LOS ANGELES TO ANAHEIM PROJECT ELEMENTS
## ALTERNATIVES COMPARISON

<table>
<thead>
<tr>
<th>ALTERNATIVE 1</th>
<th>ALTERNATIVE 2</th>
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<tbody>
<tr>
<td>Up to 3 new tracks</td>
<td>Up to 2 new tracks</td>
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<tr>
<td>Would require additional right-of-way</td>
<td>Would require additional right-of-way, but less than Alternative 1</td>
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<td>Three Stations:</td>
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<td>1. Los Angeles Union Station (LAUS)</td>
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<td></td>
<td>2. Norwalk/Santa Fe Springs OR Fullerton</td>
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<td>3. Anaheim Station (ARTIC)</td>
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</tbody>
</table>
VERTICAL PROFILES

- ELEVATED
- SURFACE
- BELOW GRADE

EXAMPLE: GRADE SEPARATION
EXAMPLE: ELEVATED

• Pros
  » Narrower width
  » Useable space below structure
  » Rider views
  » Constructability

• Cons
  » Visual impact
  » Noise impact

*Train tracks elevated above ground.*
EXAMPLE: SURFACE

• Pros
  » Fewer visual impacts (vs. elevated)
  » Rider views
  » Constructability
  » Construction costs

• Cons
  » Property impacts
  » Aesthetics (noise barriers)

Train tracks at surface level.
EXAMPLE: BELOW GRADE

**Pros**
- Limited visual impacts
- Options for connectivity across trench
- Avoids conflict with airport flight path

**Cons**
- Cost
- Limited rider views
- Right of way for construction
- Potential impacts to waterways and utilities

*Train tracks below surface level.*
EXAMPLE: GRADE SEPARATION

https://www.youtube.com/watch?v=TnH0u9QK8xc
EXAMPLES: SOUND BARRIERS
EXAMPLES: BRIDGE DESIGN
LOCAL SAFETY BENEFITS

• Investment in Positive Train Control (PTC)
  » GPS-based safety technology capable of preventing train collisions and over-speed derailments

• New Grade Separations

• Upgrading Existing Safety Improvements

• Results:
  » Increased capacity for passenger rail service (Metrolink and Amtrak)
  » Safer service for all passengers and operators
METROLINK EFFICIENCY IMPROVEMENTS

• Separation of Freight and Passenger Rail
• New and Upgraded Metrolink Locomotives, Facilities and Equipment
• Grade Separations
• Results for Riders:
  » Increased on-time performance
  » Increased train frequencies
  » Improved customer experience
  » More rail travel options
LOCAL TRANSIT CONNECTIONS

LEGEND

- HSR Alignment
- HSR Stations
- HSR Station Options
- Existing Metrolink Station
- Metro Rapid Bus Routes

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CORRIDOR CITIES
HIGH-SPEED RAIL IN LOS ANGELES

- At-grade along Los Angeles River
  ‣ Coordination with LA River projects

- Proposed alignments in and out of Los Angeles Union Station take into consideration sensitive structures and aesthetics

- High-Speed Rail service at Los Angeles Union Station

- Future study of Los Angeles Union Station will be addressed in the Burbank to Los Angeles Project Section
HIGH-SPEED RAIL IN VERNON

- Elevated, and at-grade under the I-710, using the existing corridor
- Minimizes impacts to 26th Street, but additional design refinements would be needed to address impacts to the south of the BNSF tracks
HIGH-SPEED RAIL IN BELL

• Elevated using the existing corridor

• Approximately 1,500 feet of the rail corridor is within Bell
HIGH-SPEED RAIL IN COMMERCE

- Elevated using the existing corridor
- Commerce Metrolink Station would provide feeder service to High-Speed Rail
- Proposed columns would be placed within Commerce Metrolink Station parking lot with minimal impacts
HIGH-SPEED RAIL IN MONTEBELLO

- Elevated, then at-grade immediately south of Greenwood Avenue within existing corridor
- High-Speed Rail team exploring designs that would keep the alignment completely at-grade within city boundaries
HIGH-SPEED RAIL IN PICO RIVERA

• At-grade using existing corridor
• Alignment would travel under the I-605, avoiding impacts to the freeway, but requiring a new San Gabriel River crossing for Slauson Avenue
  » New High-Speed Rail structure would be built with minor work to existing rail structure
HIGH-SPEED RAIL IN NORWALK & SANTA FE SPRINGS

- At-grade under the I-605
- Elevated through existing Metrolink Station
- At-grade after Carmenita Road
- High-Speed Rail station option adjacent to existing Metrolink station
- New structure for Valley View Avenue grade separation and some road modifications proposed
- Rosecrans/Marquardt identified as an early investment project by High-Speed Rail
HIGH-SPEED RAIL IN LA MIRADA

- New structure for Valley View Avenue grade separation and some road modifications proposed
- Modifications to the Alondra Boulevard grade separation and the Edison Substation to accommodate High-Speed Rail
HIGH-SPEED RAIL IN BUENA PARK

• At-grade alignment using existing corridor
  » Street crossings remain grade separated

• Buena Park Metrolink Station is proposed to be relocated
  » Evaluating the corner near Beach Boulevard and Stage Road
HIGH-SPEED RAIL IN FULLERTON

• At-grade alignment using existing corridor
  » Short below grade section under the Fullerton Airport flight path
  » Street crossings remain grade separated

• High-Speed Rail station option at the Fullerton Transit Center

• Would avoid potential impacts to the Janet Evans Swim Complex, the Hunt Building Structure, and the Hunt Library Structure
HIGH-SPEED RAIL IN ANAHEIM

• At-grade alignment using existing corridor and tracks

• City coordination for improved grade crossings
  » Reviewing opportunities for pedestrian and bicycle bridges for community circulation

• High-Speed Rail service at Anaheim Station (ARTIC)