



Palmdale to Burbank Project Section

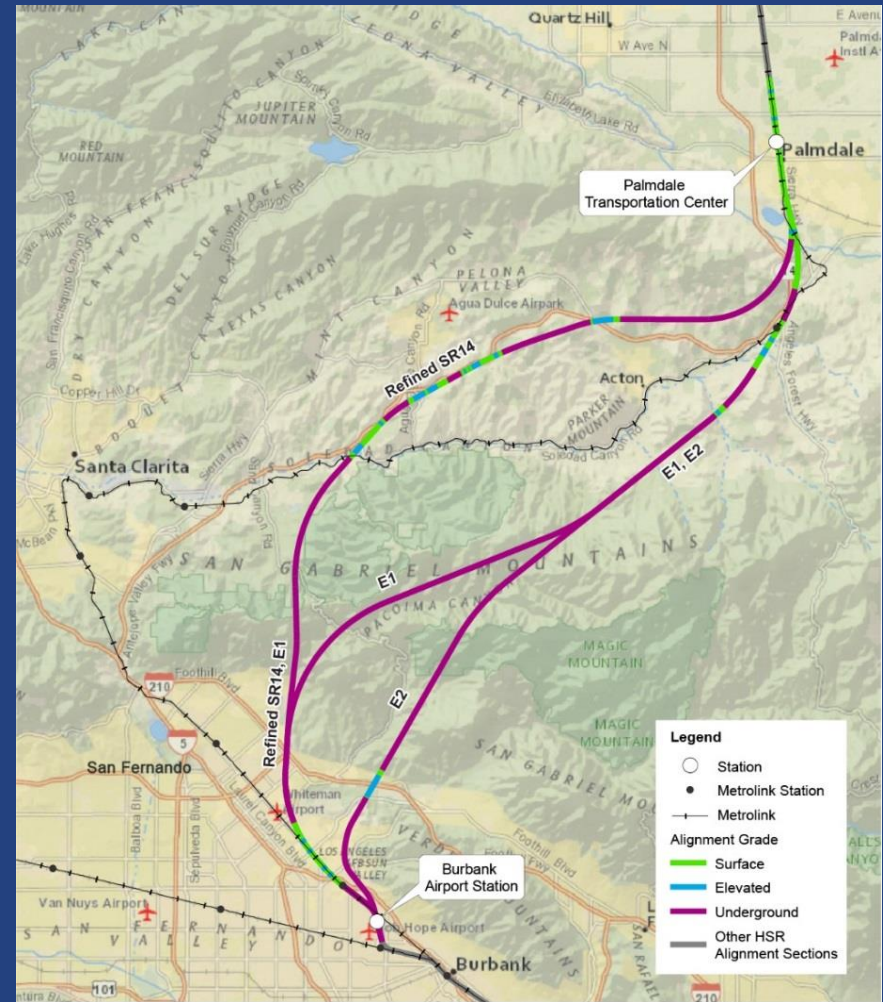
Agenda Item #1 -- Presentation on the Staff Recommended State Preferred Alternative for Identification in the Palmdale to Burbank Project Section Draft EIR/EIS

TODAY'S REQUESTED BOARD ACTION

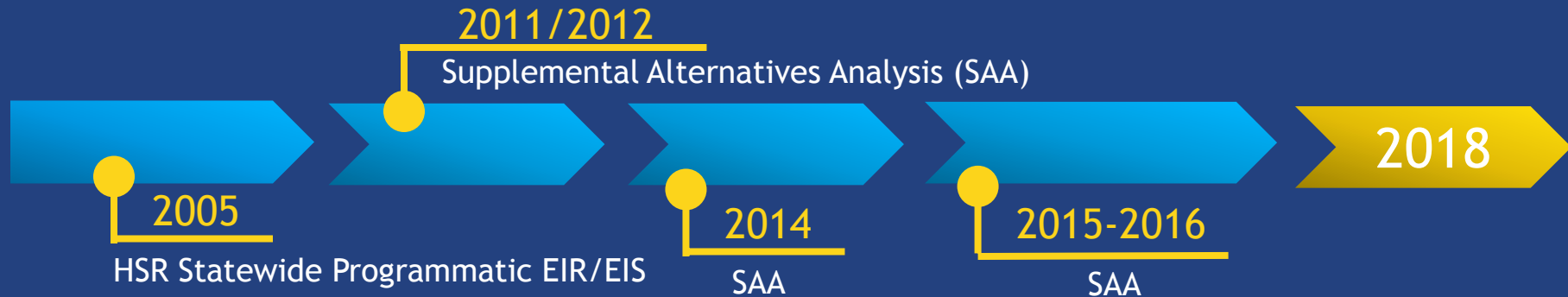
- Concur with staff recommendation to identify Refined SR 14 as the State's Preferred Alternative in Palmdale to Burbank Project Section Draft EIR/EIS
 - Recommendation based on the preliminary analysis completed to date and is considered preliminary
 - Will continue to analyze all alternatives at a similar level of detail as Draft EIR/EIS is prepared
 - Comments received continue to be considered up until certification of Final EIR/EIS currently planned for 2021
 - Coordination with resource agencies and stakeholders on key issues continues throughout the process
 - The processes described above may lead to modifications between now and when decision to approve an alternative is made

PALMDALE TO BURBANK PROJECT SECTION

- Three Alternatives
 - » Refined SR14
 - » E1
 - » E2
- Connects Antelope Valley and the Los Angeles Basin
- Length: 33-38 miles
 - » 22-25 miles of tunneling
- Two Stations
 - » Palmdale
 - » Burbank



PALMDALE TO BURBANK PROJECT DEVELOPMENT TIMELINE

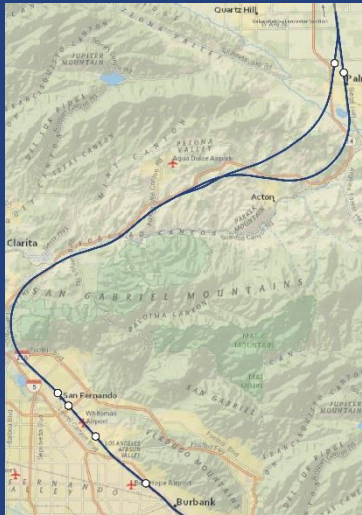


Preferred Alignments and Stations - South

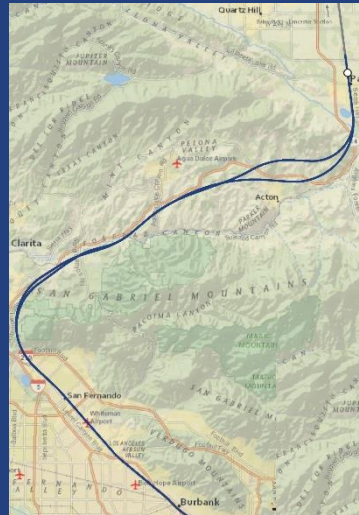


- 2005 Program EIR/EIS
- 2011/2012 Supplemental Alternative Analysis (SAA)
- 2014 SAA/Amended Scoping
- 2015 SAA
- 2016 SAA
- 2018 Staff PA Recommendation

ALTERNATIVES DEVELOPMENT OVERVIEW



2010



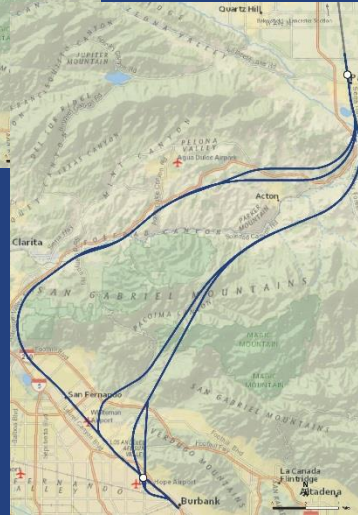
2014



2015



2012



2014



2016

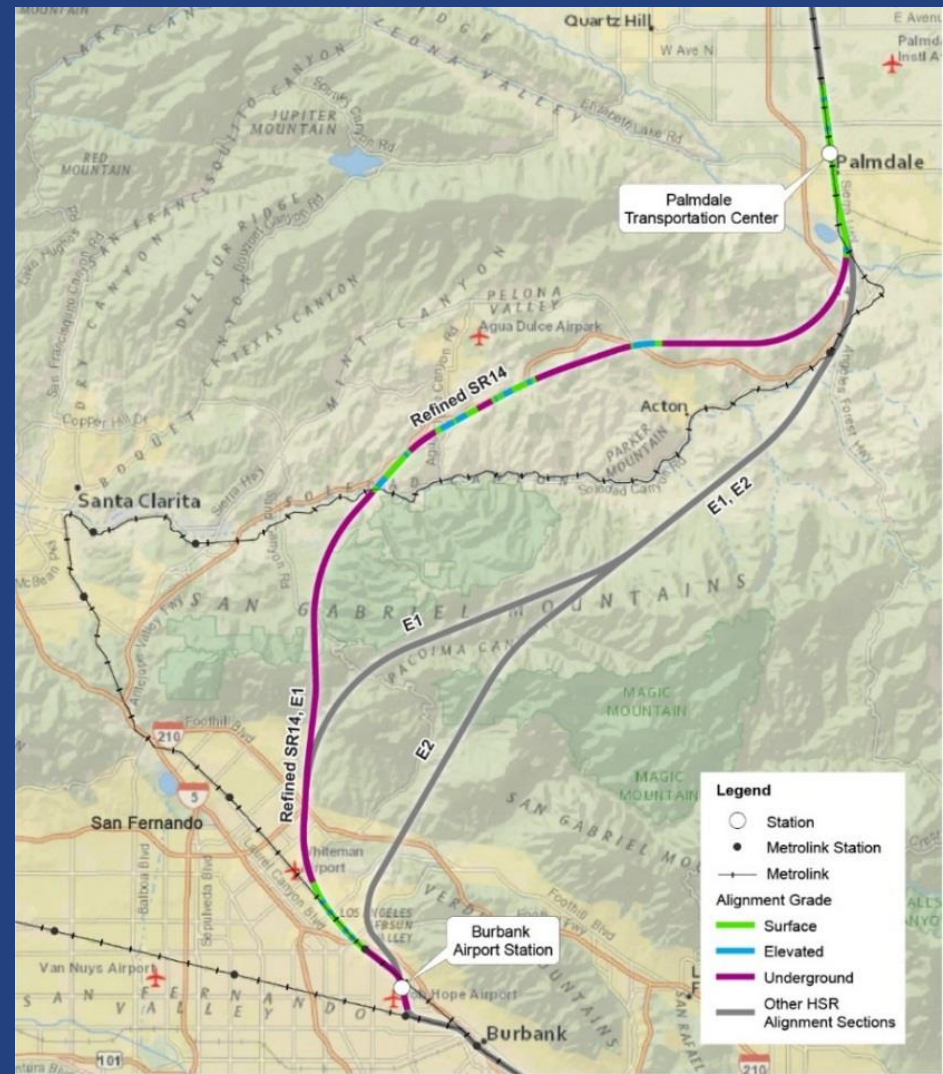
PUBLIC & STAKEHOLDER ENGAGEMENT

- Open House outreach conducted in Palmdale, Acton/Agua Dulce, Sylmar/Pacoima/Sun Valley and Shadow Hills/Lakeview Terrace
 - » **35 total Open Houses since 2014**
 - **Four in September 2018**
 - Over 4,300 attendees since 2014
 - » **September 19, 2018 Webcast**
 - 174 Participants
 - **Over 2,500 views since 9/19/18**
 - » **21 total Community Working Groups**
 - Over 500 participants
 - Bilingual and all-Spanish meetings
 - » **240+ coordination meetings with various stakeholders, agencies, and community organizations**



STATE'S PREFERRED ALTERNATIVE

- Staff recommends that Refined SR 14 be identified as the State's Preferred Alternative
 - » The *lowest constructability risk* related to tunnels, hydrogeologic, and geologic conditions
 - » The *lowest risk of unexpected conditions or circumstances* that could impact the cost to build the project and the schedule to complete it
 - » *Fewer traffic and air quality impacts within the communities* that surround it during construction
 - » *Generates the least amount of spoils* from tunneling
 - » *The shortest tunnel* under the Angeles National Forest (ANF) and the San Gabriel Mountain National Monument (SGMNM)
 - » The *lowest risk to affecting surface or groundwater and wildlife* within the ANF
 - » *Avoids key archaeological and tribal resources*
 - » *Reuses a former mining area for construction* and thus has the potential benefit of restoring a highly degraded area of the ANF/SGMNM back to natural conditions



REFINED SR 14 HIGHLIGHTS

- **Palmdale** – Uses the Metrolink ROW to the extent possible and grade separates all major at grade roadway crossings of the active rail corridor
- **Acton** – Avoids historic and cultural resources. Is not closer to Vasquez High School than the SR 14 freeway is today
- **Agua Dulce** – Avoids impacts to Vasquez Rocks
- **Soledad Canyon** – Avoids most of Soledad Canyon and crosses the Santa Clara River with a shorter bridge than previous alignments
- **Santa Clarita** – Is underground within the City of Santa Clarita (entirely underground in a tunnel approximately 400 feet deep)
- **Sylmar** – Is underground within the Sylmar community
- **San Fernando** – Avoids the City of San Fernando completely
- **Pacoima** – Avoids most of Pacoima by traveling underground and then using the Metrolink ROW to the maximum extent possible to avoid introducing a new transportation corridor through this community
- **Sun Valley** – Uses the Metrolink ROW to the maximum extent possible to avoid introducing a new transportation corridor through this community
- **Lakeview Terrace, Shadow Hills, Sunland/Tujunga** – Avoids foothill equestrian communities completely
- **Hollywood Burbank Airport** – Avoids conflicts at Hollywood Burbank Airport (continuing coordination planned to prevent future conflicts)



STATE'S PREFERRED ALTERNATIVE DESCRIPTION

Refined SR14 Alternative

- 38 mile route bounded by Palmdale & Burbank Airport Stations
- Six bored tunnels totaling approximately 25 miles
 - » Tunnel #1 approximately 7 miles long
 - » Tunnel #2 approximately 3 miles long
 - » Tunnel #3 approximately 0.5 miles long
 - » Tunnel #4 approximately 1 mile long
 - » Tunnel #5 approximately 13 miles long
 - » Tunnel #6 approximately 1 mile long
- Starts at a multimodal station in Palmdale
- Uses the existing Metrolink ROW for approximately 3 miles
- Crosses the San Andreas Fault at grade
- Bridges over SR 14 near Red Rover Mine Road Interchange and the Santa Clara River
- Tunnels underneath the SGMNM, ANF, Sylmar & most of Pacoima
- Emerges in the San Fernando Valley near Branford Street in an industrial area of Pacoima
- Enters the Metrolink ROW and uses the existing rail corridor as it travels on the surface along San Fernando Road in Sun Valley for approximately 2 miles
- Enters a tunnel as it leaves the rail corridor to arrive at the Burbank Airport Station below grade



COMPARISON OF THE ROUTES: BASIC FEATURES

Criterion	HSR Build Alternatives		
	Refined SR 14	E1 Alternative	E2 Alternative
Total length	38.6 miles	36.6 miles	32.8 miles
Elevated profile	2.8 miles	0.6 miles	1.3 miles
Underground profile	26.9 miles	26.1 miles	23.8 miles
Surface profile	8.9 miles	9.9 miles	7.7 miles
Travel time (approx.)	14/17 minutes	13/16 minutes	12/15 minutes

PROJECT COSTS

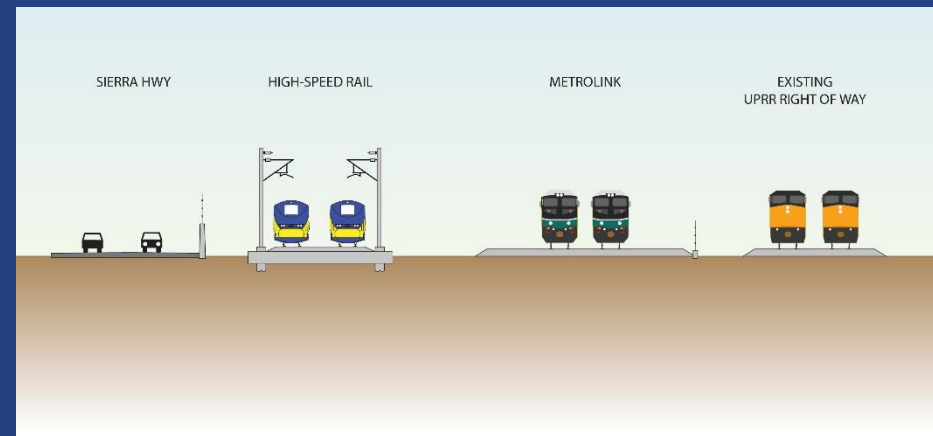
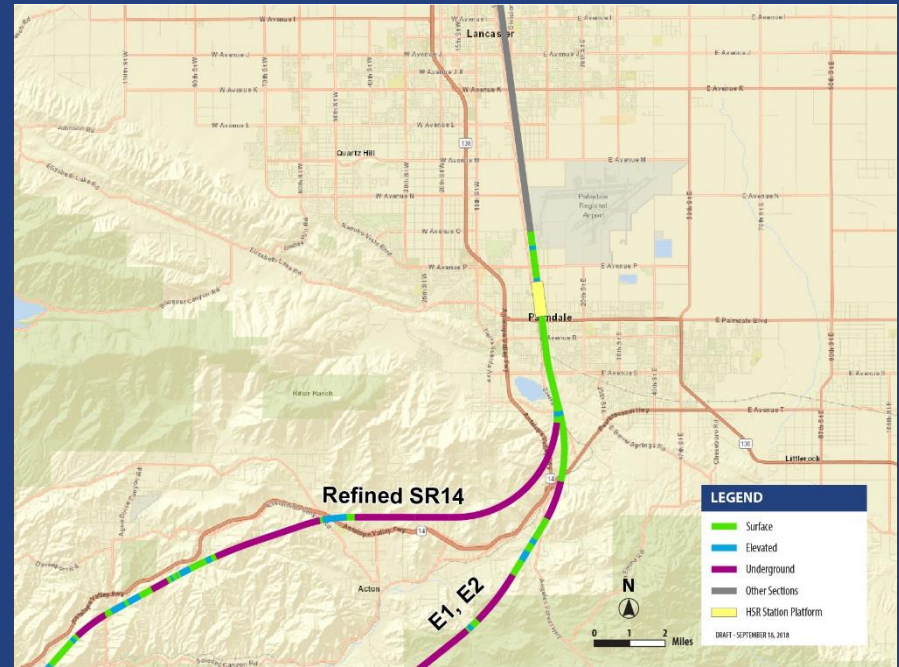
Cost Category	HSR Build Alternatives		
	Refined SR 14 Alternative	E1 Alternative	E2 Alternative
Total Cost in 2017 Dollars ¹	20.3 billion	18.3 billion	19.3 billion

- **Environmental Documents versus 2018 Business Plan**
 - » Should Not Be Compared on a Like for Like Basis
- **Projects Demonstrate Independent Utility**
 - » Duplication of Scope Across Project Sections
- **Environmental Project Scope is Conservative**
 - » 15% Design
 - » Maximum Footprint to Evaluate all Potential Impacts
 - » Value Engineering Not Yet Applied

¹ The total cost estimate includes the total effort and materials necessary to construct this section, including stations, maintenance facilities, and modifications to roadways required to accommodate grade separated guideways.

PALMDALE

- Uses existing Metrolink corridor when possible
- Grade separates all major roadway crossings of the active rail corridor that exist today
- Seamless connections to AVTA, Metrolink, and future high-speed rail service to Las Vegas from Palmdale Transportation Center multimodal station
- Crosses San Andreas Fault at-grade
- Avoids Plant 42 Sensitive Airspace



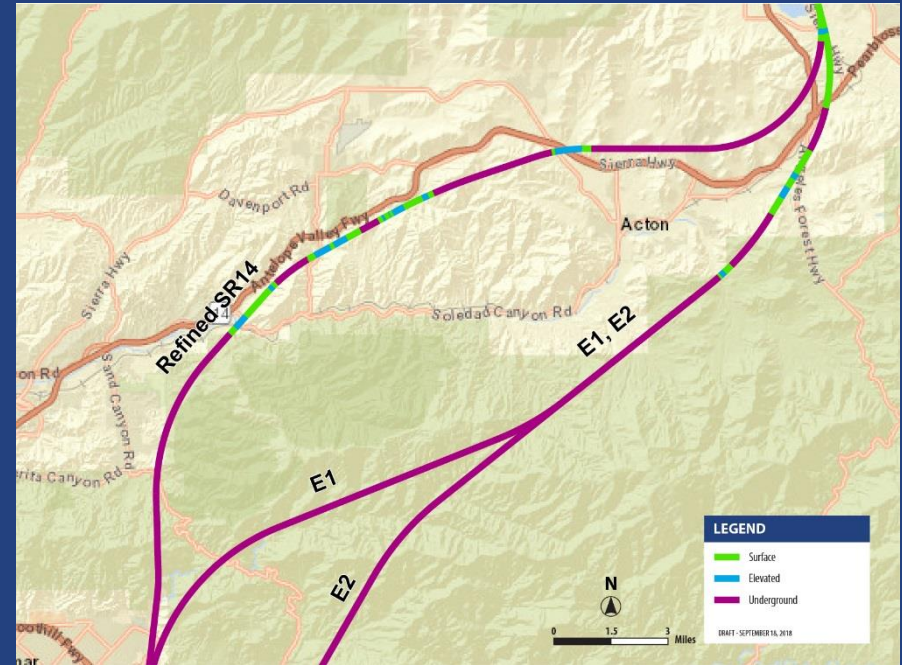
ACTON/AGUA DULCE/SANTA CLARITA

- **Refined SR14**

- » Roughly follows the SR 14 freeway corridor
- » Crosses the SR 14 freeway near Red Rover Mine Road
- » Further away from Vasquez High School than the SR 14 freeway (1/2 mile from buildings)
- » Provides wildlife and Pacific Crest Trail (PCT) crossings
- » Completely underground within Santa Clarita City limits

- **E1/E2**

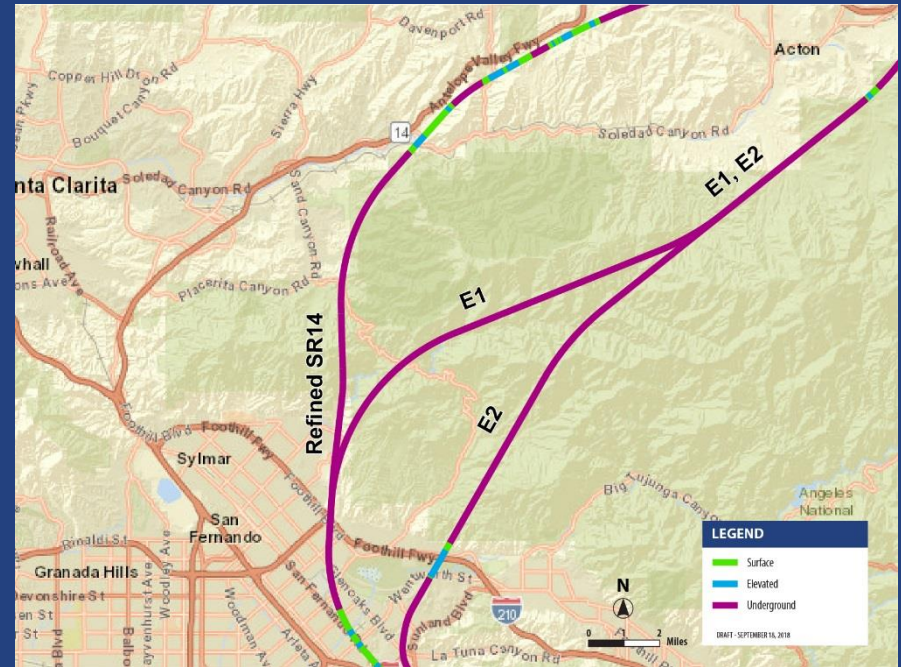
- » Passes near Vincent Substation
- » Enters long tunnel near Aliso Canyon Road



ANGELES NATIONAL FOREST (ANF)

• Refined SR14

- » Entirely below ground within the ANF/SGMNM
- » Crosses Santa Clara River near Lang Station Road
- » Reuses former mine site as tunnel portal
- » May include one intermediate horizontal access point for construction (adit) for construction located on privately held land

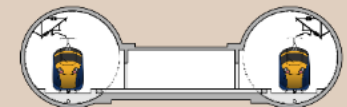


• E1/E2

- » Entirely below ground within the ANF/SGMNM
- » May include one intermediate horizontal access point for construction (adit) for construction located on privately held land



Santa Clara River near Lang Mine



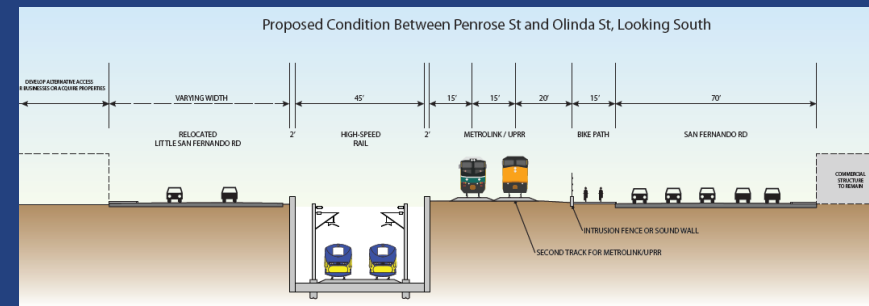
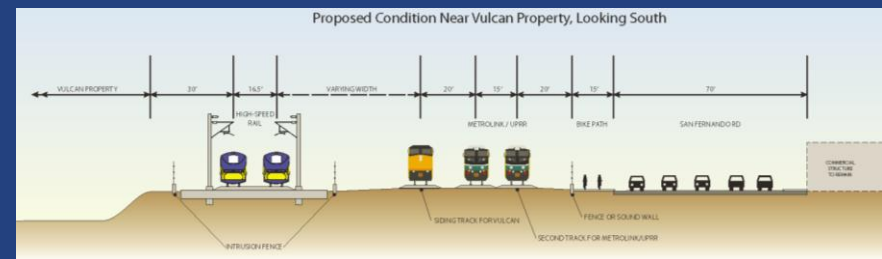
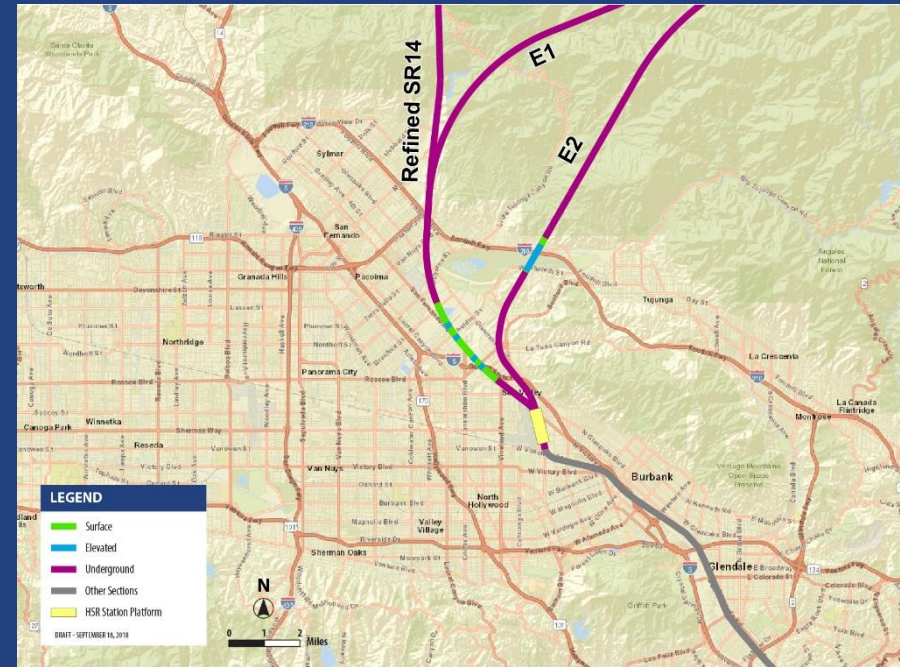
SAN FERNANDO VALLEY AREA

• Refined SR14/E1

- » Avoids residential displacements in highly developed areas in NE San Fernando Valley by emerging from tunnel in industrial area
- » Tunnel construction site allows for disposal of spoils by conveyor system to nearby abandoned gravel pits
- » Uses existing Metrolink corridor to the extent possible by traveling on surface alongside Metrolink
- » Grade separates the Sheldon Street crossing of the active rail corridor that exists today

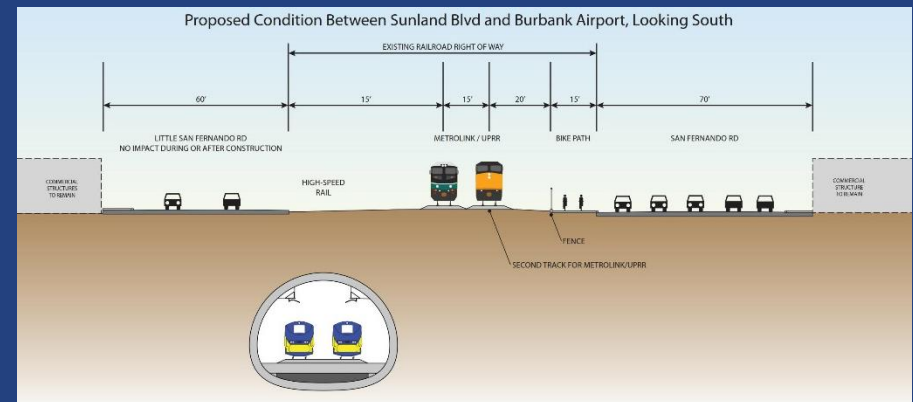
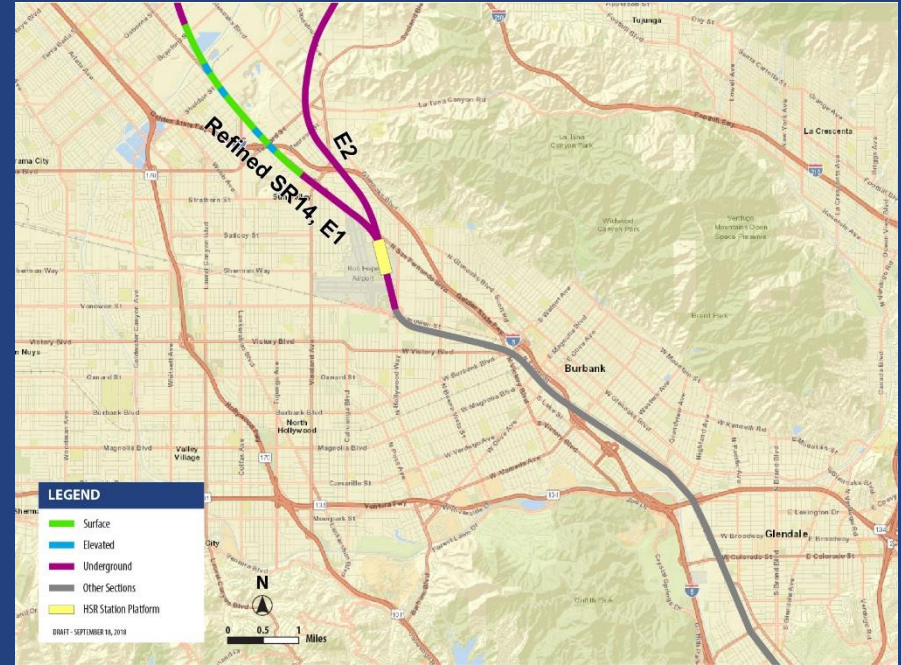
• E2

- » Reduces or avoids impacts to Big Tujunga Wash Mitigation Area near Tujunga Wash crossing
- » Parallel to major electrical transmission corridors
- » Completely underground in Shadow Hills



BURBANK

- All alignments carry the same Burbank Airport Station configuration
- Provides maximum air-rail connectivity at Hollywood Burbank Airport, while maintaining integrity and independence of both projects
- Avoids surface impacts to Burbank Airport Layout Plan
- Minimizes impacts to businesses and residential areas with underground configuration

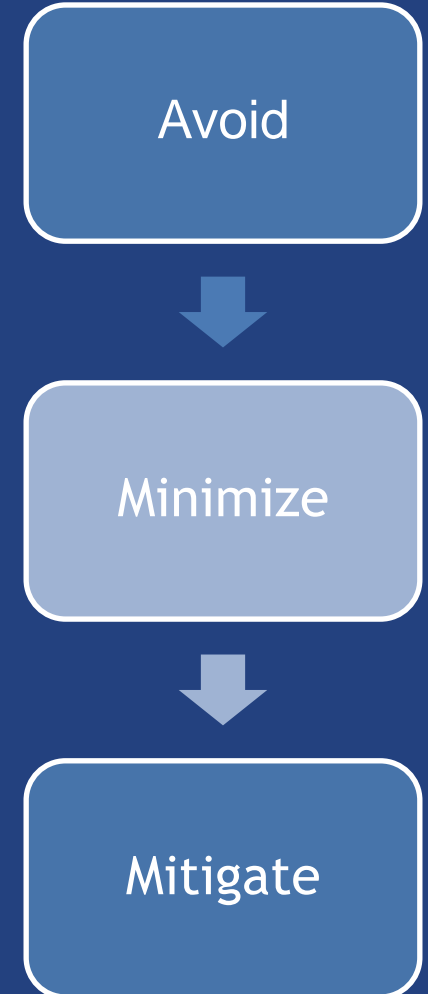


IDENTIFYING STATE'S PREFERRED ALTERNATIVE

- » Identifying a preferred alternative aligns with federal law, including MAP-21 (2012) and FAST Act (2015), and with CEQA
- » This process is consistent with the approach adopted for the *Merced to Fresno Project Section: Central Valley Wye Supplemental EIR/EIS*, and *Bakersfield to Palmdale EIR/EIS*
- » Identifying a preferred alternative in the Draft EIR/EIS allows the public and agencies to comment on the preferred alternative
- » Identifying a State's preferred alternative does not constitute the adoption or approval of a Preferred Alternative
- » Concur with the staff recommendation to identify Refined SR 14 as the State's Preferred Alternative in the Palmdale to Burbank Project Section Draft EIR/EIS

AVOID, MINIMIZE & MITIGATE POTENTIAL IMPACTS

- Develop alternatives that:
 1. **Avoid** impacts
 2. **Minimize** impacts, when they cannot be avoided
 3. **Mitigate** impacts, when they cannot be avoided or minimized
- The environmental resource areas below illustrate differences among alternatives:
 - » Transportation, Air Quality, and GHG
 - » Hydrology, Hydrogeology, and Water Resources
 - » Cultural Resources





ALTERNATIVES EVALUATION: COMMUNITY

CRITERIA	Alternatives Ratings		
	Refined SR14	E1	E2
Transportation (Spoils Removal)			
Air Quality			
Noise & Vibration			
Right-of-Way (Displacements)			
Above Ground vs. Underground			
Socioeconomics and Communities			



RATING	DESCRIPTION
	Least Favorable
	Favorable
	Most Favorable

ALTERNATIVES EVALUATION: PROJECT OBJECTIVES



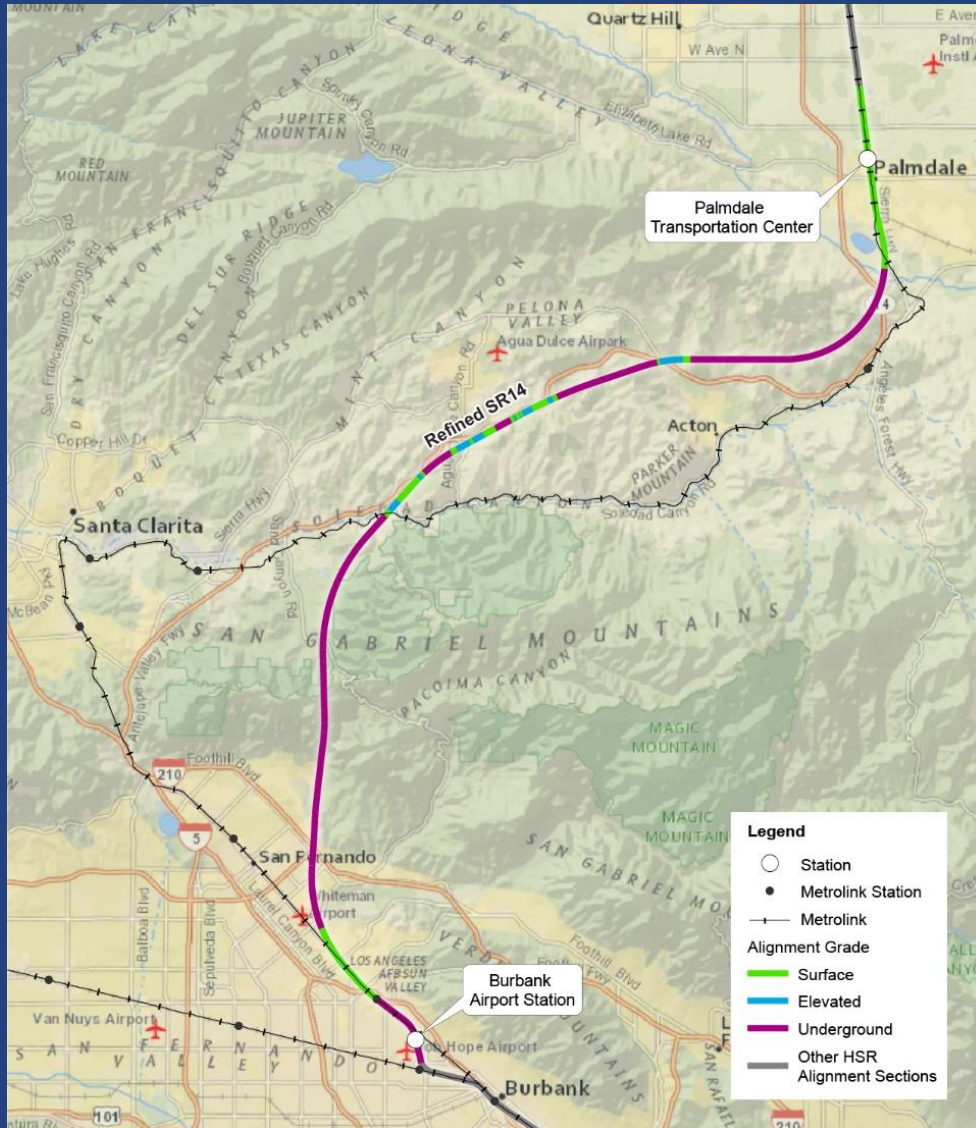
CRITERIA	Alternatives Ratings		
	Refined SR14	E1	E2
FUNCTIONAL			
Travel Time			
Cost			
CONSTRUCTABILITY			
Construction Logistics & Tunnel Construction Duration			
Spoil Disposal Sites			
Overall Time Schedule for Construction			
GEOTECHNICAL			
Geotechnical Risks Due to High Groundwater Pressure			
Distance Across Hazardous Fault Zones			
Number and Net width of "Wide Fault" Zones			

ALTERNATIVES ANALYSIS: ENVIRONMENTAL RESOURCES



CRITERIA	Alternatives Ratings		
	Refined SR14	E1	E2
ENVIRONMENTAL RESOURCES			
Paleontology			
Hazardous Materials			
Agricultural Farmland and Forest Land			
Section 4(f)			
Cultural Resources			
Biological and Water Resources			
ANGELES NATIONAL FOREST IMPACTS			
Length of Tunnels Under the ANF			
Risk of Impacting Seeps and Springs within the ANF			
Adits (Intermediate Access) within the ANF Limits			
Ability to Utilize Spoils from underneath San Gabriel Mountains National Monument (SGMNM) within SGMNM			

STATE'S PREFERRED ALTERNATIVE - REFINED SR 14



- Refined SR 14 would, in general, result in:
 - ✓ Lowest risk to impacting surface or groundwater and corresponding biology within the ANF
 - ✓ Lowest constructability risk
 - ✓ Avoidance of key archeological and tribal resources
 - ✓ Generation of the least amount of spoils from tunneling and other construction activities and therefore has reduced traffic and air quality impacts

* FRA has not yet concurred with the State's Preferred Alternative

NEXT STEPS

**2016
2018**

**Alternative
Development
& Public
Outreach**

ADVANCE RANGE OF ALTERNATIVES

Engagement with Agencies & Community
Desktop Studies, Conceptual Engineering
Mapping & Field Data Collection

**Fall
2018**

**Identification
of State's
Preferred
Alternative**

IDENTIFY STATE'S PREFERRED ALTERNATIVE

Ongoing Communication/Engagement
Extensive Environmental Analysis
Preliminary Engineering
Staff Recommends Alternative to Board for Consideration
Board Considers Recommendation and Identifies State's
Preferred Alternative

**Winter
2019
2020**

**Release of Draft
EIR/EIS &
Hearings**

DRAFT ENVIRONMENTAL DOCUMENT

Ongoing Communication/Engagement
Public Hearings
Response to Comments

**Early
2021**

**Completion of
EIR/EIS & Adopt**

FINAL ENVIRONMENTAL DOCUMENT

Community Open Houses & Briefings
Authority Board Decision (Notice of Determination)
NEPA Decision (Record of Decision)

*Subject to Change

TODAY'S REQUESTED BOARD ACTION

- Concur with the staff recommendation to identify Refined SR 14 as the State's Preferred Alternative in the Palmdale to Burbank Project Section Draft EIR/EIS
- NOTE: Identifying a state's preferred alternative does not constitute the adoption or approval of a Preferred Alternative



Burbank to Los Angeles Project Section

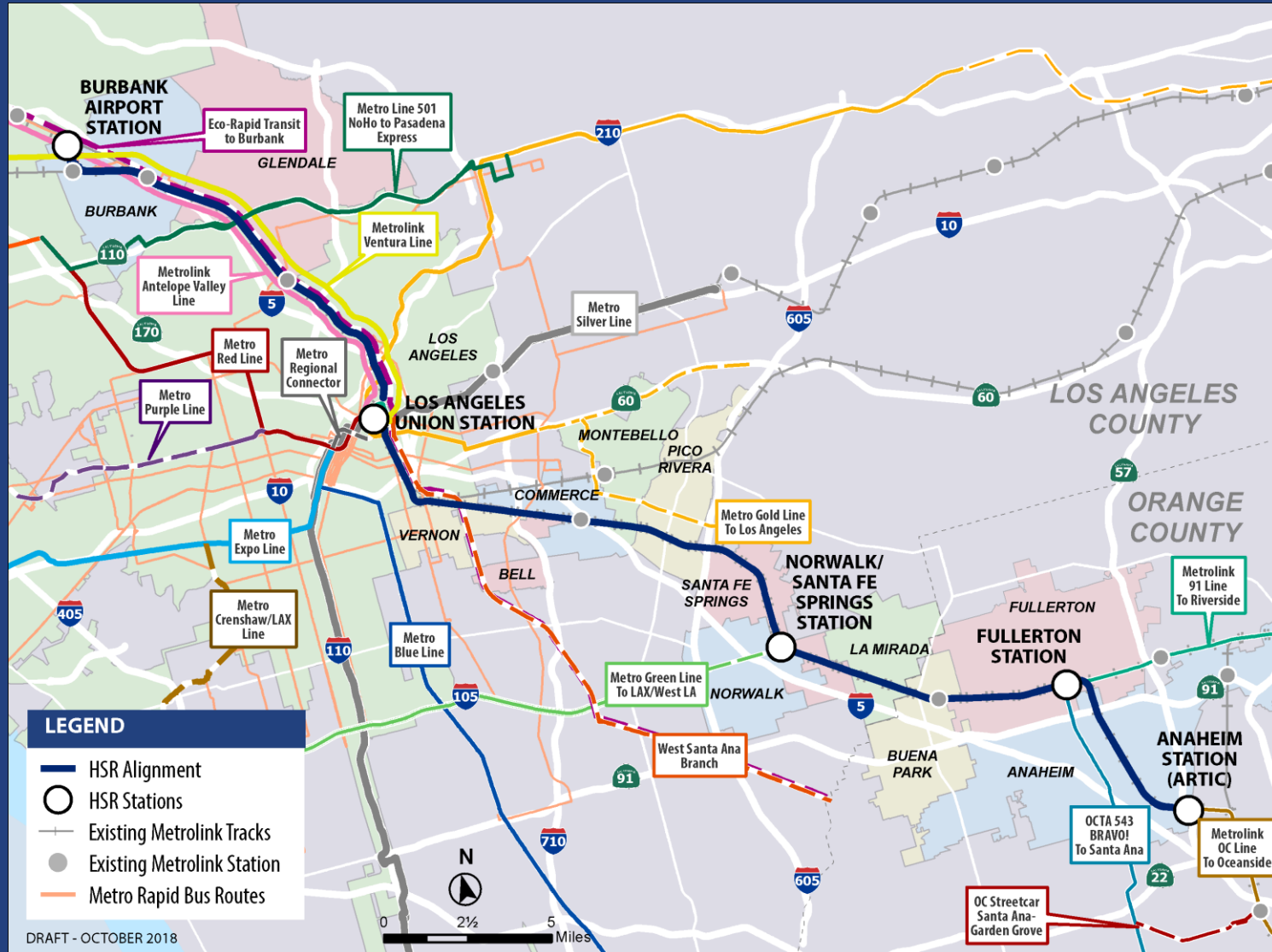
Agenda Item #2 –Presentation on the Staff Recommended State Preferred Alternative for Identification in the Burbank to Los Angeles Project Section Draft EIR/EIS

November 15, 2018

TODAY'S REQUESTED BOARD ACTION AND EXPLANATION

- Concur with staff recommendation to identify HSR Project Alternative as the State's Preferred Alternative in the Burbank to Los Angeles Project Section Draft EIR/EIS
- The Fine Print
 - » Recommendation based on the preliminary analysis completed to date and is considered preliminary
 - » All comments received continue to be considered up until certification of Final EIR currently planned for 2020-2021
 - » Coordination with resource agencies and stakeholders on key issues continues throughout the process
 - » The processes described above may lead to modifications between now and when decision to approve an alignment is made

SHARE CONNECTED MODERN RAIL CORRIDOR: BURBANK TO LOS ANGELES TO ANAHEIM



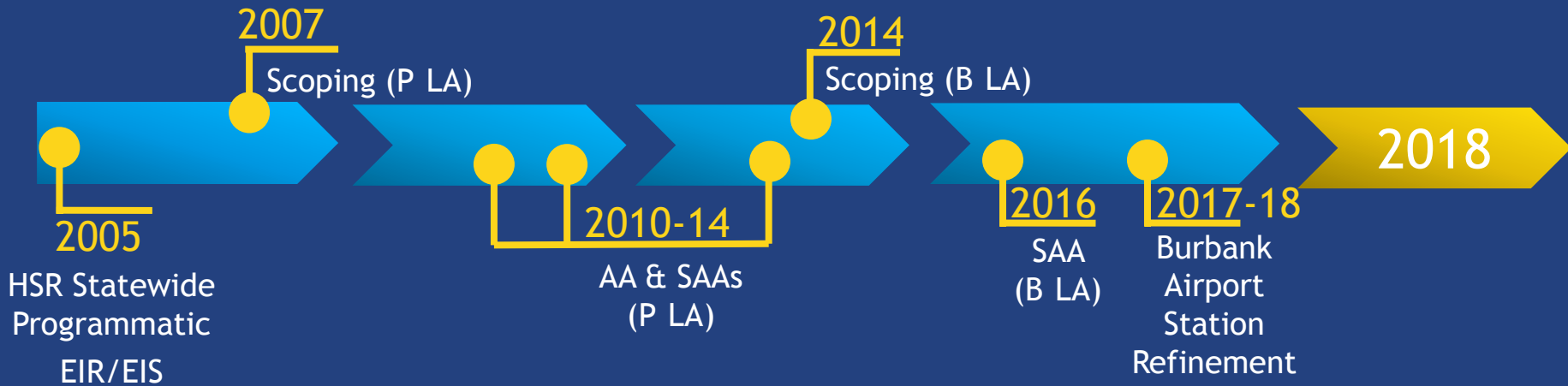
BURBANK TO LOS ANGELES PROJECT SECTION

- **Approximately 14 miles**
- **Two Stations**
 - » Burbank Airport Station
 - » Los Angeles Union Station
- **Two Alternatives Under Study**
 - » HSR Project Alternative
 - » No Project Alternative
- **Alternative Evaluated Across Multiple Areas**
 - » Improve operational characteristics for passenger and freight services
 - » Freight rail improvements
 - » Improve safety
 - » Complete grade separations
 - » Reduce emissions and congestion



** Some grade separations could be completed prior to HSR operations as independent early investment projects.*

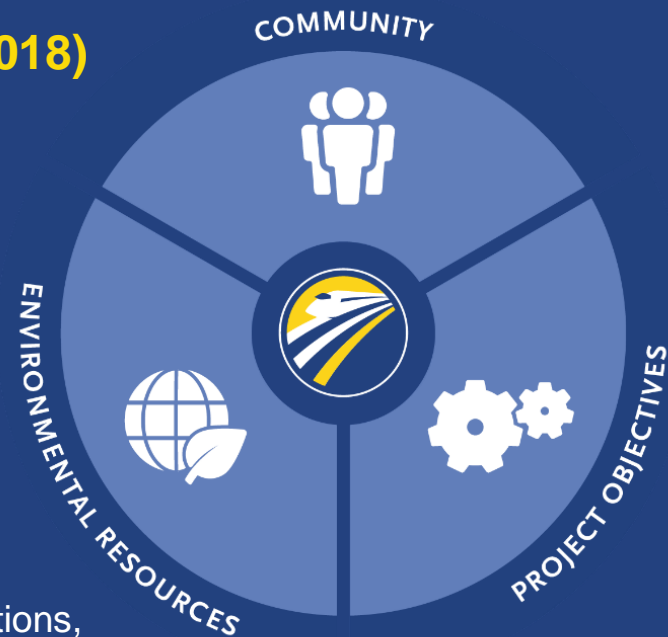
BURBANK TO LOS ANGELES PROJECT DEVELOPMENT TIMELINE



- 2005 Program EIR/S
- 2007 Palmdale to Los Angeles (P-LA) Scoping
- 2010 P-LA Alternatives Analysis (AA)
- 2011 P-LA Supplemental AA (SAA)
- 2014 P-LA SAA
- 2014 Burbank to Los Angeles (B-LA) Scoping
- 2016 B-LA SAA
- 2017-18 Burbank Airport Station Refinement
- 2018 Staff Recommendation

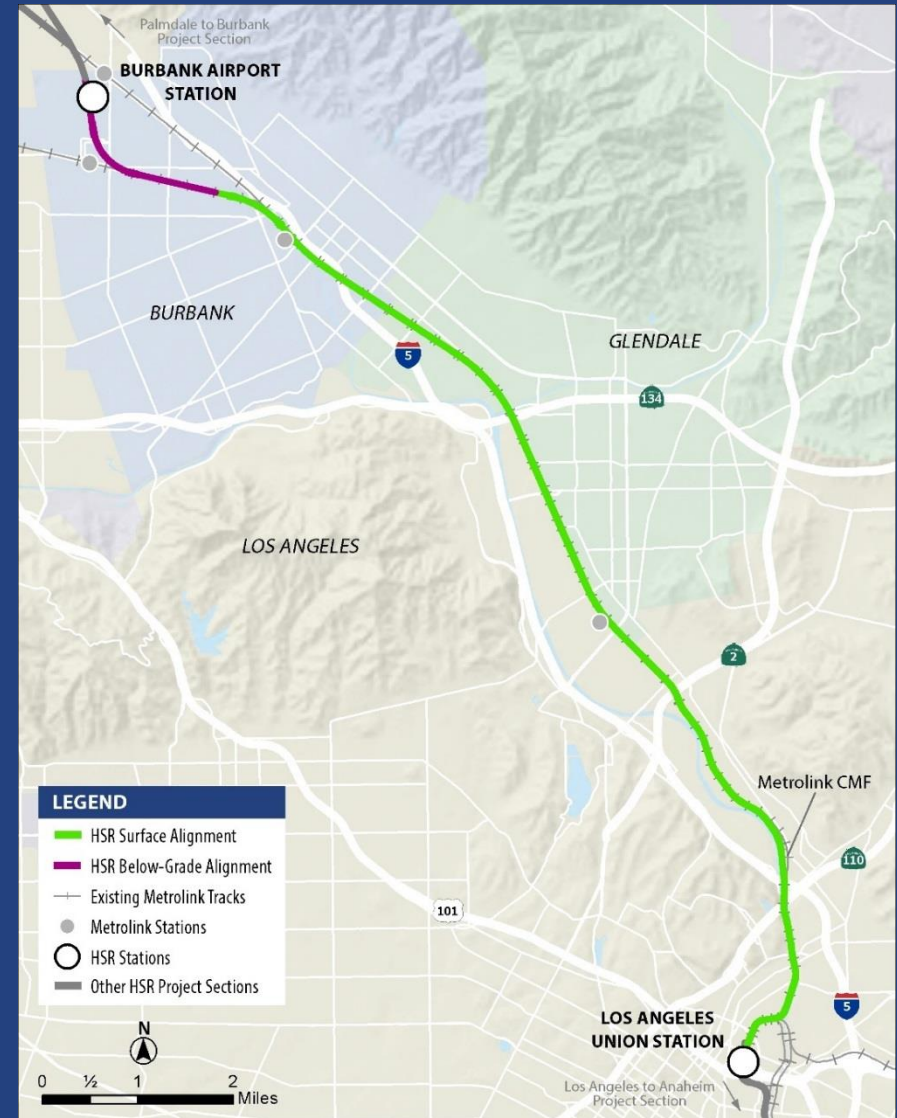
STAKEHOLDER ENGAGEMENT

- **Community Open House Series (2015, 2017 & 2018)**
 - » Burbank, Glendale, Downtown Los Angeles
 - » 665 community members attended
 - » Live webcast and translation services for up to 8 languages
- **Stakeholder Working Groups**
 - » Four rounds of meetings (2015, 2016, 2017 & 2018)
 - » Cypress Park/LA River & Burbank/Glendale
 - » 400+ organizations invited
- **Ongoing Community Activities**
 - » 120+ meetings with key stakeholders & community organizations, neighborhood councils, etc.
 - » Information booths at various community events
 - » Multi faceted, bilingual approach focused on reaching range of stakeholders
 - » “24/7” public online commenting
- **Continuous coordination with current owners/operators (Metro, Amtrak, LOSSAN, Metrolink, UPRR)**



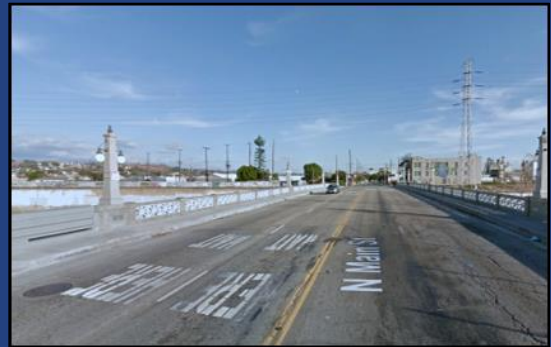
STAFF RECOMMENDED STATE'S PREFERRED ALTERNATIVE

- Staff recommends that the Project Alternative be identified as the State's Preferred Alternative because it best achieves the goals laid out in the Purpose and Need
- The No Project Alternative does not achieve the Purpose and Need
- Key Features
 - » Share electrified tracks throughout most of the project section
 - » Use existing regional stations as stops
 - » Modernize the Corridor



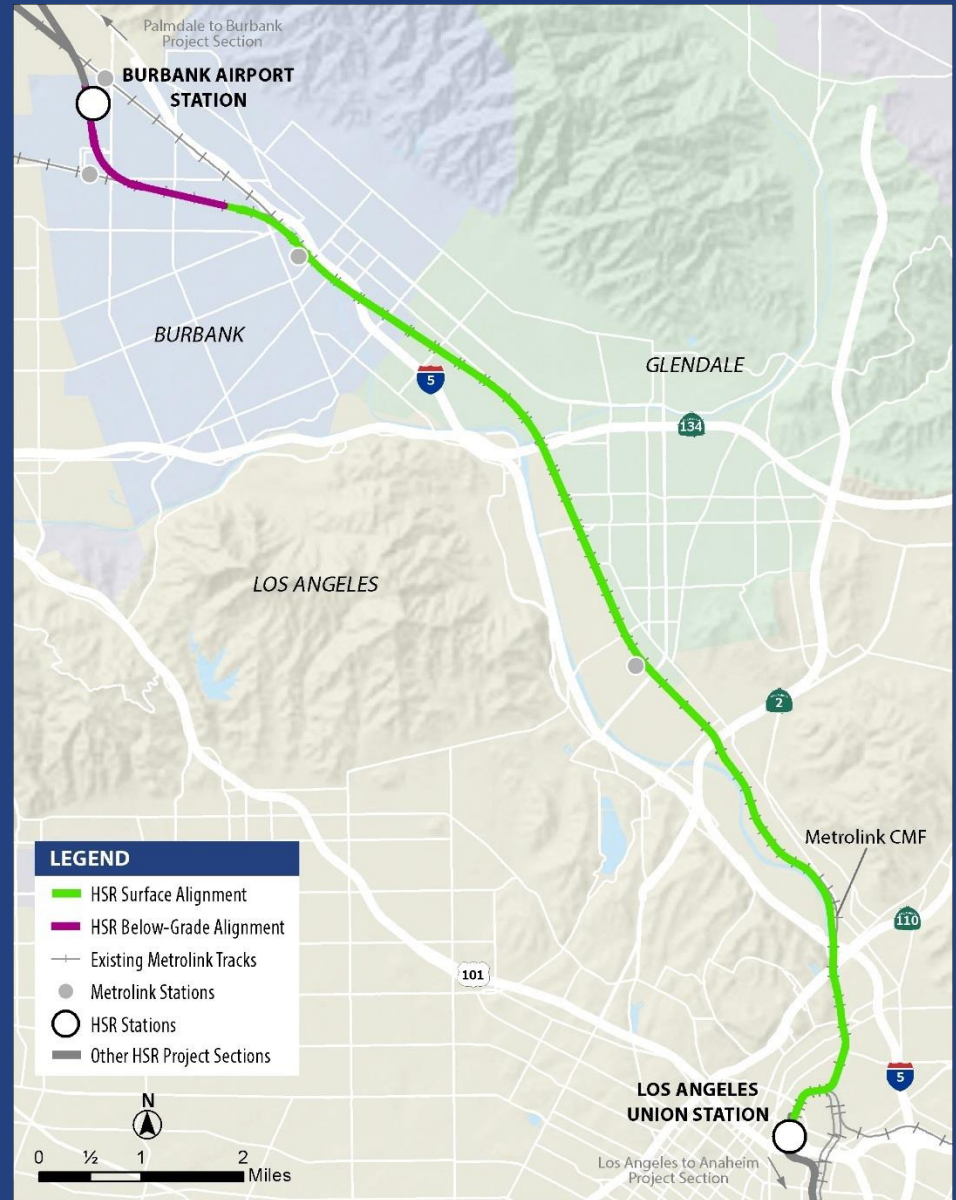
KEY AVOIDANCE & MINIMIZATION ACCOMPLISHMENTS

- **Hollywood Burbank Airport** – Avoids conflicts at Hollywood Burbank Airport (continuing coordination planned to prevent future conflicts)
- **Lockheed / West Burbank Channels** – Refined engineering to minimize permanent impacts to 404/408 resources
- **Glendale Grade Separations** – Reduced grade separation footprints in the City of Glendale which are in close proximity to each other & to sensitive areas
- **Historic Glendale Metrolink Station** – Refined HSR alignment design to avoid direct impacts to existing historic station
- **Eliminate Flyover Structure** – Refined to eliminate flyover rail structure & avoid significant ROW takes
- **Taylor Yard / G2 Parcel** – Refined alignment design to avoid directly impacting proposed park
- **LA River Railroad Crossings** – Designed alignment that shares existing RR bridges in order to avoid impacting directly LA River
- **Main Street** – Refined design reduces impacts, additional coordination underway on remaining issues



THE PROJECT ALTERNATIVE BY THE NUMBERS

- **Length: Approx. 14 miles**
 - » Approximately 1 mile would be located below-grade in Burbank
 - » Remainder is at-grade primarily within existing railroad corridor
 - » Would share corridor with Metrolink, Amtrak, and UPRR
 - » Shift existing tracks to north/east (freight & non-HSR passenger only)
 - » Add two new electrified tracks on south/west to share with passenger rail only (no freight)
- **2 Stations**
 - » Burbank Airport Station (New)
 - » Los Angeles Union Station (Existing)
- **6 grade separations, 1 roadway closure**
- **Shared electrified tracks through most of the project section**
- **Capital Cost considerations**



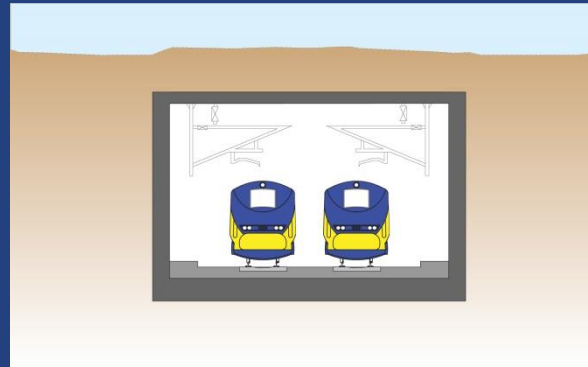
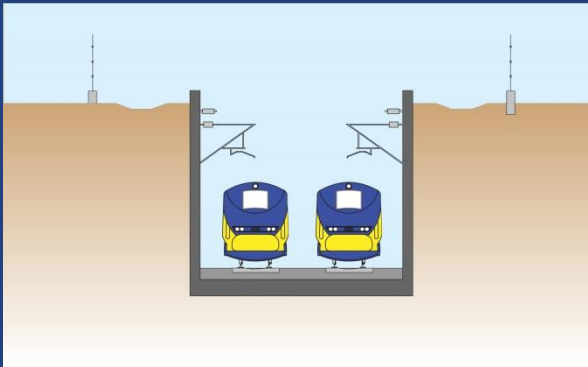
PROJECT COSTS

- **Total Proposed Project Alternative Cost in 2017 Dollars: \$3.6B**
- **Environmental Documents versus 2018 Business Plan**
 - » Should Not Be Compared on a Like for Like Basis
- **Projects Demonstrate Independent Utility**
 - » Duplication of Scope Across Project Sections
- **Environmental Project Scope is Conservative**
 - » 15% Design
 - » Maximum Footprint to Evaluate all Potential Impacts
 - » Value Engineering Not Yet Applied

1 The total cost estimate includes the total effort and materials necessary to construct this section, including stations, maintenance facilities, and modifications to roadways required to accommodate grade separated guideways.

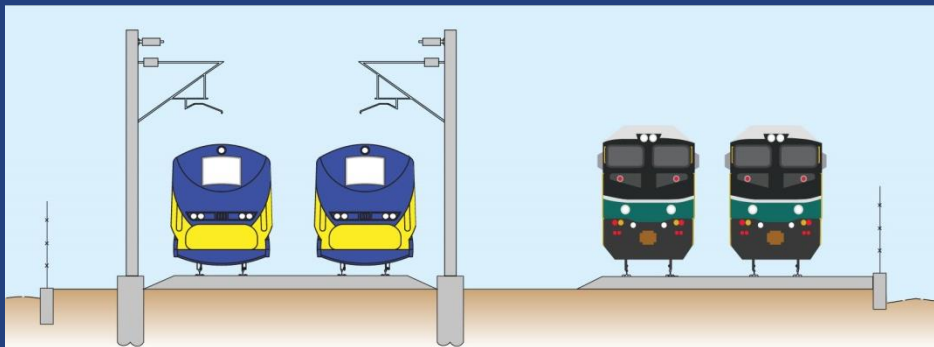
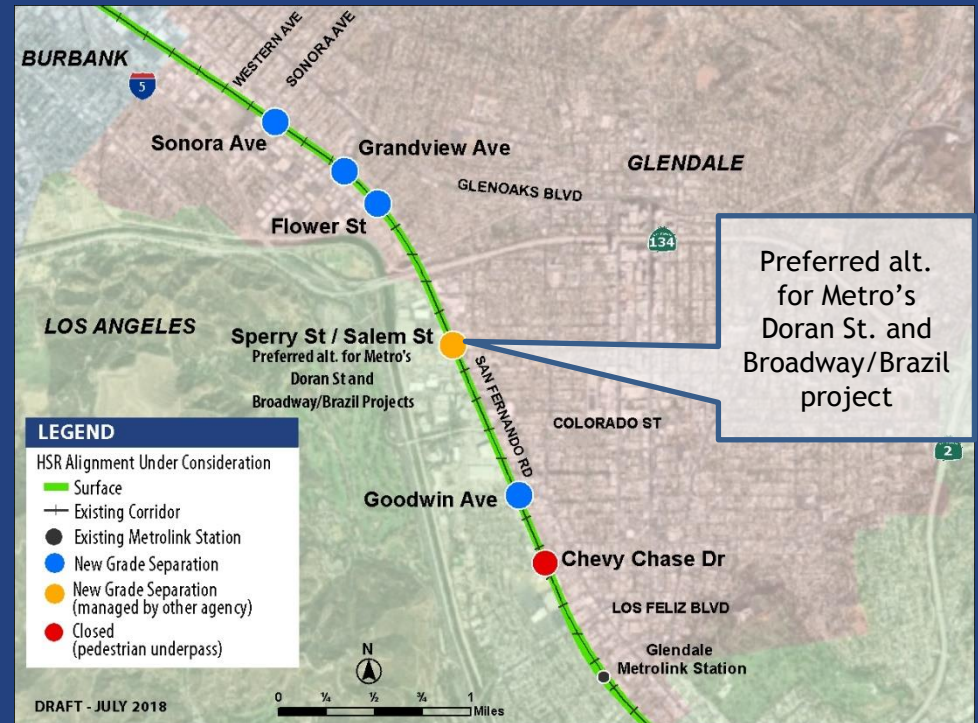
BURBANK

- Burbank Airport Station improves connectivity to relocated airport terminal
- Preserves existing downtown Burbank Metrolink Station
- Minimizes interface with residential areas



GLENDALE & ATWATER VILLAGE

- Follows existing rail corridor
- Coordination underway with local neighborhoods on grade separations
- Preserves historic Glendale Amtrak/MetroLink Station



Photos and graphics for illustrative purposes only.

LOS ANGELES

- Alignment crosses LA River
- Avoids impacts to G2 Parcel & Los Angeles State Historic Park
- Planned grade separation at Main Street
- Coordination with Metro LinkUS Project

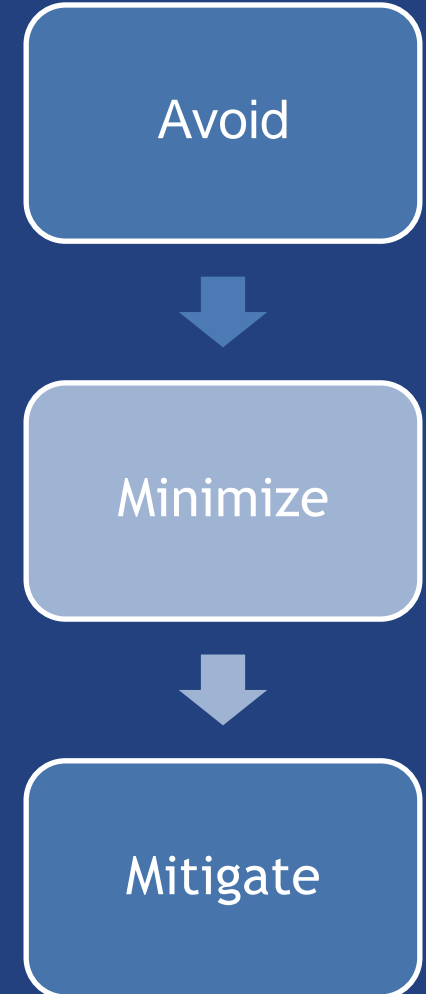


IDENTIFYING STATE'S PREFERRED ALTERNATIVE

- » Identifying a preferred alternative aligns with federal law, including MAP-21 (2012) and FAST Act (2015), and with CEQA
- » This process is consistent with the approach adopted for the *Merced to Fresno Project Section: Central Valley Wye Supplemental EIR/EIS and Bakersfield to Palmdale EIR/EIS*
- » Identifying a preferred alternative in the Draft EIR/EIS allows the public and agencies to comment on the preferred alternative
- » Identifying a State's preferred alternative does not constitute the adoption or approval of a Preferred Alternative
- » Concur with the staff recommendation to identify the HSR Project Alternative as the State's Preferred Alternative in the Project Section Draft EIR/EIS

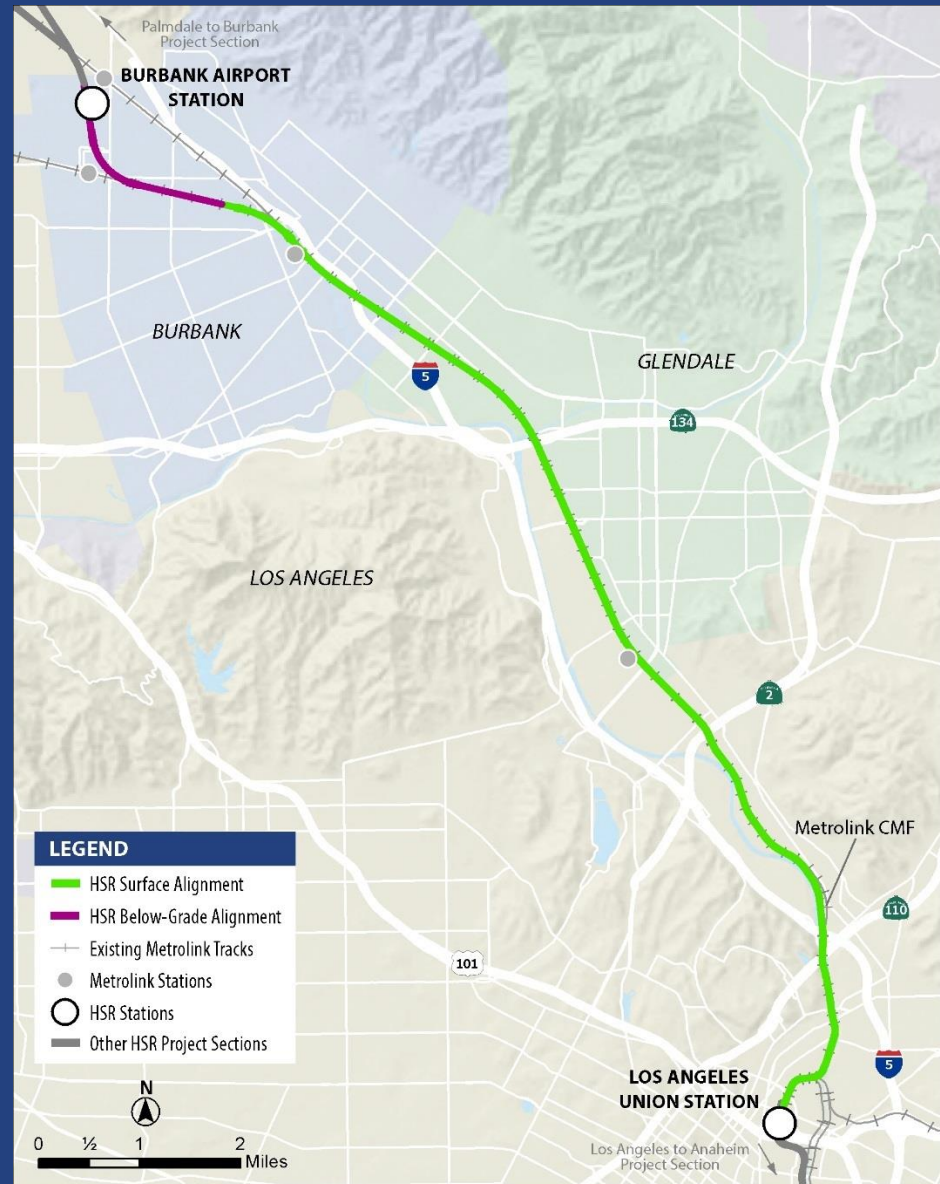
AVOID, MINIMIZE & MITIGATE POTENTIAL IMPACTS

- Develop alternatives that:
 1. **Avoid** impacts
 2. **Minimize** impacts, when they cannot be avoided
 3. **Mitigate** impacts, when they cannot be avoided or minimized
- The project alternative represents numerous design adjustments to avoid impacts such that there are now:
 - » Fewer ROW impacts – both commercial and residential
 - » Fewer visual impacts – decrease in viaduct sections
 - » Reduced potential impacts to EJ communities



STATE'S PREFERRED ALTERNATIVE

- Staff recommends the HSR Project Alternative Over the No Project Alternative
 - » Satisfies Project's Purpose, Need & Objectives
 - » Corridor safety
 - » Transportation amenity
 - » Improve regional air quality
 - » Community benefits
- Mitigation Measures will be identified in the Draft EIR/EIS



NEXT STEPS

COMPLETED	Alternative Development & Public Outreach 2016 2018	ADVANCE RANGE OF ALTERNATIVES Engagement with Agencies & Community Desktop Studies, Conceptual Engineering Mapping & Field Data Collection
NEXT STEPS	Identification of State's Preferred Alternative Fall 2018	IDENTIFY STATE'S PREFERRED ALTERNATIVE Ongoing Communication/Engagement Extensive Environmental Analysis Preliminary Engineering Staff Identifies & Recommends State's Preferred Alternative to Board
	Release of Draft EIR/EIS & Hearings	DRAFT ENVIRONMENTAL DOCUMENT Ongoing Communication/Engagement Public Hearings Response to Comments
	Completion of EIR/EIS & Adopt	FINAL ENVIRONMENTAL DOCUMENT Community Open Houses & Briefings Authority Board Decision (Notice of Determination) NEPA Decision (Record of Decision)

TODAY'S REQUESTED BOARD ACTION

- Concur with the staff recommendation to identify the HSR Project Alternative as the State's Preferred Alternative in the Los Angeles to Anaheim Project Section Draft EIR/EIS
- NOTE: Identifying a state's preferred alternative does not constitute the adoption or approval of a Preferred Alternative



CALIFORNIA
High-Speed Rail Authority

Los Angeles to Anaheim Project Section

Agenda Item #3 -- Presentation on the Staff Recommended State Preferred Alternative for Identification in the Los Angeles to Anaheim Project Section Draft EIR/EIS

November 15, 2018

TODAY'S REQUESTED BOARD ACTION AND EXPLANATION

- Concur with staff recommendation to identify HSR Project Alternative as the State's Preferred Alternative in Los Angeles to Anaheim Project Section Draft EIR/EIS
- The Fine Print
 - » Draft EIR/EIS under development and will be published at a later date
 - » Recommendation based on the preliminary analysis completed to date and is considered preliminary
 - » Comments received continue to be considered up until certification of Final EIR currently planned for 2020-2021
 - » Coordination with resource agencies and stakeholders on key issues continues throughout the process
 - » The processes described above may lead to modifications between now and when the decision to approve an alternative is made

LOS ANGELES TO ANAHEIM PROJECT SECTION

- **Approximately 30 miles**
- **Four Stations and/or Stops**
 - » Los Angeles Union Station
 - » Norwalk/Santa Fe Springs Station
 - » Fullerton Transportation Center
 - » Anaheim Regional Transportation Intermodal Center (ARTIC)
- **Two Alternatives Under Study**
 - » Project Alternative
 - » No Project Alternative
- **Alternative Evaluated Across Multiple Areas**
 - » Improve operational characteristics for passenger and freight services
 - » Freight rail improvements
 - » Improve safety
 - » Complete grade separations*
 - » Reduce emissions and congestion



* Some grade separations could be completed prior to HSR operations as independent early investment projects.

LOS ANGELES TO ANAHEIM PROJECT DEVELOPMENT TIMELINE



- 2005 Program EIR/EIS
- 2007 Scoping
- 2009 Alternatives Analysis
- 2010 Supplemental Alternatives Analysis
- 2016 Supplemental Alternatives Analysis
- 2018 Staff Recommendation

STAKEHOLDER ENGAGEMENT

- **Open House Series (2015, 2017, & 2018)**
 - » Downtown LA, Montebello, Santa Fe Springs, Norwalk, Commerce, Pico Rivera, Buena Park, Fullerton, Anaheim
 - » 581+ community members attended
 - » Live webcast and translation services for five languages
- **Stakeholder Working Group**
 - » Four rounds of meetings (2015, 2016, 2017, & 2018)
 - » 400+ organizations invited
- **Ongoing Community Activities**
 - » 200+ meetings with key stakeholders & community organizations, neighborhood councils, etc.
 - » Information booths at various community events
 - » Multi-faceted, bilingual approach focused on reaching range of stakeholders
 - » “24/7” public online commenting
- **Continuous coordination with owners/operators (LA Metro, Amtrak, BNSF, OCTA, LOSSAN, Metrolink)**



STAFF RECOMMENDED STATE'S PREFERRED ALTERNATIVE

- Staff recommends that the Project Alternative be identified as the State's Preferred Alternative because it best achieves the goals laid out in the Purpose and Need
- The No Project Alternative does not achieve the Purpose and Need
- Key Features
 - » Share electrified tracks throughout most of the project section
 - » Use existing regional stations as stops
 - » Modernize the Corridor



“...provide the public with electric-powered HSR service that offers predictable and consistent travel times between major urban centers...”

-HSR EIR/EIS Purpose and Need

KEY AVOIDANCE & MINIMIZATION ACCOMPLISHMENTS

- **Redondo to Fullerton Junction** - Fewer ROW impacts; 30% less commercial and residential parcels needed
- **Vernon and Commerce** - Less visual impacts with 50% decrease in viaducts
- **LA, San Gabriel & Rio Hondo Rivers** - Fewer new bridges/footings - in water/wetland resources
 - » Fewer tracks allows sharing of existing bridges
 - » 65% fewer new HSR bridges
 - » 50% less acreage impacted
- **Montebello, Pico Rivera & La Mirada** - Fewer Environmental Justice communities adverse impacts from fewer property acquisitions
- **BNSF tracks** - Minimal impacts to railroads and roads
 - » 50% reduction of shifted track
 - » Tracks elevated on new viaducts to overpass roads



THE PROJECT ALTERNATIVE BY THE NUMBERS

- **Length: Approx. 30 miles**
 - » ~3.9 miles elevated tracks (at Redondo Junction, Commerce Yard, and Santa Fe Springs/Norwalk)
 - » ~0.9 miles below-grade through Fullerton
 - » Remainder at-grade *primarily* within existing railroad corridor
 - » Would share corridor with Metrolink, Amtrak, BNSF and UPRR
- **Four stops that utilize existing regional stations**
 - » Los Angeles Union Station
 - » Norwalk/Santa Fe Springs Station
 - » Fullerton Transportation Center
 - » Anaheim Regional Transportation Intermodal Center (ARTIC)
- **10 grade separations, 2 roadway closures at existing at-grade crossings**
- **Shared electrified tracks through most of project section**
- **Capital Cost considerations**



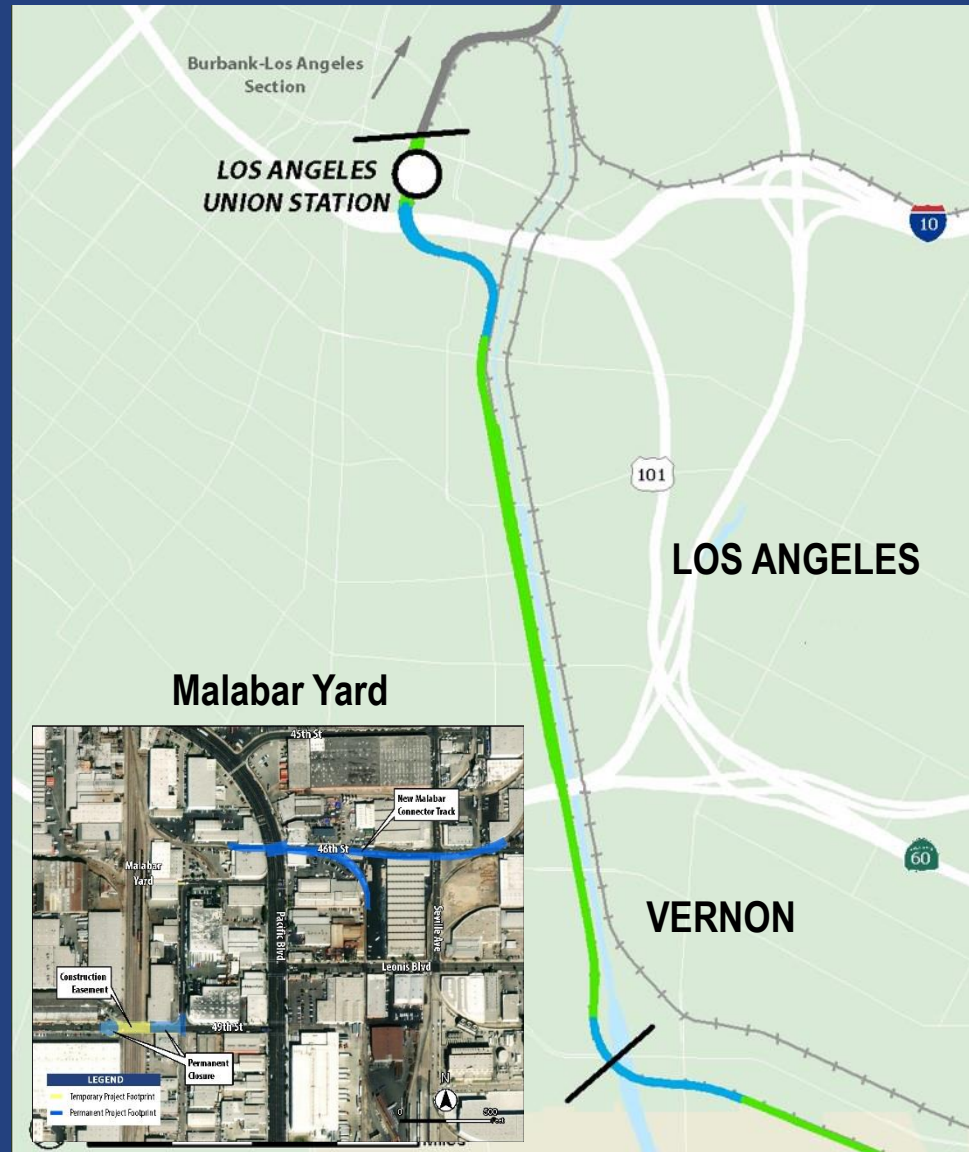
PROJECT COSTS

- **Total Proposed Project Alternative Cost in 2017 Dollars: \$4.9B**
- **Environmental Documents versus 2018 Business Plan**
 - » Should Not Be Compared on a Like for Like Basis
- **Projects Demonstrate Independent Utility**
 - » Duplication of Scope Across Project Sections
- **Environmental Project Scope is Conservative**
 - » 15% Design
 - » Maximum Footprint to Evaluate all Potential Impacts
 - » Value Engineering Not Yet Applied

1 The total cost estimate includes the total effort and materials necessary to construct this section, including stations, maintenance facilities, and modifications to roadways required to accommodate grade separated guideways.

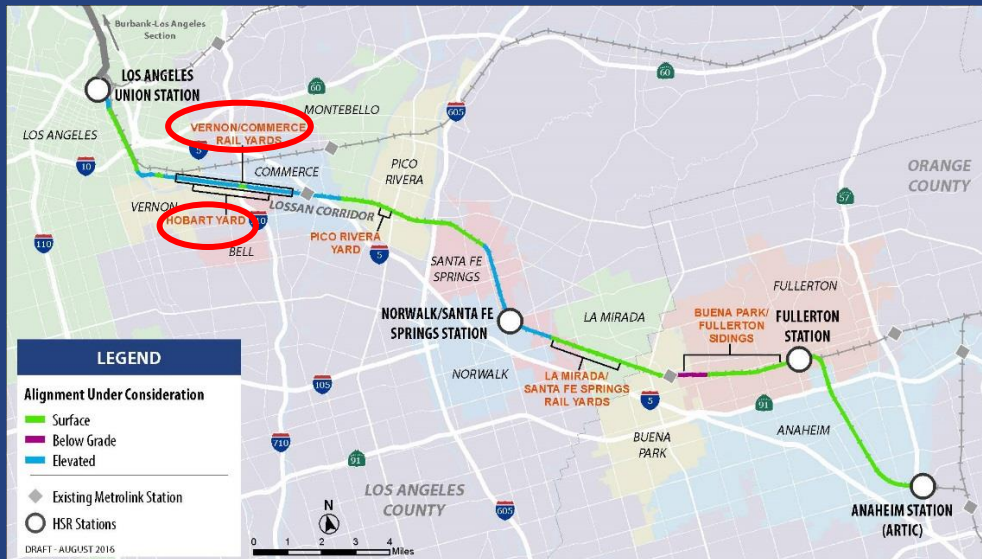
LOS ANGELES TO VERNON

- Coordination with LA Metro Link US Project from LAUS to 1st Street
- Conversion of BNSF railroad yard on west bank of the LA River to HSR light maintenance facility
- Malabar Yard Connection
 - » 750' of new freight track to link with mainline without having equipment idle on the mainline
 - » 49th St. crossing closure



VERNON / COMMERCE TO MONTEBELLO

- Addition of at least 1 new mainline track
- Existing tracks electrified and/or realigned to accommodate HSR
- Relocate Commerce Station 0.75 miles east, to Maple Avenue



- Improved access to freight facilities and modernization of yard equipment at Hobart and Commerce Yards
 - » Eliminates many switching movements to transfer intermodal cars
 - » Eliminates movements from 8th Street Yard
 - » New east Commerce Yard track allowing for switching short cuts without need to use mainline

MONTEBELLO TO FULLERTON

Norwalk / Santa Fe Springs Station Reconfiguration



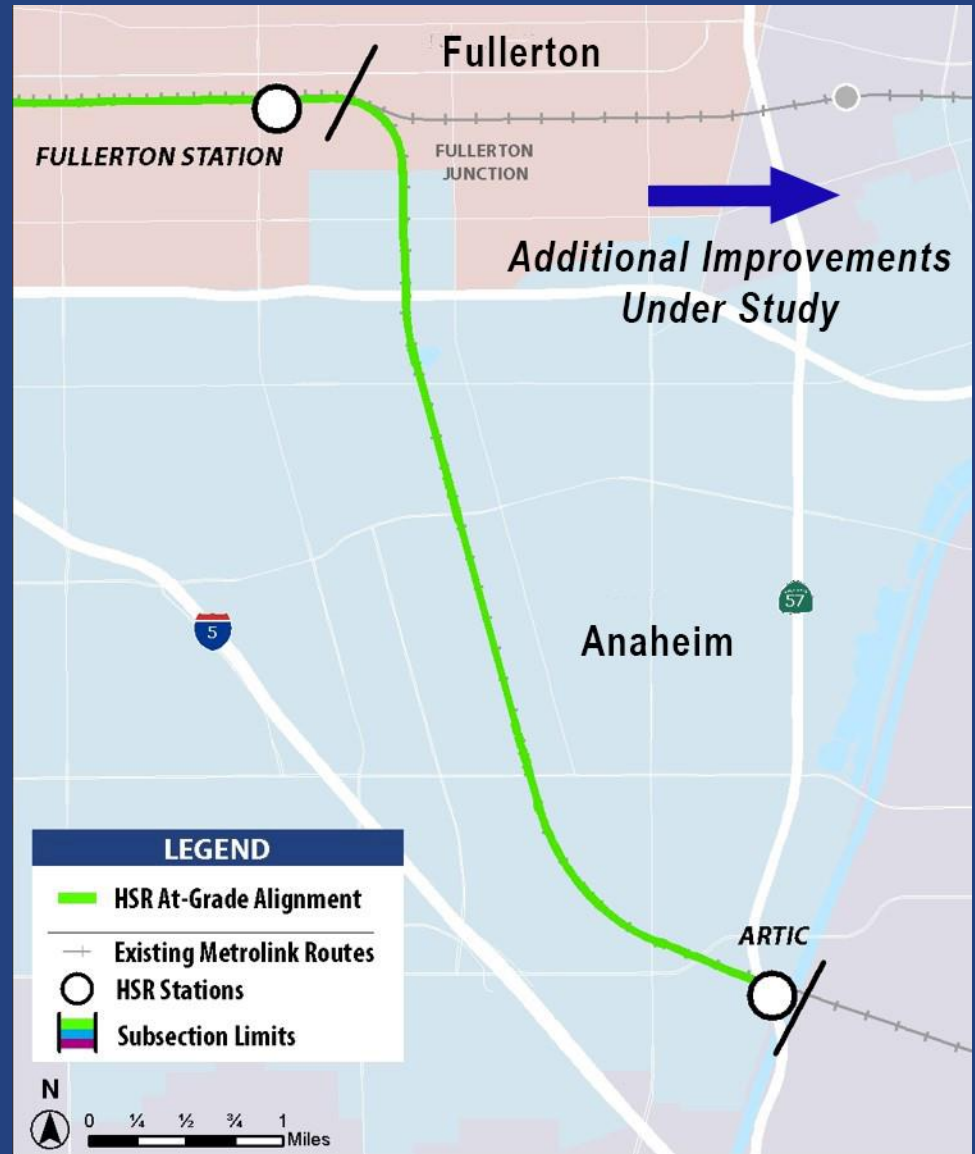
- Relocate Buena Park Station 0.75 miles west, to Beach Blvd
- Reconfigure Norwalk/Santa Fe Springs Metrolink Station on elevated structure, approximately 350 feet east of current location

- Alignment mostly within existing railroad corridor except in the area where the reconfiguration of Norwalk Santa Fe Springs Station to accommodate HSR stop
- Addition of at least 1 new mainline track
- Existing tracks electrified and/or realigned to accommodate HSR



FULLERTON TO ANAHEIM

- Alignment within existing railroad corridor
- Existing tracks electrified and/or realigned to accommodate HSR
- Improvements at Fullerton Junction eliminate conflicts between freight and passenger train movements
- Additional improvements east of Fullerton Junction are under study because they could provide further operational and construction staging benefits

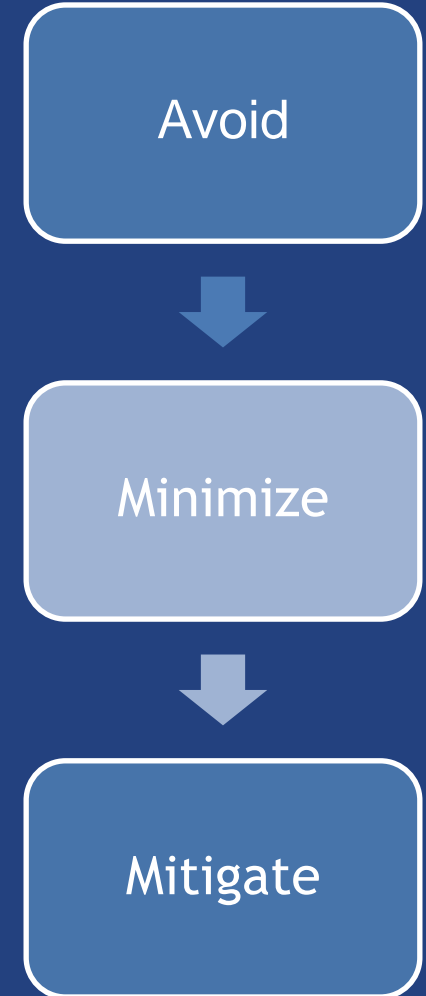


IDENTIFYING STATE'S PREFERRED ALTERNATIVE

- Identifying a preferred alternative aligns with federal law, including MAP-21 (2012) and FAST Act (2015), and with CEQA
- This process is consistent with approach adopted for *Merced to Fresno Project Section: Central Valley Wye Supplemental EIR/EIS* and *Bakersfield to Palmdale EIR/EIS*
- Identifying a preferred alternative in Draft EIR/EIS allows public and agencies to comment on preferred alternative
- Identifying a State's preferred alternative does not constitute adoption or approval of a Preferred Alternative
- Concur with the staff recommendation to identify HSR Project Alternative as the State's Preferred Alternative in the Project Section Draft EIR/EIS

AVOID, MINIMIZE & MITIGATE POTENTIAL IMPACTS

- Develop alternatives that:
 1. **Avoid** impacts
 2. **Minimize** impacts, when they cannot be avoided
 3. **Mitigate** impacts, when they cannot be avoided or minimized
- The Project Alternative represents numerous design adjustments to avoid impacts such that there are now:
 - » Fewer ROW impacts – both commercial and residential
 - » Fewer visual impacts – decrease in viaduct sections
 - » Fewer new bridges/footings in water/wetland resources
 - » Reduced potential impacts to EJ communities
 - » Reduced 4(f) uses
 - » Minimal impact to existing railroad operations



STATE'S PREFERRED ALTERNATIVE

- Staff recommends the Project Alternative over the No Project Alternative
 - » Satisfies the Project's Purpose and Objectives
 - » Transportation amenity
 - » Improve regional air quality
 - » Safety
 - » Promote efficient land use and station area development
 - » Socioeconomics & Communities
- Mitigation measures will be identified in Draft EIR/EIS



NEXT STEPS

COMPLETED

**Alternative
Development &
Public Outreach**
2016 | 2018

ADVANCE RANGE OF ALTERNATIVES

Engagement with Agencies & Community
Desktop Studies, Conceptual Engineering
Mapping & Field Data Collection

NEXT STEPS

**Identification of
State's Preferred
Alternative**
Fall 2018

IDENTIFY STATE'S PREFERRED ALTERNATIVE

Ongoing Communication/Engagement
Extensive Environmental Analysis
Preliminary Engineering
Staff Identifies & Recommends State's Preferred Alternative to Board

**Release of Draft
EIR/EIS &
Hearings**

DRAFT ENVIRONMENTAL DOCUMENT

Ongoing Communication/Engagement
Public Hearings
Response to Comments

**Completion of
EIR/EIS & Adopt**

FINAL ENVIRONMENTAL DOCUMENT

Community Open Houses & Briefings
Authority Board Decision (Notice of Determination)
NEPA Decision (Record of Decision)

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