



CALIFORNIA
High-Speed Rail Authority

**Los Angeles to Anaheim
Update**

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High-Speed Rail in Southern California



**Bakersfield to
Palmdale**
79 miles

**Palmdale to
Burbank**
41 miles

**Burbank to
Los Angeles**
13 miles

**Los Angeles to
Anaheim**
33 miles

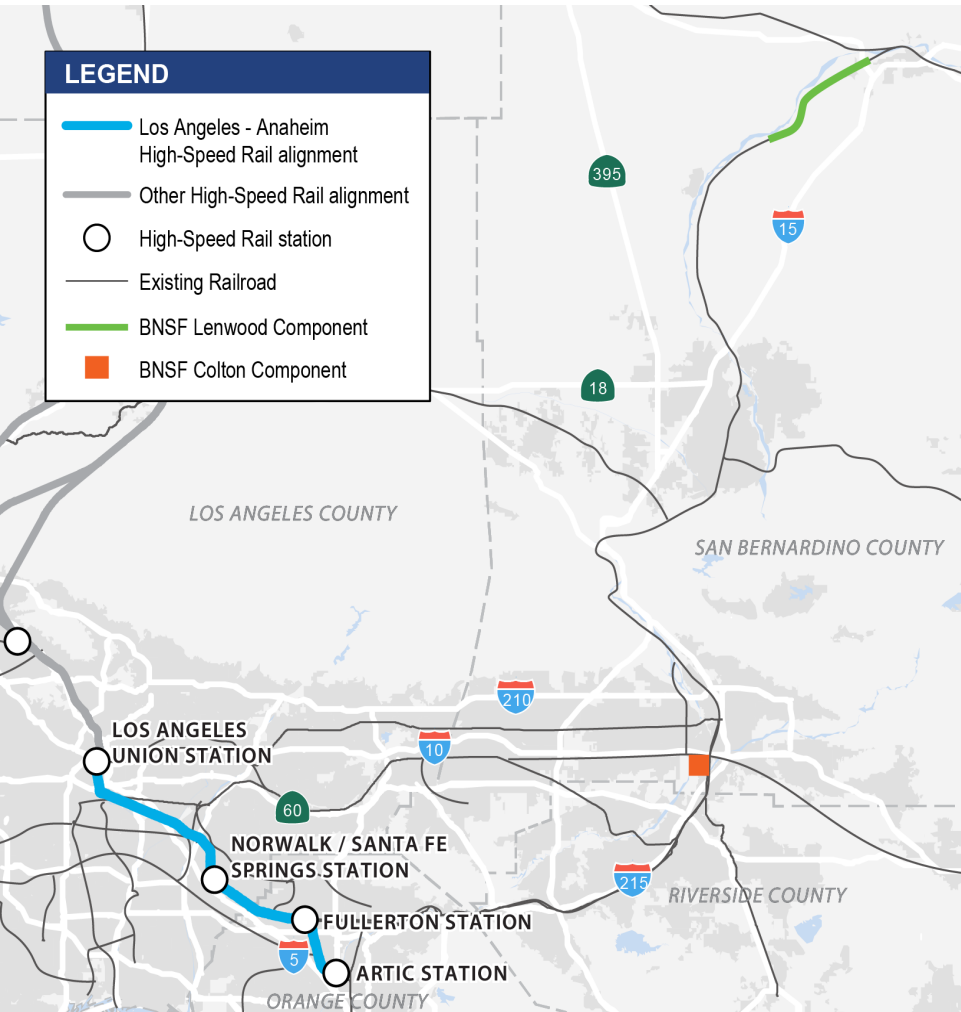
166 miles



Southern California Update: Los Angeles to Anaheim

- LA-A: 2018 HSR Project Alternative Background
- Supplemental Alternatives Analysis
 - » Alternatives Considered
 - » Recommended New Build Alternative: Shared Passenger Track Alternative, reviewed by PDC June 2023
 - Including Staging Track Mitigation
- Potential New Preferred Alternative
 - » Shared Passenger Track Alternative
 - Light Maintenance Facility (LMF)
 - Intermediate Stations
 - » Additional Considerations
 - Anaheim Grade Crossing Approach
- Outreach and Next Steps

LA-A: 2018 HSR Project Alternative Background



- Currently there are 3 mainline tracks in BNSF-owned right-of-way between Redondo Junction (just south of LAUS) and Fullerton Station:
 - » These tracks are used by both passenger (Metrolink & Amtrak) and freight (BNSF) rail services, subject to 1992 Shared Use Agreement signed by BNSF and RCTC/OCTA
- The 2018 HSR Project Alternative (informally, 2+2 Alternative) would add one mainline track to the corridor. Two tracks would be used by BNSF; two tracks would be shared by passenger rail services (HSR, Metrolink, Amtrak)
- The BNSF Intermodal Facility (IMF) at Colton would accommodate future freight train volumes (an average of 10 freight trains per day) that could not be accommodated in the corridor
- The BNSF Staging Tracks at Lenwood would be used for staging freight trains during and after HSR construction

BNSF Project Components

- Colton Intermodal Facility: Rail yard, railroad lead tracks, and roadway modifications for future freight train volumes that cannot be accommodated in LA-A corridor after HSR operations begin
- Lenwood Staging Tracks: Staging tracks adjacent to the BNSF existing mainline in Lenwood provide for staging of trains prior to entering the Los Angeles to Anaheim HSR passenger rail corridor limits

Colton Intermodal Facility



Lenwood Staging Tracks

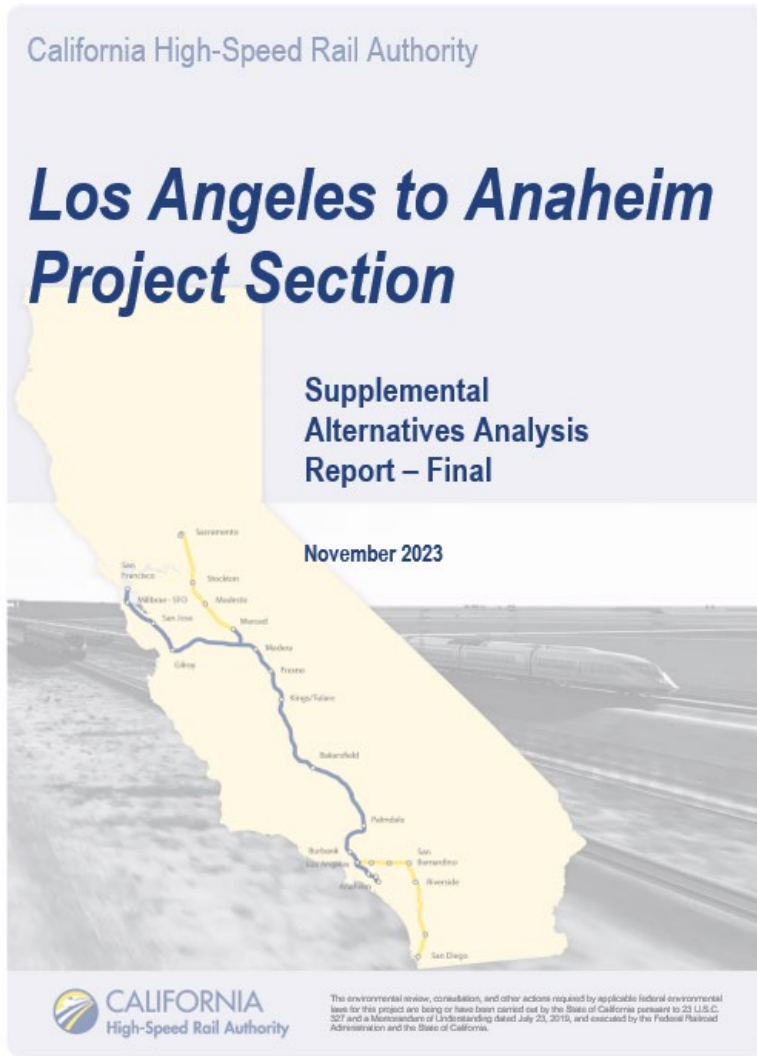


Challenges with Project Delivery

Stakeholder Feedback

- The inclusion of the BNSF IMF as a project feature has resulted in significant stakeholder and community opposition
- Authority held a 30-day scoping comment period from Aug 25-Sep 24, 2020 to obtain comments on the revised scope of the LA-A project, which included Colton and Lenwood facilities as project components
- Authority received 131 scoping comment submissions with 401 individual comments. Comments were focused on Colton and covered a wide range of concerns, for example:
 - » Truck traffic: SBCTA, RCTC, County of San Bernardino
 - » Air quality: EPA, CARB, SCAQMD, EarthJustice, NRDC, Sierra Club
 - » Environmental justice: City of Colton, Center for Community Action and Environmental Justice (CCA EJ), USC School of Medicine and East Yard Communities for Environmental Justice

Supplemental Alternatives Analysis

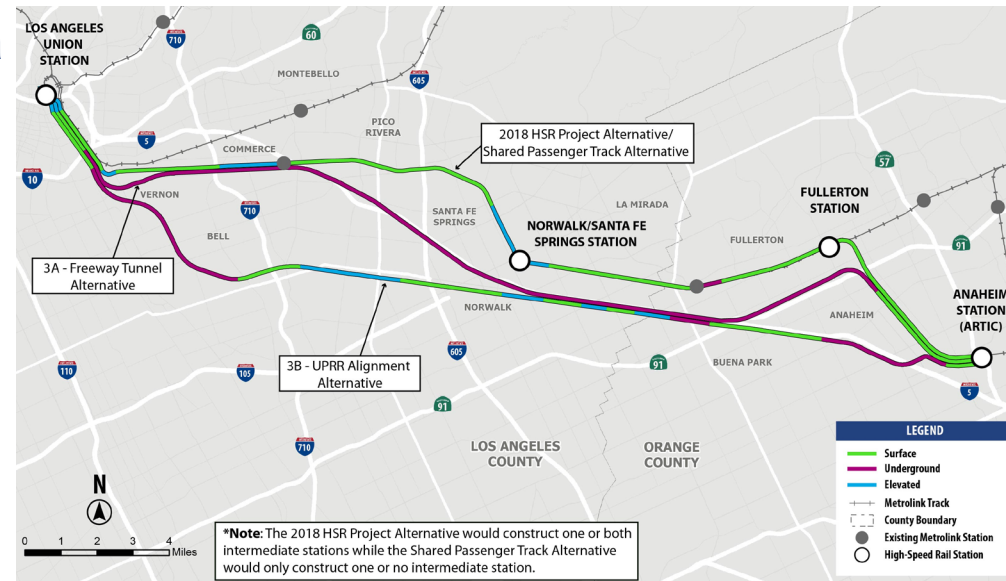


- In response to mounting opposition, Authority explored alternatives that would eliminate the need to redirect trains and trucks to Colton
- Authority prepared this Supplemental Alternatives Analysis (SAA) to document and evaluate potential alternatives that would reduce or eliminate the impacts to passenger and freight train operations in the Los Angeles – San Diego – San Luis Obispo Rail Corridor (LOSSAN Corridor)

Supplemental Alternatives Analysis

Project Alternatives Considered

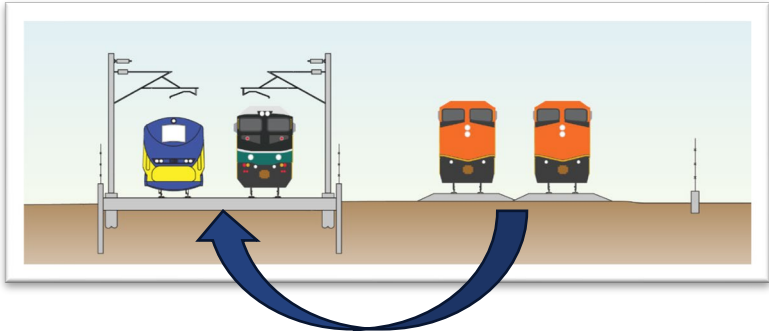
- The Supplemental Alternative Analysis (SAA) evaluates five alternatives, including three build alternatives that eliminate the need for a BNSF IMF:
 - » Shared Passenger Track Alternative
 - » Freeway Tunnel Alternative*
 - » Union Pacific Railroad (UPRR) Alignment Alternative*
- The SAA also provides comparison to
 - » 2018 HSR Project Alternative
 - » No Build Alternative



**Tunnel and the UPRR Alternatives not recommended for further study due to impacts, functionality, and cost when compared with other build alternatives.*

Supplemental Alternatives Analysis

Project Alternatives Considered



- The Authority will construct one additional mainline track within the Corridor
- Some BNSF freight traffic would be shifted to two passenger rail tracks (i.e., tracks are no longer dedicated for passenger rail service only)
 - » BNSF could utilize up to four mainline tracks within its right-of-way



- Two of the four mainline tracks would be electrified. Some BNSF freight trains would operate on electrified tracks
- Operations would slightly reduce passenger service levels when compared to the 2018 HSR Alternative but no IMF would be required
- Track reconfiguration may be considered at locations including the Commerce viaduct, Norwalk/SFS station, and Fullerton station (to ensure BNSF access and/or to reduce project footprint or costs)

New Build Alternative: Shared Passenger Track Alternative

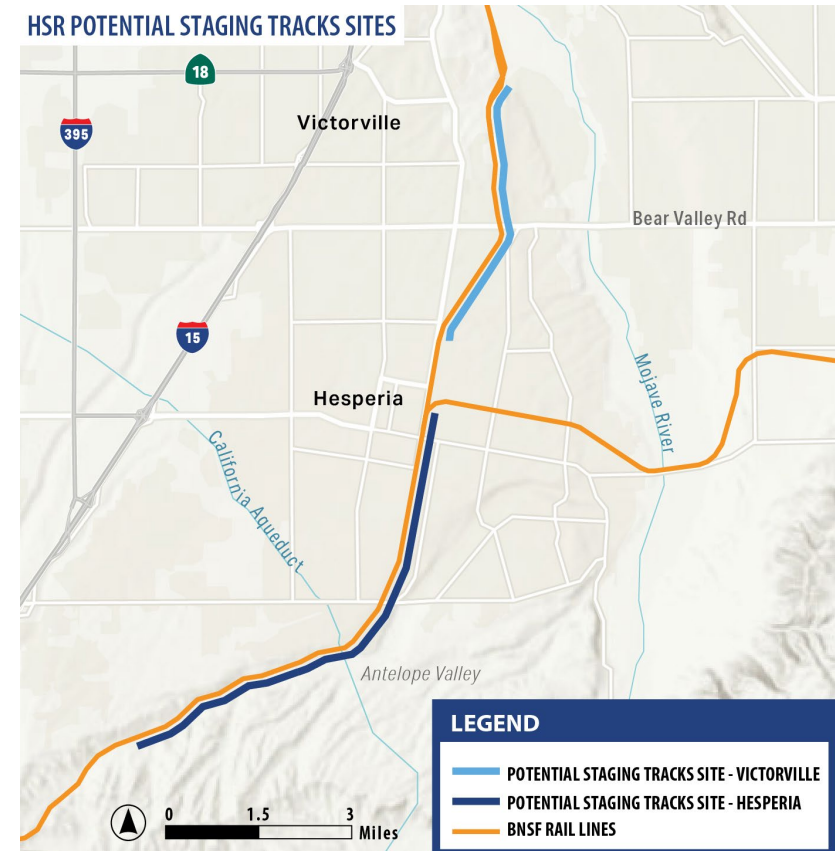
Summary of Key Features

- Utilizes existing rail corridor
- Excludes controversial BNSF Colton IMF
- Reduces environmental footprint, including property acquisitions
- Reduces construction and operational costs
- Maximizes potential for shared maintenance costs with other passenger rail services
- Reduces HSR train operations on section from four to two HSR trains per hour per direction
 - » Also reflects overall decrease in systemwide service detailed in 2023 Project Update Report (PUR)
- Meets 2040 passenger rail operational objectives
- Requires additional staging tracks outside project corridor (considered freight rail mitigation)

New Build Alternative: Shared Passenger Track Alternative

Staging Track Mitigation

- Additional BNSF staging track would mitigate construction and operational impacts to freight rail
 - » 2 x 16,000' or 1 x 32,000' track
- Six sites evaluated, two proposed for further consideration:
 - » Victorville
 - » Hesperia
- Staging track sites will undergo constraints-level analysis within DEIR/EIS



Supplemental Alternatives Analysis









Freeway Tunnel and UPRR Alternatives







- Roughly 3-5x construction costs (\$18.6-\$31 Billion vs. \$6.6-6.9 Billion for Shared Passenger Track)
 - » 23.6 and 8.3 miles of tunneling for 3A and 3B, respectively
 - » 3.88 aerial miles for 3B
- Increased construction time
- Increased maintenance and operational costs
- Infrastructure challenges related to tunneling
- Increased construction impacts (air quality, traffic/transportation, GHG emissions)
- No intermediate stations options

Supplemental Alternatives Analysis

Comparison of Alternatives

Objective	Measurements	2018 HSR Project Alternative	Shared Passenger Track Alternative	3A - Freeway Tunnel Alternative	3B - UPRR Alignment Alternative
Design Objectives	Journey Time	46 mins	46 mins	20 mins	25 mins
	Route Length (miles)	33	33	29.7	33
	Capital Costs ¹	\$9.17 ²	\$6.65-6.91 ^{3,4}	\$31.06	\$18.62
	Operating Costs				
	Intermodal Connections				

¹Total cost is an estimate, including a light maintenance facility, in 2023 dollars (billions). Further analysis is required to determine exact total cost.
²This estimate includes the BNSF Lenwood and Colton Components. Cost estimates were prepared by Trans Systems in 2020 and AECOM who were a subconsultant to BNSF and escalated to 2023 dollars by the Authority.
³This estimate includes staging tracks.
⁴This range of cost is due to whether a station in Norwalk/Santa Fe Springs, Fullerton, or neither is constructed.

	Best Performance Option Among All Options		Worse Performance Option Among All Options
	Better Performance Option Among to All Options		Worst Performance Option Among All Options

Supplemental Alternatives Analysis

Next Steps

- SAA Release November 3rd, 2023
- Outreach
 - » Legislative Staff Working Group meeting
 - » Stakeholder Working Group meeting
 - » Public Workshops
 - » Cooperating Agency briefing(s)
- Beginning analysis for potential selection of New Preferred Alternative
 - » Light Maintenance Facility (LMF)
 - » Intermediate Stations
 - » Grade Crossings

Shared Passenger Track Alternative

SoCal Light Maintenance Facilities (LMF) – 15th Street and 26th Street Options



Shared Passenger Track Alternative

SoCal Light Maintenance Facility (LMF) – 15th Street Option (Los Angeles)



- 40+ Acres
- 20 trainsets, 6 shop tracks
- Located west of Amtrak 8th Street Yard
 - » May require some modifications
- Facilitates construction of proposed Metro Arts District/6th Street Station

Shared Passenger Track Alternative

SoCal Light Maintenance Facility (LMF) – 26th Street Option (Vernon)

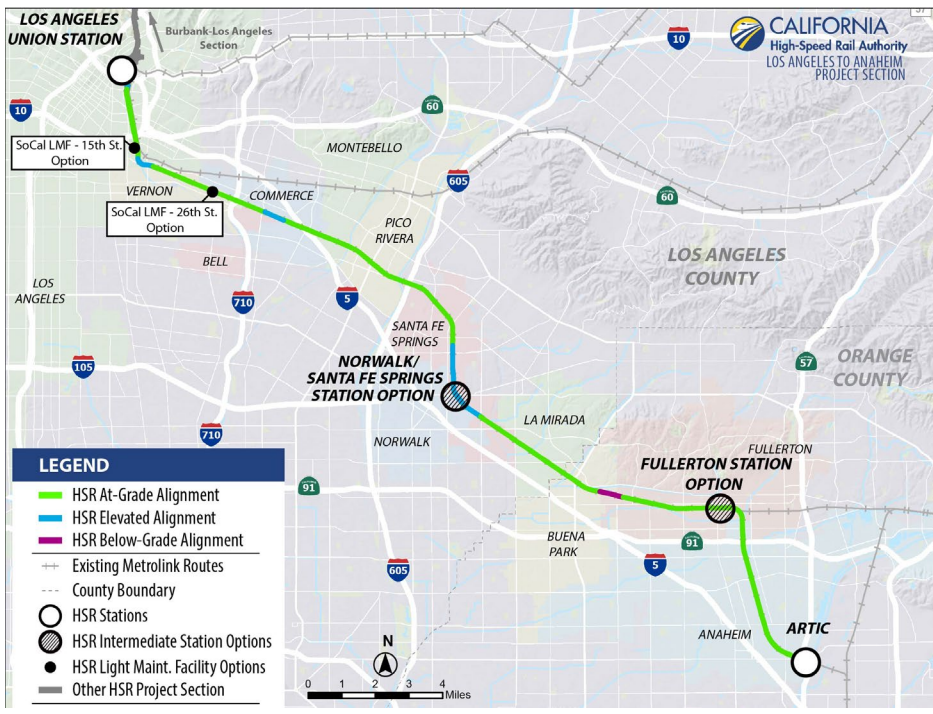
- 41 acres
- 24 single trainsets, 6 shop tracks
- Minor impacts to BNSF Lot 11
- Allows other uses of West Bank (turning tracks) and minimizes impacts to existing Amtrak operations



Shared Passenger Track Alternative

Intermediate Stations

- Historically, Authority's approach to intermediate stations has been uncertain
- 2018 HSR Project Alternative proposed building both Norwalk/Santa Fe Springs and Fullerton Stations
 - » Discussion of skip-stop service but there was no official board decision
 - » 2016, 2018, and 2020 Business Plans and 2023 PUR only model one intermediate stop
- 2020 Revised Notice of Preparation
 - » Potential intermediate station locations to be evaluated in EIR/EIS included Norwalk / Santa Fe Springs Transportation Center and Fullerton Transportation Center



Shared Passenger Track Alternative

Intermediate Stations

- The Authority will consider constructing one or no intermediate station
 - » Prop 1A limits HSR station development
 - » Stations are ~10 miles apart
 - » Existing Metrolink/Amtrak service at stations
- City support for stations has been uncertain
- Design and parking constraints exist at both stations
- Building no intermediate station could increase efficiencies in cost, schedule, and operations while reducing impacts



Additional Considerations

Anaheim Grade Crossing Approach

- Existing Fullerton to ARTIC corridor consists of one track per direction (2 tracks total)
 - » Orange County Transportation Authority (OCTA)-owned ROW
 - » 14 grade crossings, 10 of which are at-grade
- OCTA recently updated all Anaheim crossings with safety improvements
- Federal, State, and Local regulations do not require grade separation within corridor
- Authority will only electrify existing track from Fullerton to ARTIC (no new track)
- Authority proposes new grade crossing approach which:
 - » Reflects reduced HSR service within corridor
 - » Maintains consistency with other HSR sections
 - » Reduces property acquisitions and construction impacts

Previous design assumptions (current PEPD) includes:

- » 7 New Grade Separations
- » 4 Modified Existing Separations
- » 1 Remain At-Grade
- » 2 New Crossing Closures

Proposed design assumptions include:

- » 2 New Grade Separations
- » 4 Modified Existing Separations
- » 8 Remain At-Grade

Additional Considerations

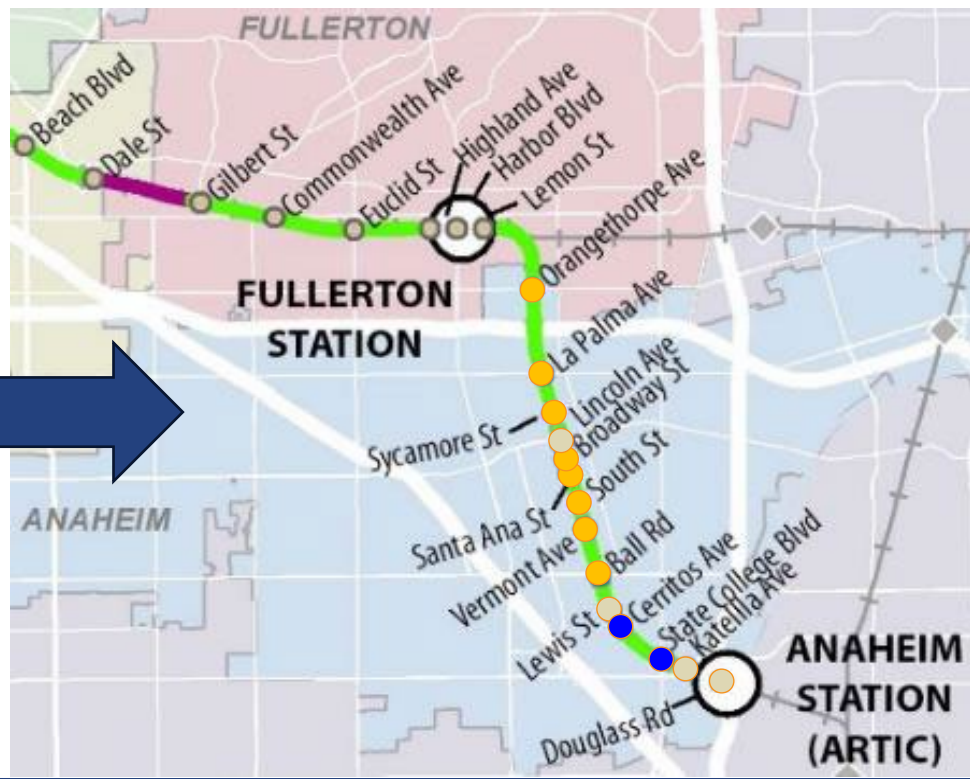
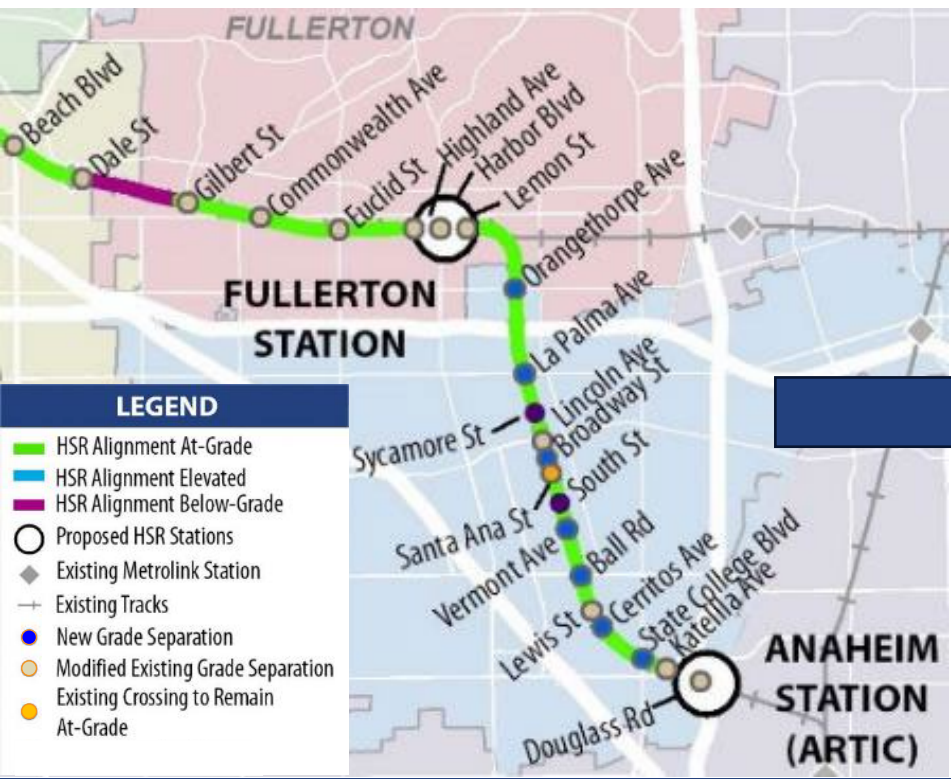
Anaheim Grade Crossing Approach

2018 Proposed Grade Separations (GSs) ●

- 1. Orangethorpe Avenue
- 2. La Palma Avenue
- 3. Broadway
- 4. Vermont Avenue
- 5. Ball Road
- 6. Cerritos Avenue
- 7. State College Boulevard

New Proposed Grade Separations (GSs)

- 1. Cerritos Avenue
- 2. State College Boulevard



Outreach and Next Steps

- City and Agency coordination meetings
- Individual/small group stakeholder briefings
- Speakers’ bureau presentations
- Stakeholder Working Groups
- Group legislative briefings
- Public meetings/open houses
- Community events
- Social media posts
- Office hours
- Email blasts & extended outreach

Outreach Activity	Date
Legislative Group Briefing	October 25, 2023
Stakeholder Working Group Meeting	November 8, 2023
Public Meeting	November 2023
Anaheim, Fullerton, Norwalk/Santa Fe Springs Grade Crossing and Station Information Meetings	December 2023
Staging Tracks and Light Maintenance Facility Meetings	December 2023
Continued Public Outreach	2024-2025

Translation and interpreter services offered in Spanish, Chinese (Mandarin), Korean, Japanese, and Tagalog

LA-A Schedule Milestones

Milestone	Delivery Date
SAA Public Release	November 3, 2023
Board Selection of New Preferred Alternative	January 2024 (Tentative)
Admin Draft EIR/EIS	May 2024
Draft EIR/EIS Release	October 2024
Admin Final EIR/EIS	May 2025
Final EIR/EIS Release	September 2025
ROD/NOD	December 2025 (Board Mtg.)



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