

Motion 47

Automatic Crossing Gates

Motion 47 Response

- Request for additional information on specific at-grade crossings and the gate downtimes for L (Gold) Line and E (Expo) Line
- June Board Box analysis outlined all grade crossings and gate down instances on the L and E Lines
- Deep Dive focused on most significant gate time instances within 3 to 5 minutes
 - L Line had three grade crossings – Mountain, Myrtle and Ave. 45
 - E Line had three grade crossings – 26th St, Stewart, and 20th St.
- Barrington Ave crossing (E Line) information included



Mountain Ave Grade Crossing



Legend: * Relief Platform

Findings

- Gates down longer due to use of operator relief platform

Actions

- Eliminate routine use of operator relief platform – emergency only
- Cancel gate activation during use of the operator relief platform by using the Train-to-Wayside (TWC) control system
- Implemented change on Dec 15, 2019



Metro

Myrtle Ave Grade Crossing



Findings

- Close proximity to Monrovia Station
- Dwell times at station impacting gate down times

Actions

- Train Operators to consistently use the Train-to-Wayside (TWC) control system to cancel gate activation during long dwell times

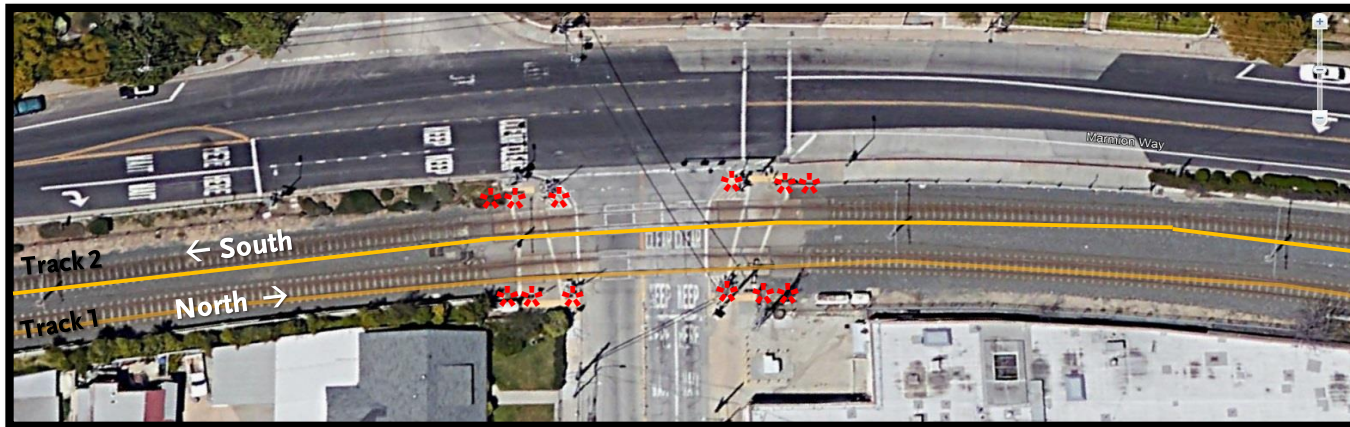
Caltrans Traffic Controller Upgrade Project – Target Completion Dec 2020

- Upgrade firmware/timing/controllers for traffic signals
- Prioritize Duarte/Myrtle intersection traffic signal



Metro

Ave 45 Grade Crossing



Legend: * Crossing Gates
** PED Gates

Findings

- 30 mph speed restriction on northbound track on approach & through grade crossing
- Current design speed at 45 mph, results in gates being down earlier than necessary

Actions

- Lift speed restriction to reduce gate down times
- Engineering analysis complete
- Field testing complete



Metro

26th St Grade Crossing



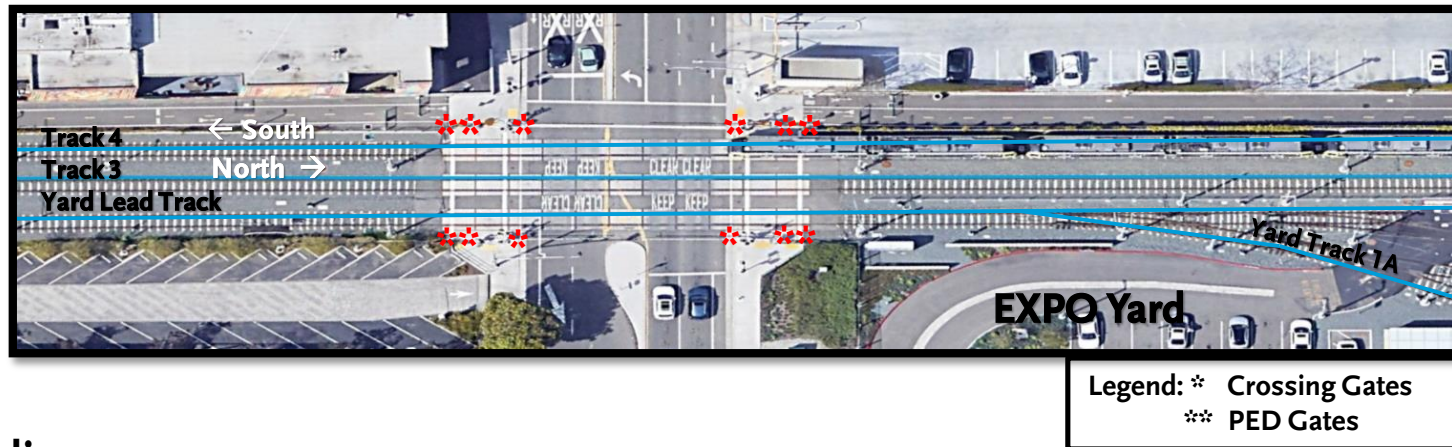
Findings

- Highest amount of gate down instances within 3 to 5 minutes and 5 to 10 minutes
- Proximity to 26th St Station & E Line yard result in longer gate down times
- Crossings activate when southbound trains stop at station & variable dwell times can result in longer gate down times
- Northbound trains from Santa Monica approaching the crossing slow down due to train(s) ahead entering the yard

Actions

- Train Operators to consistently use TWC control system to cancel gate activation during long dwell times
- Change schedule for pull ins to avoid train bunching

Stewart St Grade Crossing



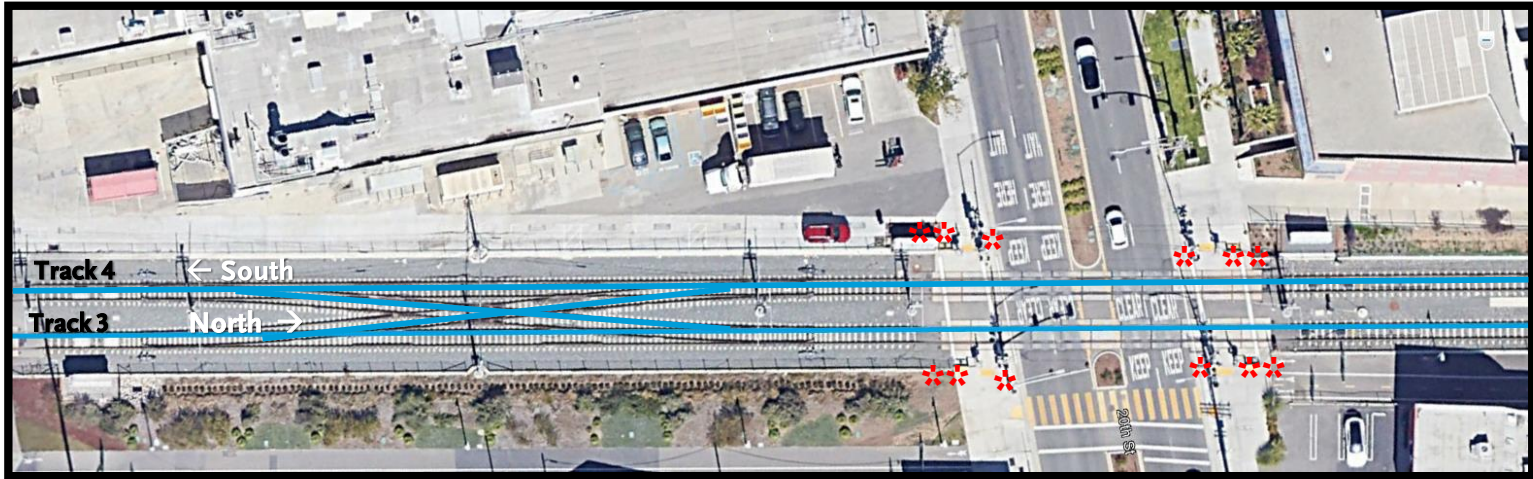
Findings

- Grade crossing within limits of E Line yard and gate activation is more frequent due to trains entering & exiting yard
- 30 mph speed restriction implemented in both directions due to track bed conditions
 - Since design speed is 45 mph, slower southbound trains to Santa Monica will cause longer gate down times

Actions

- Modify train control design – temporary while track bed is being improved
 - Design speed of 35 mph will be provided and start of gate activation will be modified
- Northbound trains headed to the yard should stop before the crossing without activating the gates and only proceed when route into the yard is clear

20th St Grade Crossing



Legend: * Crossing Gates
** PED Gates

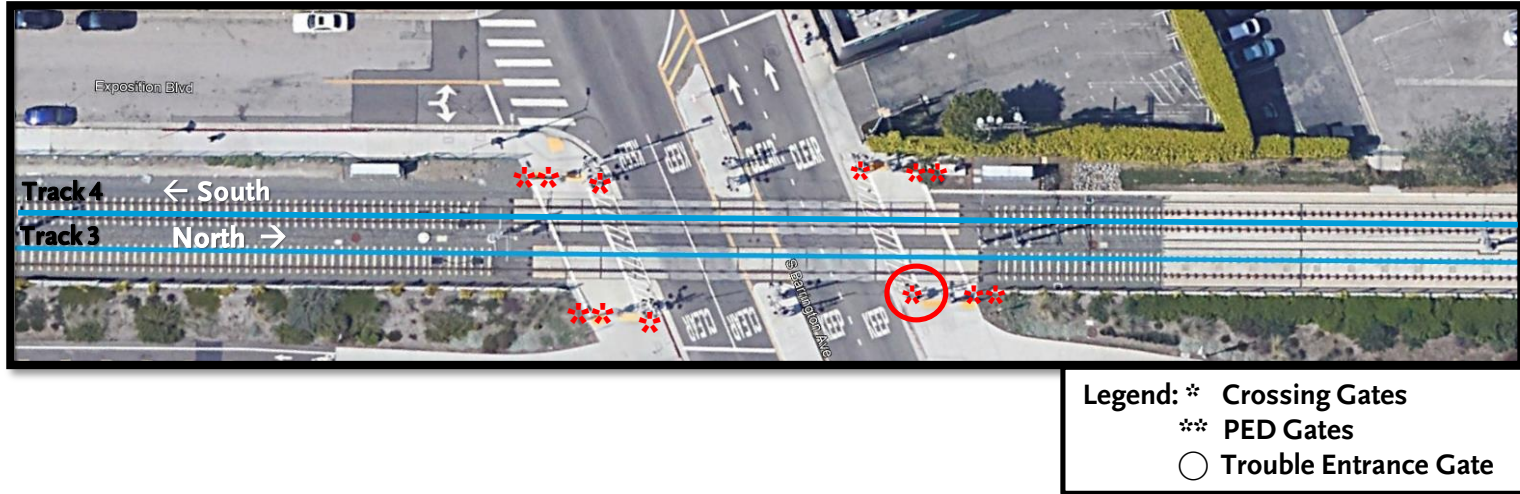
Preliminary Findings

- Frequent train meets
- Northbound trains are bunching

Actions

- Revise schedule for pull ins to avoid train bunching

Barrington Grade Crossing



Findings

- Metro Rail Operations Center (ROC) reported single gate malfunction – 11/14/19
- Metro received complaints of excessive gate down time

Results

- Metro found one gate down, while other 7 gates at grade crossings were up
- Found failure of electronic controller board for gate & replaced