

# LOS ANGELES TO ANAHEIM PROJECT ELEMENTS



# LOS ANGELES TO ANAHEIM PROJECT SECTION



## LEGEND

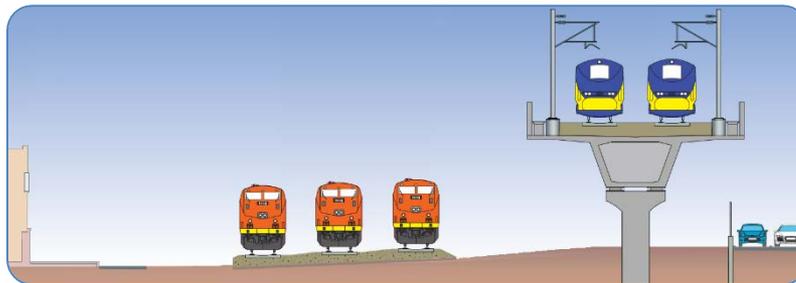
- HSR Alignment
- HSR Stations
- HSR Station Options
- Existing Metrolink Station

# ALTERNATIVES COMPARISON

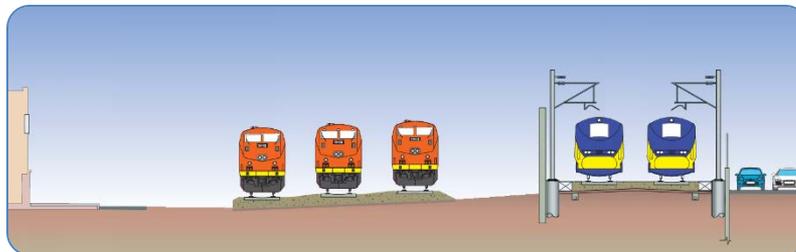
ALTERNATIVE 1	ALTERNATIVE 2
Up to 3 new tracks	Up to 2 new tracks
Would require additional right-of-way	Would require additional right-of-way, but less than Alternative 1
<b>Three Stations:</b> <ol style="list-style-type: none"><li>1. Los Angeles Union Station (LAUS)</li><li>2. Norwalk/Santa Fe Springs OR Fullerton</li><li>3. Anaheim Station (ARTIC)</li></ol>	

# VERTICAL PROFILES

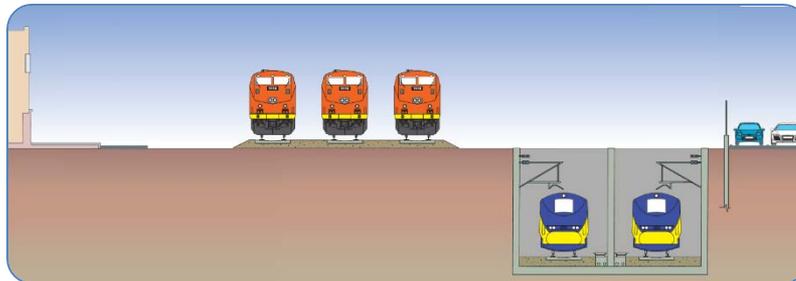
ELEVATED



SURFACE



BELOW GRADE



EXAMPLE: GRADE SEPARATION

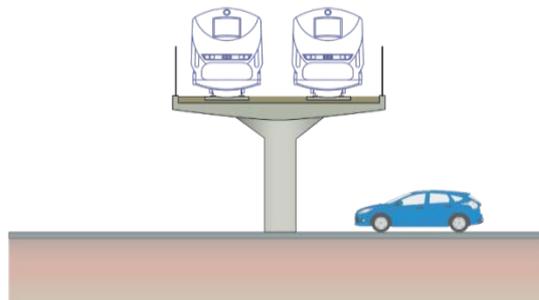
# EXAMPLE: ELEVATED

- Pros

- » Narrower width
- » Useable space below structure
- » Rider views
- » Constructability

- Cons

- » Visual impact
- » Noise impact



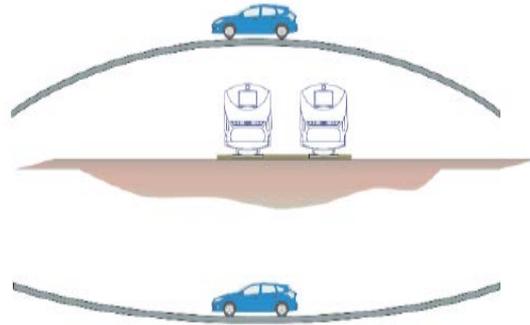
*Train tracks elevated above ground.*



# EXAMPLE: SURFACE

- Pros

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



*Train tracks at surface level.*

- Cons

- » Property impacts
- » Aesthetics (noise barriers)



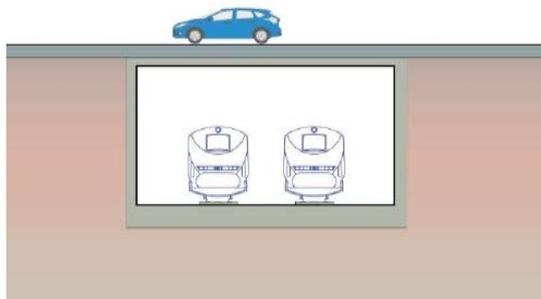
# EXAMPLE: BELOW GRADE

- 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

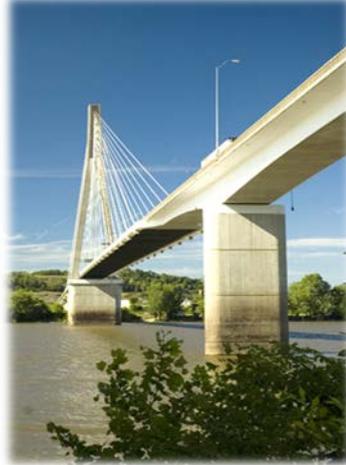
<https://www.youtube.com/watch?v=TnHOu9QK8xc>



# 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

DRAFT - OCTOBER 13, 2015

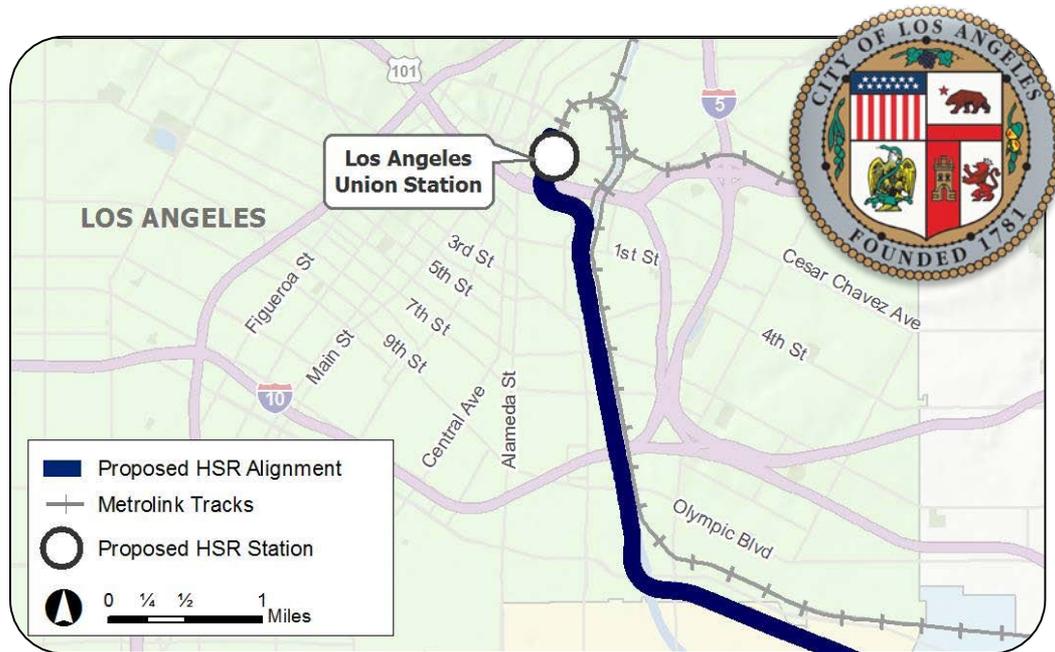
0 1 2 3 4 Miles

# CORRIDOR CITIES



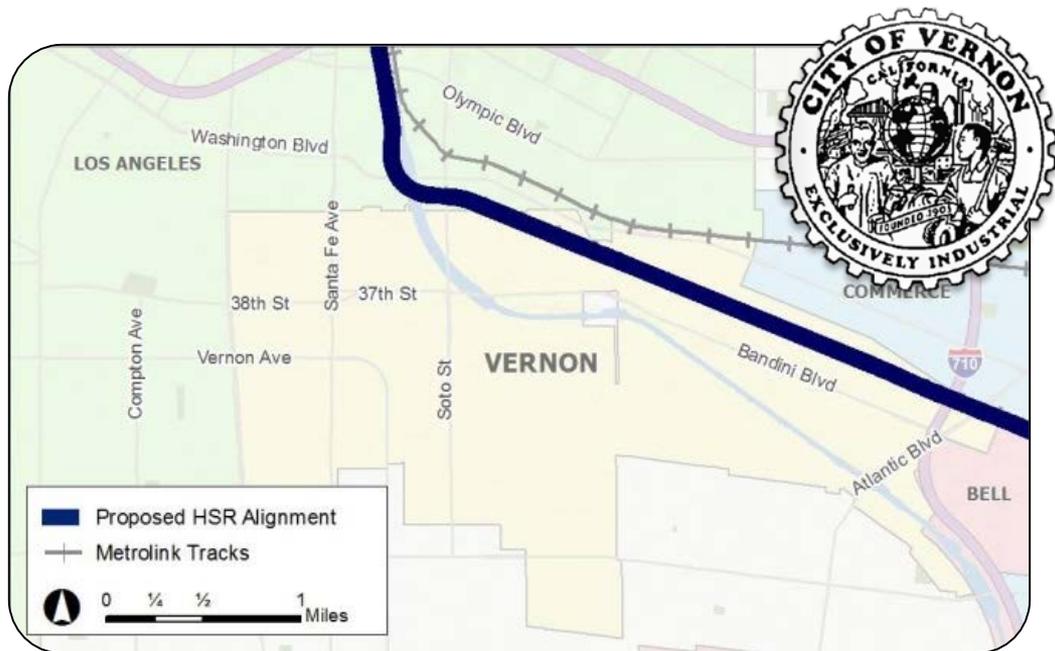
# HIGH-SPEED RAIL IN LOS ANGELES

- 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



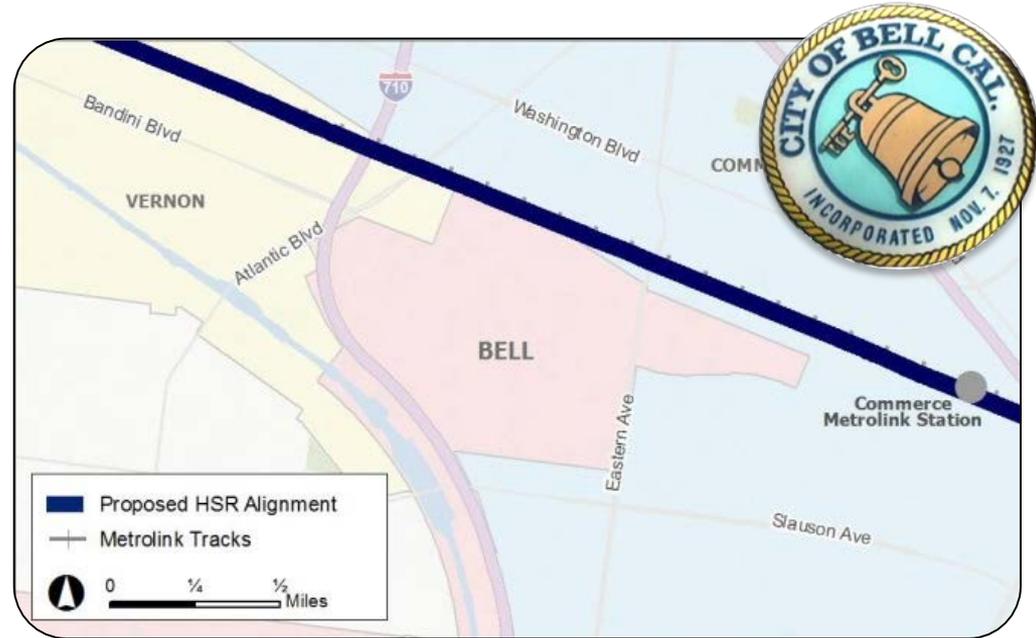
# HIGH-SPEED RAIL IN VERNON

- 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



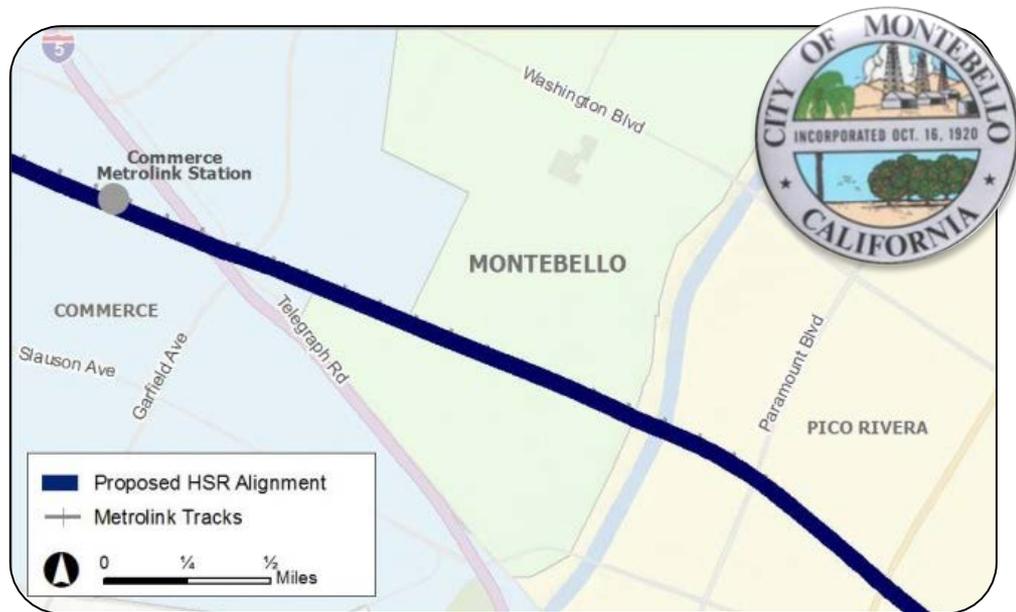
# HIGH-SPEED RAIL IN COMMERCE

- 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



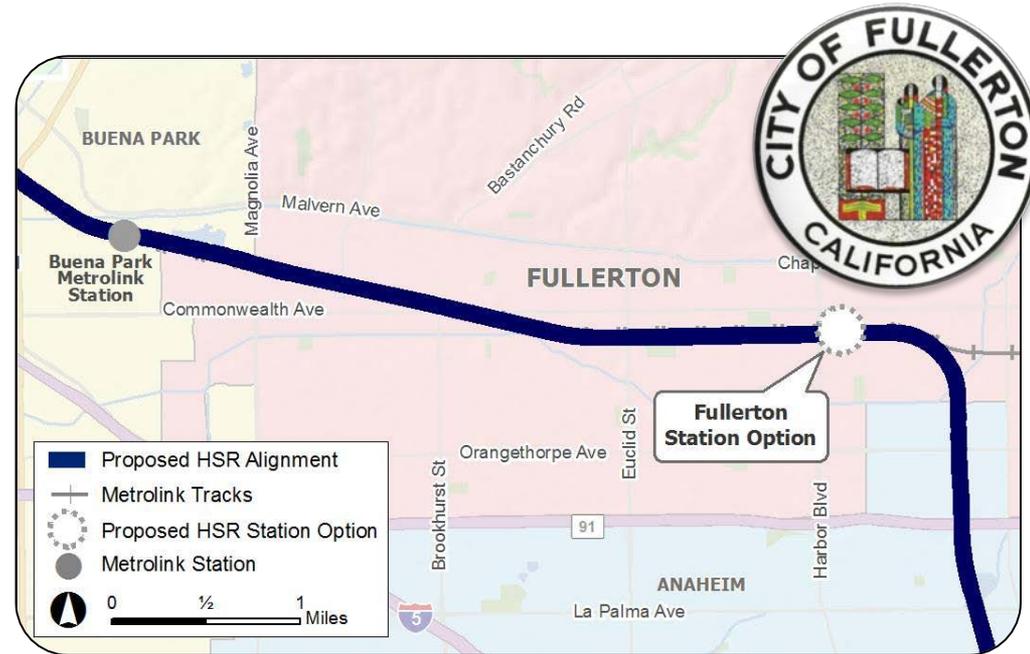
# HIGH-SPEED RAIL IN BUENA PARK

- 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)

