



# Bakersfield to Palmdale High-Speed Train Project EIR/EIS

## Preliminary Alternatives Analysis (AA)

California High-Speed Rail Authority

Board Briefing  
September 2, 2010



# Section Description

## Bakersfield to Palmdale

— Approx. 77 miles

Three Subsections

— Edison:

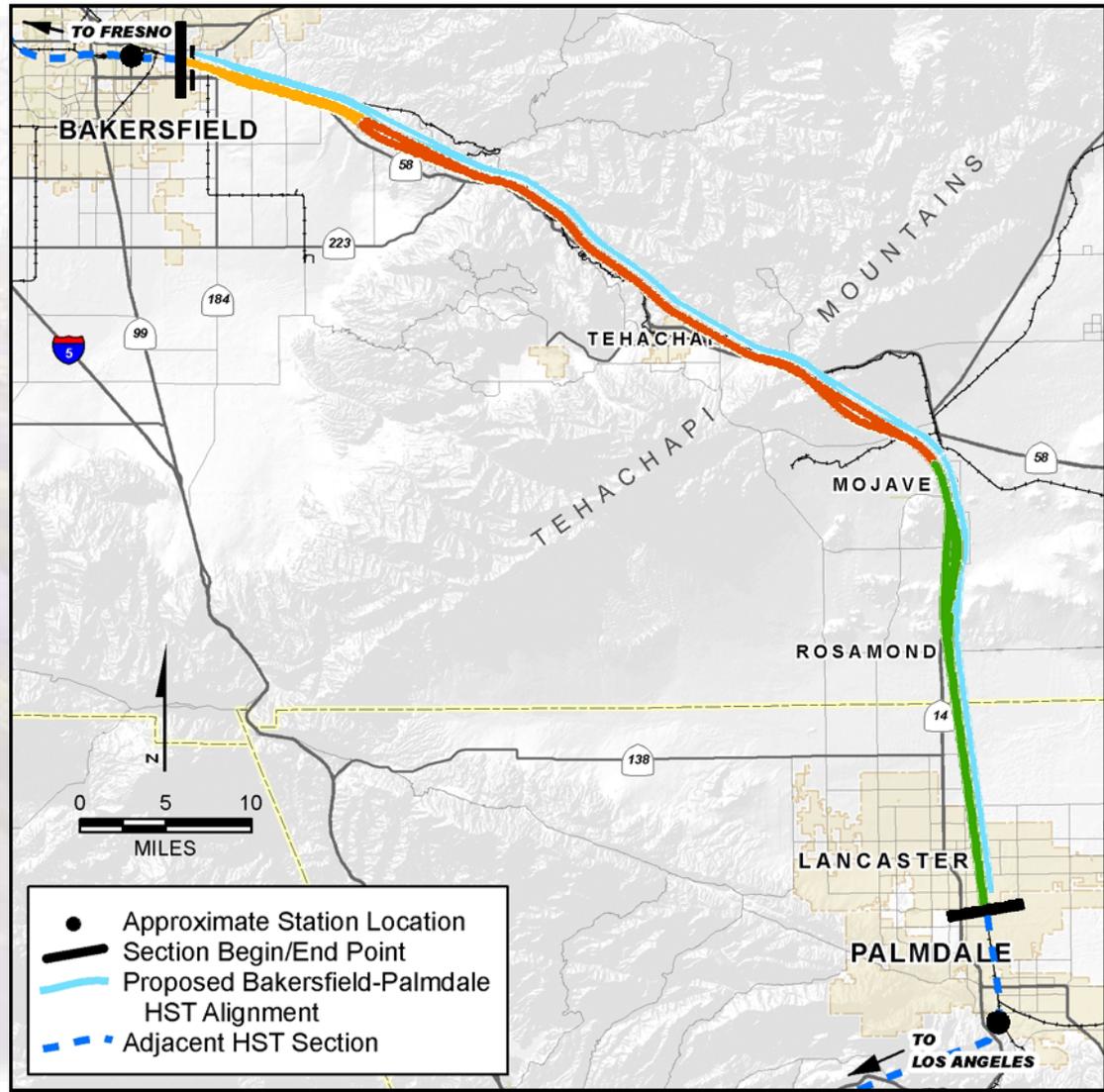
11.2 mi.

— Tehachapi:

40.5 mi.

— Antelope Valley:

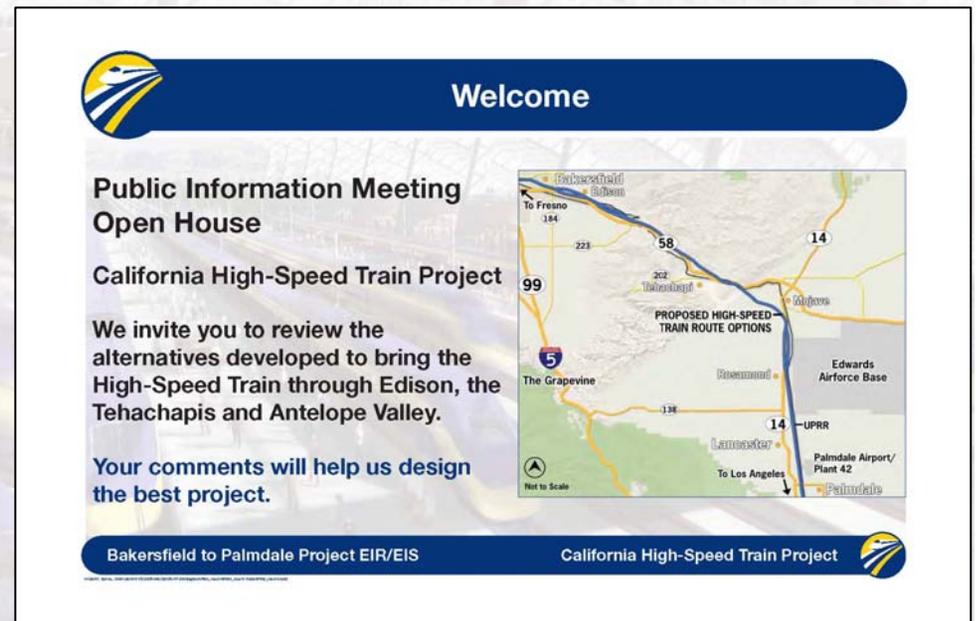
25.6 mi.





# Public Outreach Activities

- **Public Information and Scoping Meetings (6)**
- **Technical Working Group and Stakeholder Meetings (37)**
- **Agricultural and Water District Stakeholder Meetings (29)**
- **Fact Sheets**
- **E-mail Alerts**
- **Media Outreach**
- **Railroad Outreach**
- **CHSRA website updates**



**Welcome**

**Public Information Meeting  
Open House**

**California High-Speed Train Project**

We invite you to review the alternatives developed to bring the High-Speed Train through Edison, the Tehachapis and Antelope Valley.

Your comments will help us design the best project.

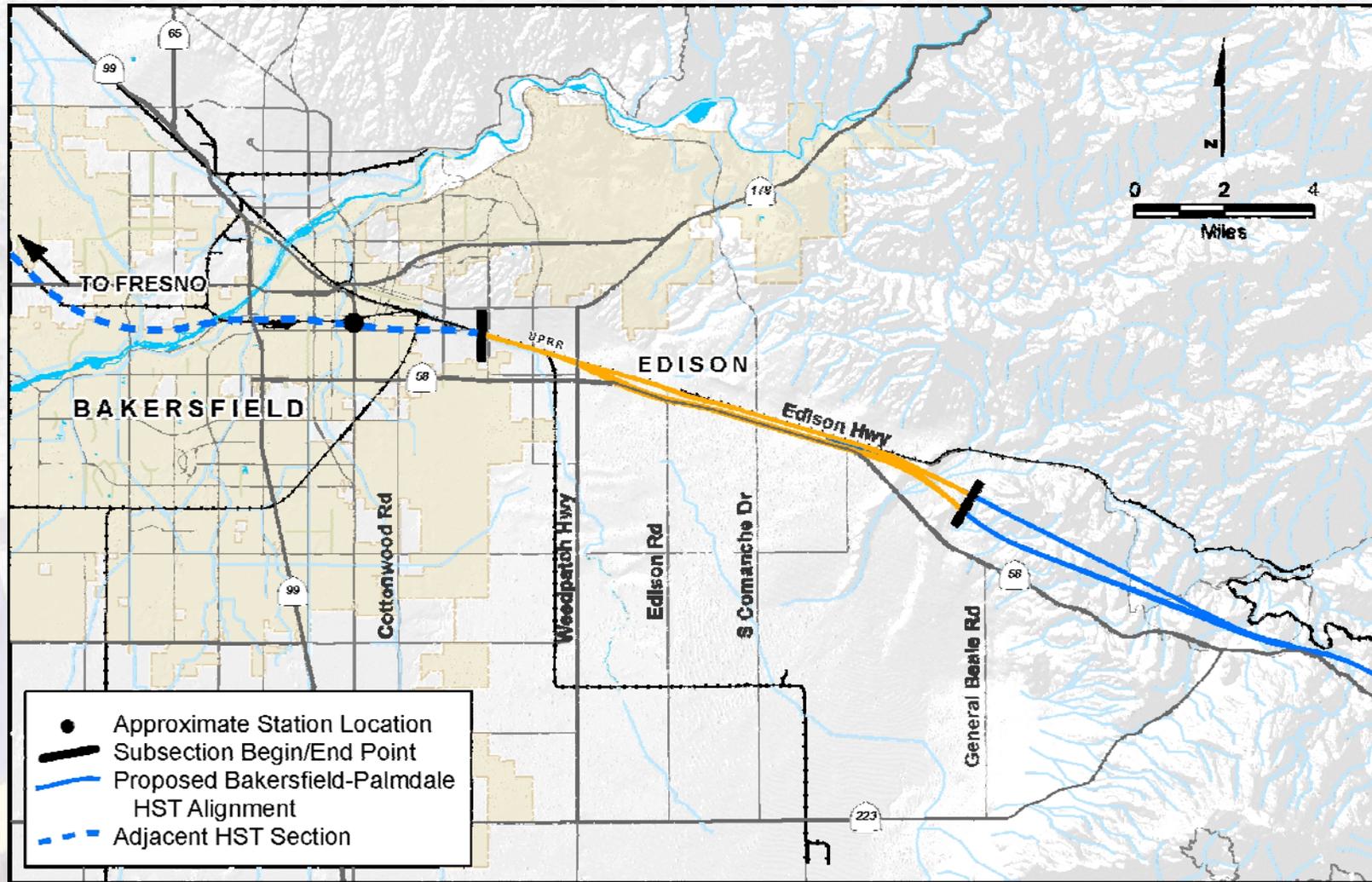


**Bakersfield to Palmdale Project EIR/EIS**      **California High-Speed Train Project**

The slide features a map showing proposed high-speed train route options from Bakersfield to Palmdale. The map includes major highways (99, 5, 198, 138, 14, 184, 223, 58, 14), cities (Bakersfield, Edison, The Grapevine, Lancaster, Palmdale), and landmarks (Edwards Airforce Base, Palmdale Airport/Plant 42). A blue line indicates the proposed route, and a red line shows the UPRR route. A scale bar and north arrow are also present.



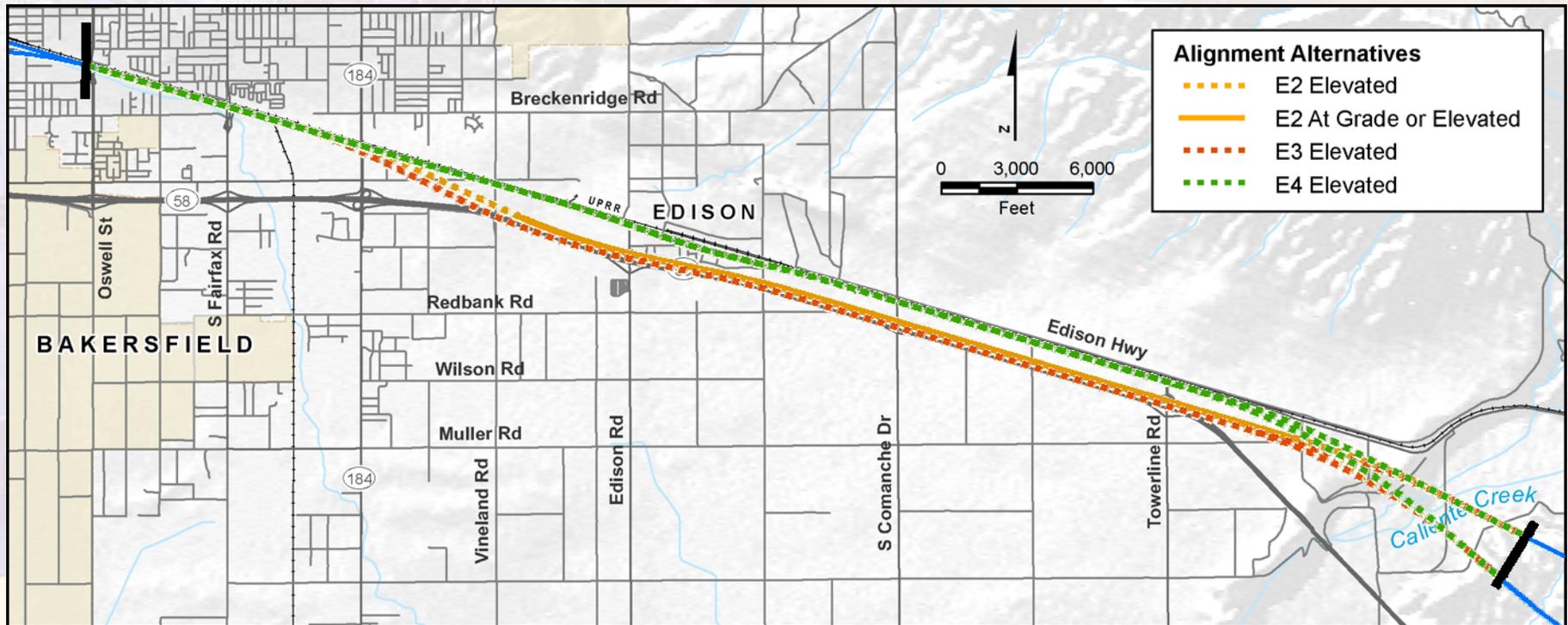
# Edison Subsection





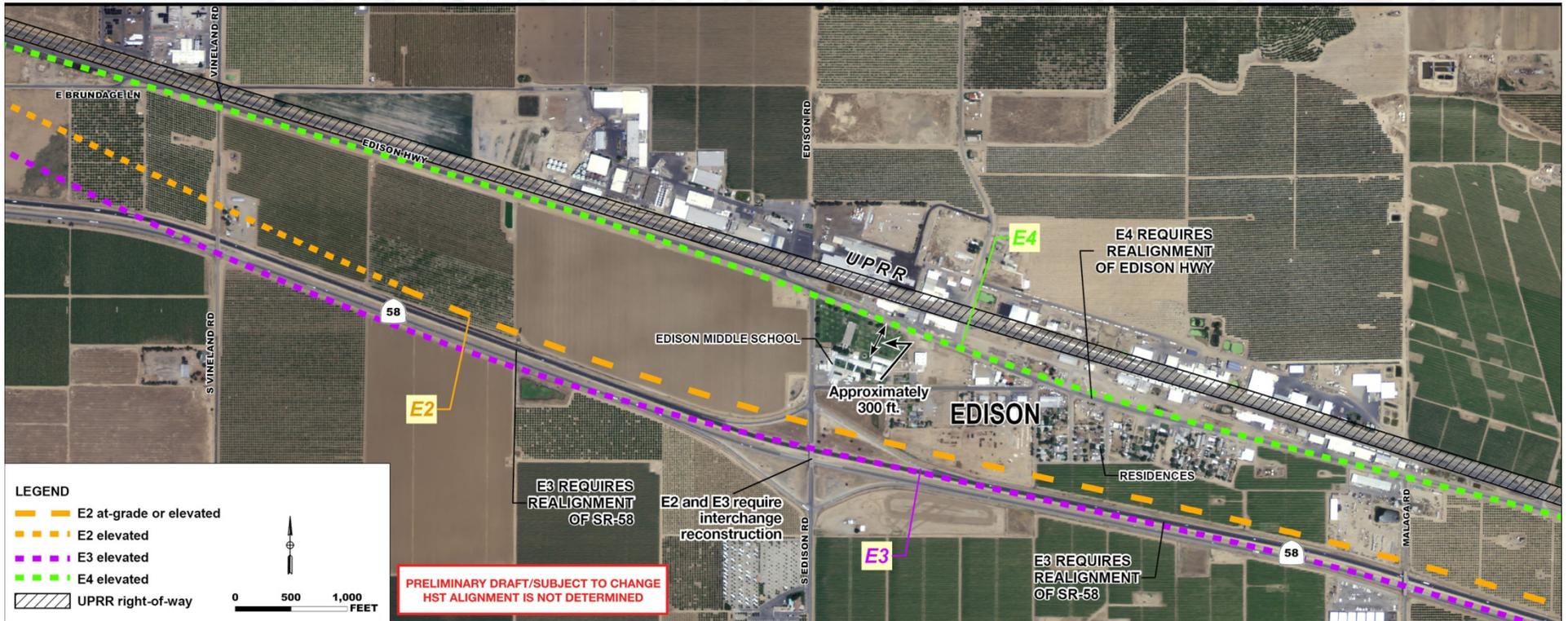
# Edison Subsection Initial Alternatives Considered

Alternative	E2 - SR-58 Adjacent North Side		E3 - In SR-58 Median	E4 - Along Edison Highway
Sub-Alternative	Partially At-Grade	All Elevated	All Elevated	All Elevated





# Edison Subsection Town of Edison Detail

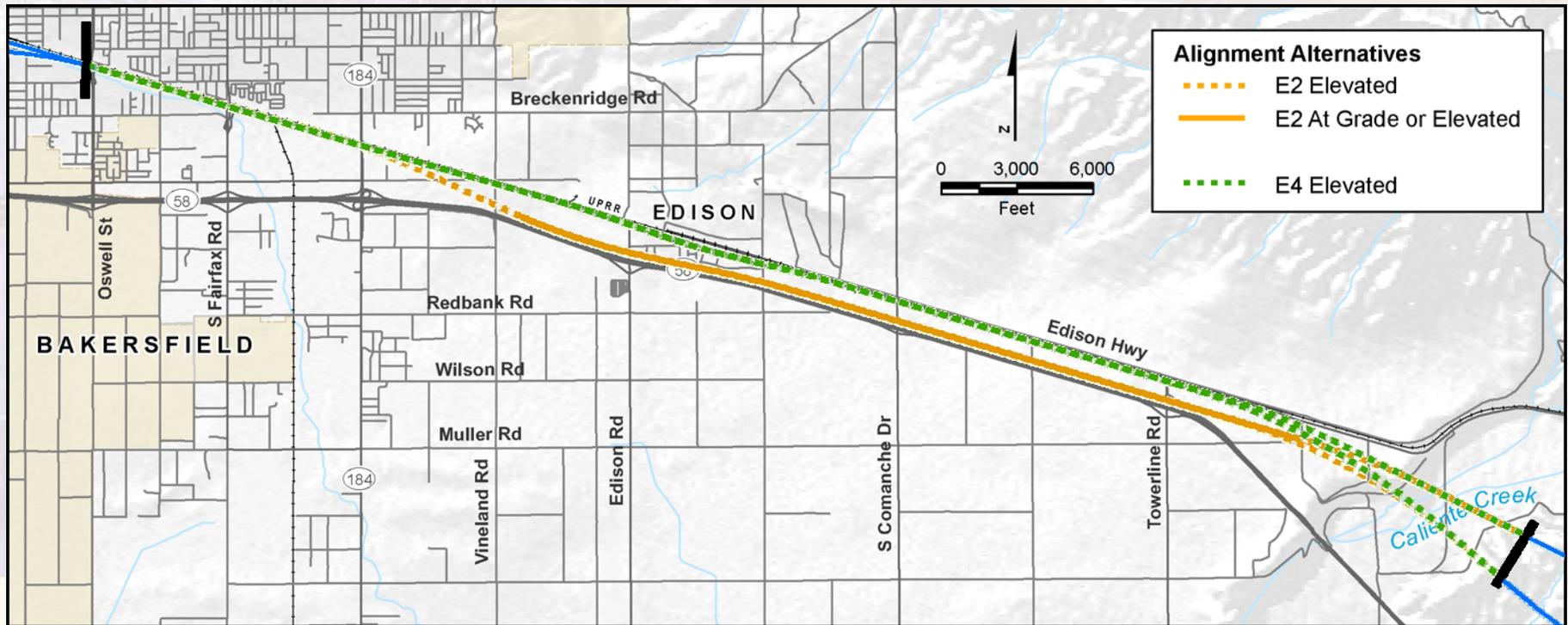






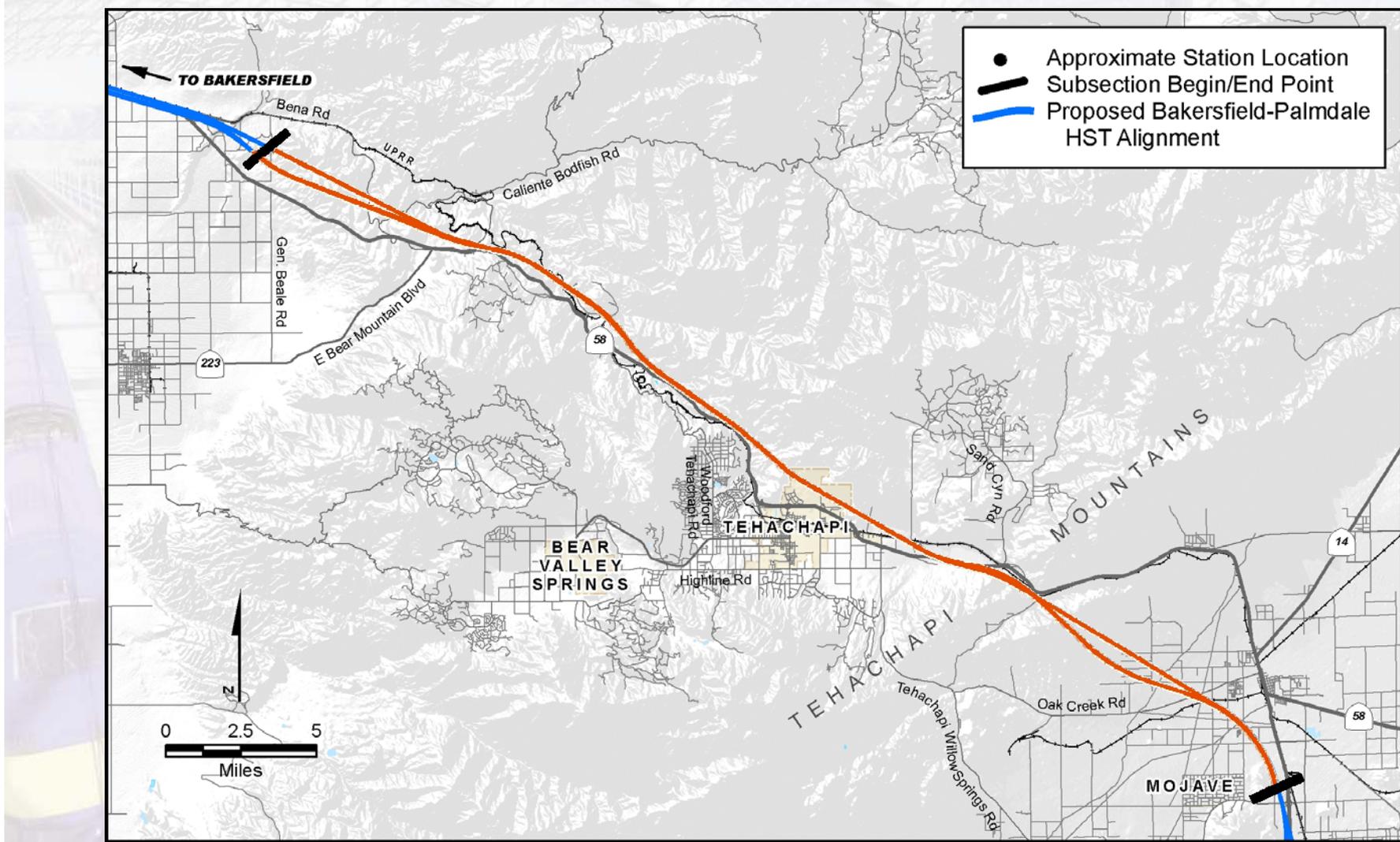
# Edison Subsection Recommended to be Carried Forward

Alternative	E2 - SR-58 Adjacent North Side		E4 - Along Edison Highway
Sub-Alternative	Partially At-Grade	All Elevated	All Elevated



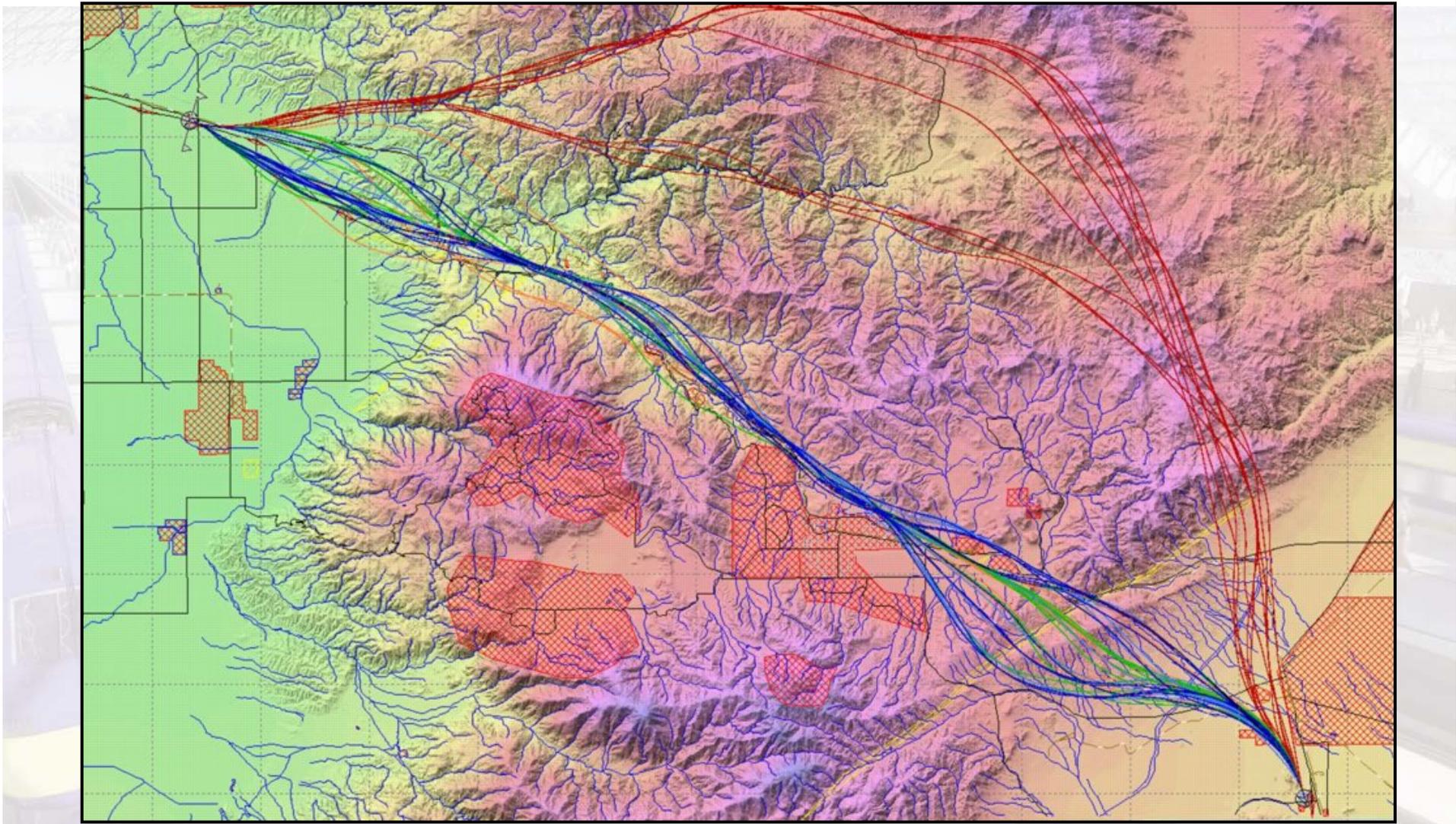


# Tehachapi Subsection





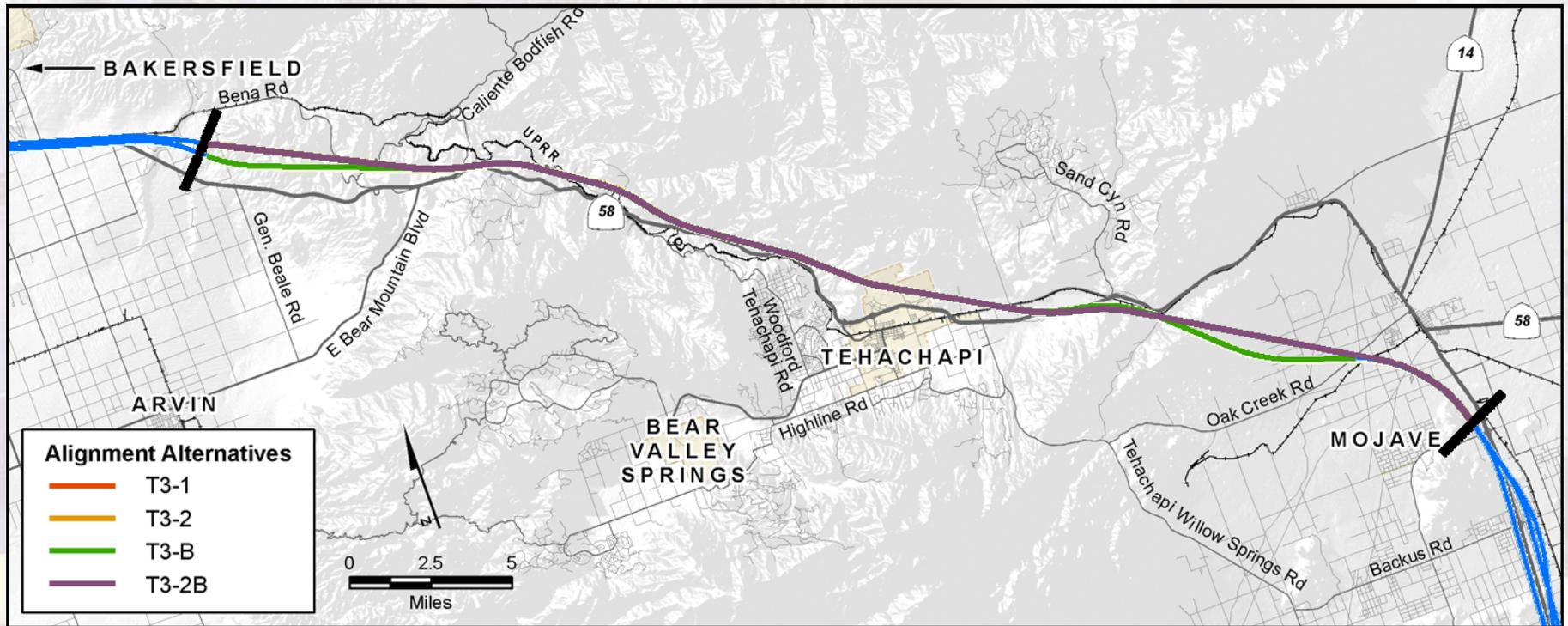
# Tehachapi Subsection Quantm-Generated Alignments





# Tehachapi Subsection Initial Alternatives Considered

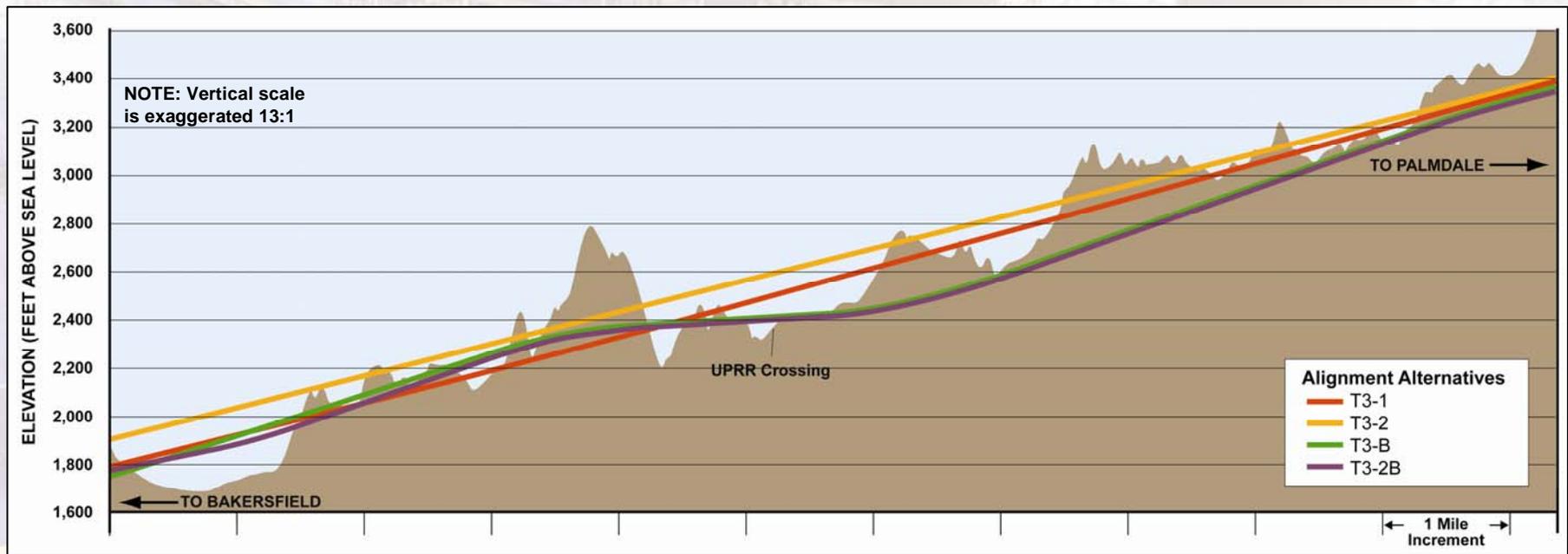
Alternative	<b>T3-1 Quantm</b> 2.65% Average Slope, 2.75% Sustained Slope over 12 miles	<b>T3-2 Modified Quantm</b> 2.5% Average Slope, 2.5% Sustained Slope over 20 miles	<b>T3-B Phase Break</b> 2.65% Average Slope, 3.5% Max. Sustained Slope over 3.4 miles	<b>T3-2B Revised Phase Break</b> 2.5% Average Slope, 3.5% Max. Sustained Slope over 3.4 miles
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# Tehachapi Subsection Alternative Alignment Profiles

Alternative	T3-1 Quantm	T3-2 Modified Quantm	T3-B Phase Break	T3-2B Revised Phase Break
	2.65% Average Slope, 2.75% Sustained Slope over 12 miles	2.5% Average Slope, 2.5% Sustained Slope over 20 miles	2.65% Average Slope, 3.5% Max. Sustained Slope over 3.4 miles	2.5% Average Slope, 3.5% Max. Sustained Slope over 3.4 miles





# High Bridge in Mountainous Area



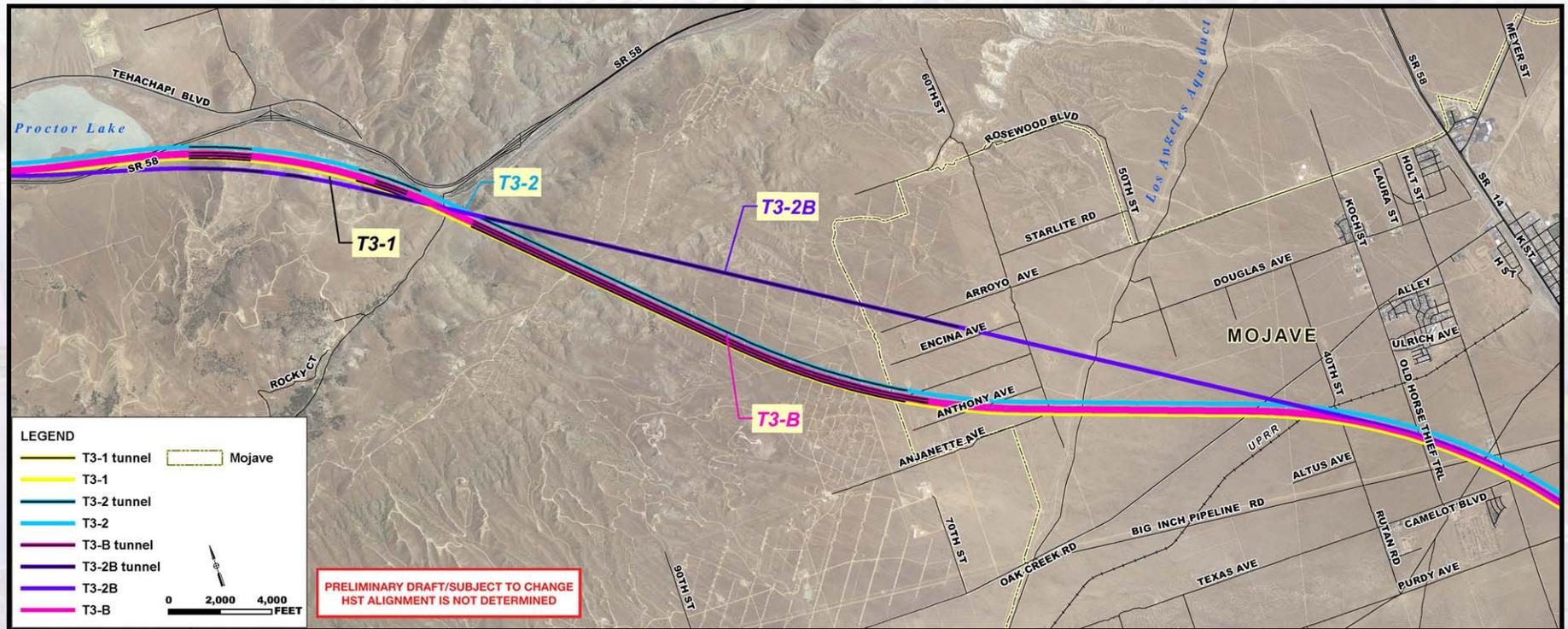


# Tunnel Portal in Mountainous Area





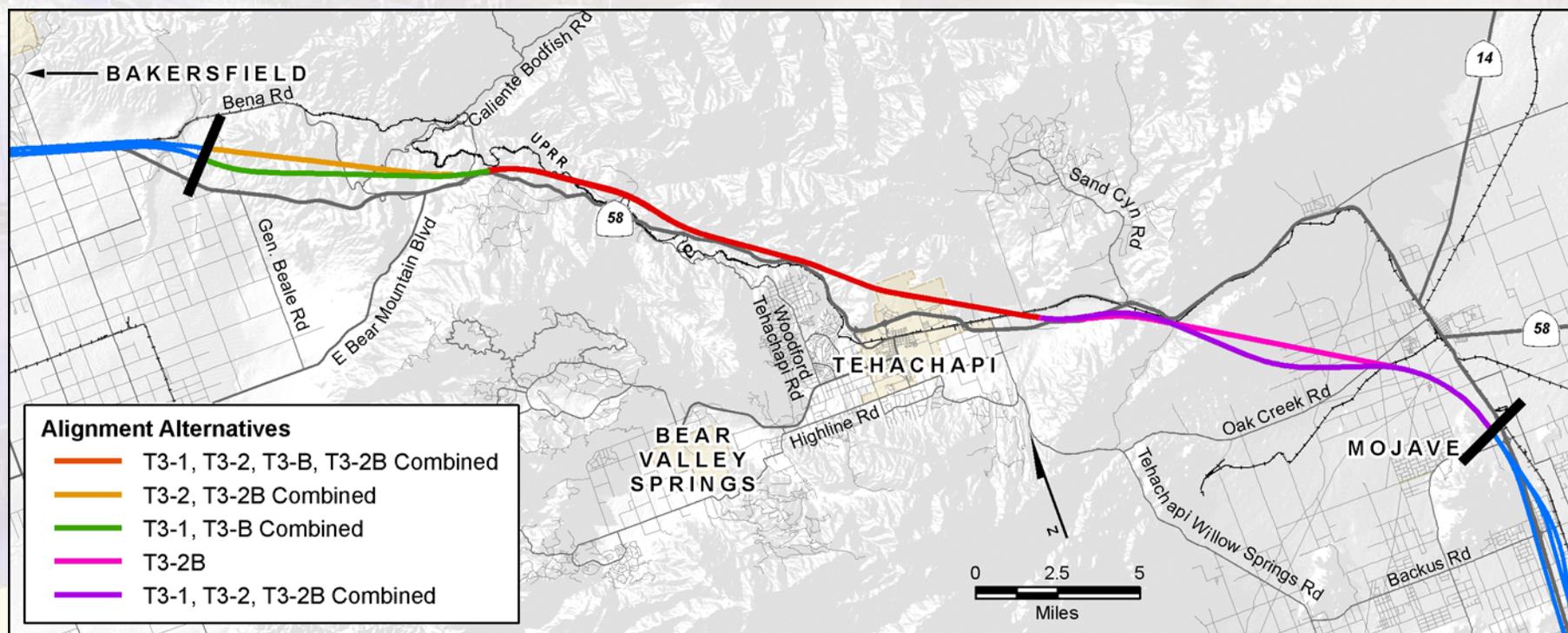
# Tehachapi Subsection Mojave Area Detail





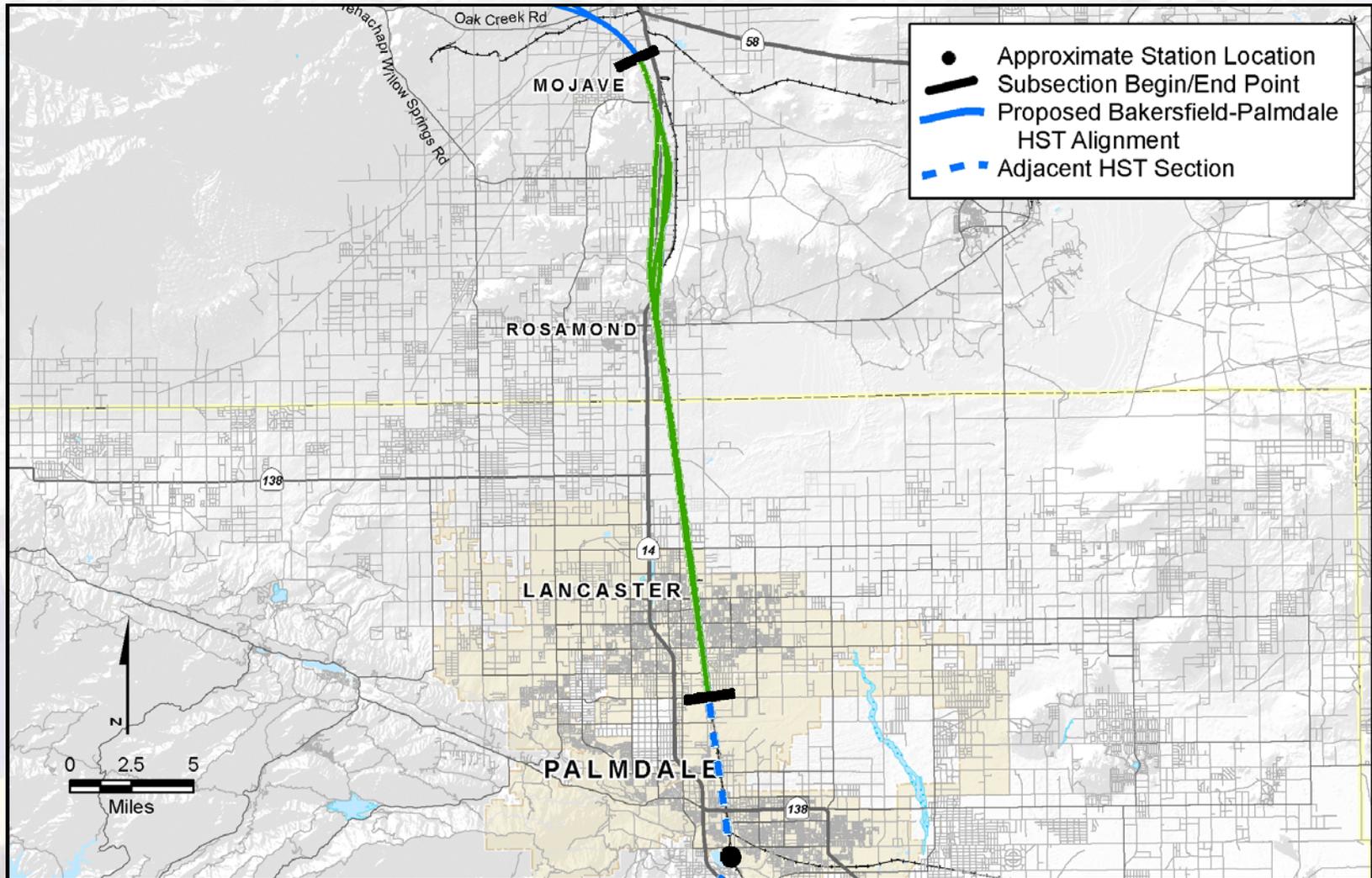
# Tehachapi Subsection Recommended to be Carried Forward

Alternative	T3-1 Quantm	T3-2 Modified Quantm	T3-B Phase Break	T3-2B Revised Phase Break
	2.65% Average Slope, 2.75% Sustained Slope over 12 miles	2.5% Average Slope, 2.5% Sustained Slope over 20 miles	2.65% Average Slope, 3.5% Max. Sustained Slope over 3.4 miles	2.5% Average Slope, 3.5% Max. Sustained Slope over 3.4 miles





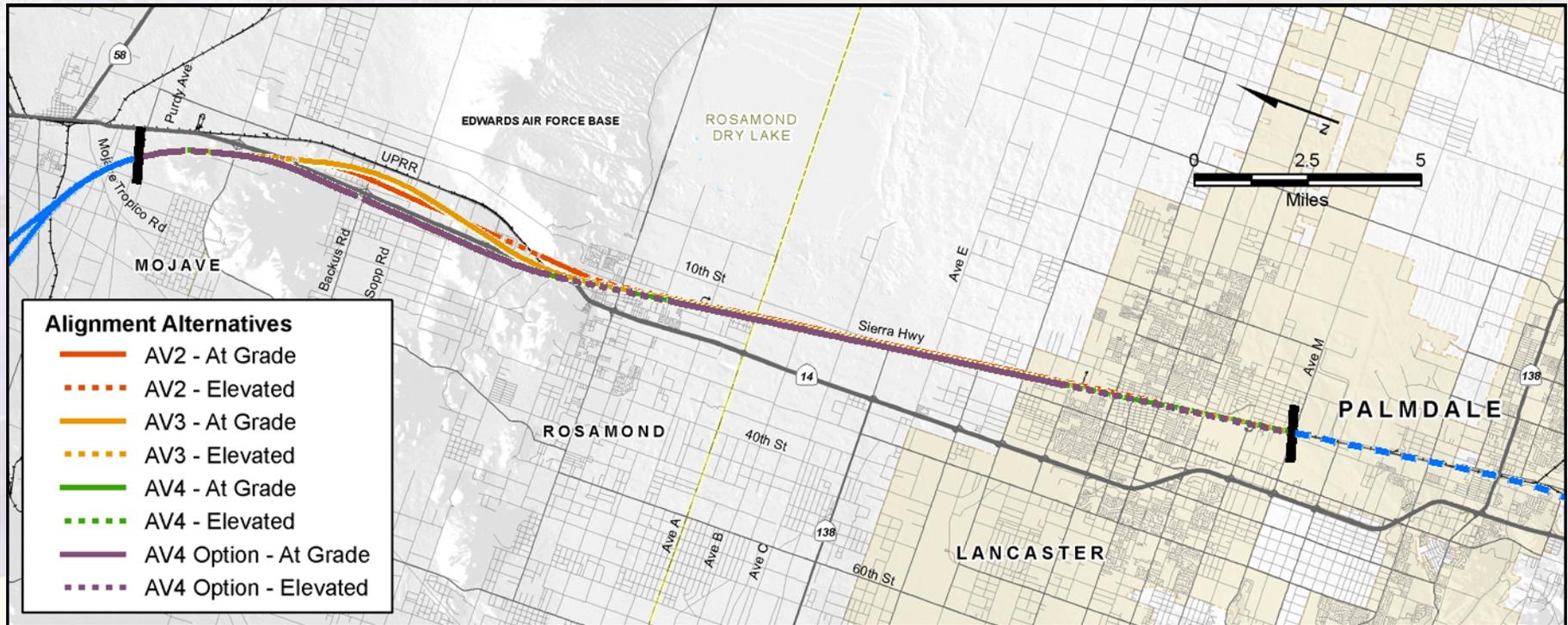
# Antelope Valley Subsection





# Antelope Valley Subsection Initial Alternatives Considered

Alternative	AV2 East Side of UPRR	AV3 Between UPRR and Sierra Highway		AV4 Within or Adjacent to Sierra Highway	AV4 Option Adjacent to Sierra Highway
Sub-Alternative	Mixed At-Grade and Elevated	All At-Grade	Partially Elevated	Primarily Elevated	Primarily Elevated





# Antelope Valley Subsection Downtown Lancaster Detail





# Antelope Valley Subsection Alternatives Withdrawn

Alternative	AV2 East Side of UPRR	AV3 Between UPRR and Sierra Highway	AV4 Within or Adjacent to Sierra Highway
Sub-Alternative	Mixed At-Grade and Elevated	All At-Grade	Primarily Elevated





# Antelope Valley Subsection Recommended to be Carried Forward

Alternative	AV3 Between UPRR and Sierra Highway	AV4 Option Adjacent to Sierra Highway
Sub-Alternative	Partially Elevated	Primarily Elevated





# Antelope Valley Subsection Lancaster Avenue J Detail





## Staff Recommendations Edison Subsection

- ➔ Carry forward Alternatives **E2** (North side of SR-58, Elevated and Partially At-Grade) and **E4** (Elevated along Edison Hwy)
- ✗ Do not carry forward Alternative **E3** (Elevated in SR-58 Median)



## Staff Recommendations Tehachapi Subsection

- ➔ Carry forward all four Tehachapi alignment alternatives.
- ➔ Conduct additional engineering to better determine phase break requirements and maximum slope standards.
- ➔ Prepare a Supplemental AA Report if additional study supports withdrawing one or more alternatives.



## Staff Recommendations Antelope Valley Subsection

- ➔ Carry forward Alternatives **AV3** (Partially elevated, between UPRR and Sierra Hwy) and **AV4 Option** (Mostly elevated on west side of Sierra Hwy)
- ✗ Do not carry forward Alternatives **AV2** (East side of UPRR), **AV3** (At-slope, between UPRR and Sierra Hwy), and **AV4** (Primarily elevated, on west side of Sierra Hwy)



# Next Steps

- **Board Action to Accept Staff Recommendations**
- **Continue to meet with Stakeholders and the Public**
- **Prepare Supplemental AA Reports**
- **Begin Environmental Studies and 15% Design**
- **Draft EIR/EIS – July 2012**
- **Final EIR/EIS – March 2013**