

**Welcome to the
California High-Speed Rail Authority's
Public Information Meeting**

**Merced to Fresno
High-Speed Train Project**



Purpose and Need

Purpose of the High-Speed Train Project

- Provide a new mode of high-speed intercity travel that would link the Central Valley to the Bay Area and Southern California
- Interface with international airports, mass transit, and highways
- Provide added capacity to meet increases in intercity travel demand in California in a manner sensitive to and protective of California's unique natural resources

Current and Projected Need

- Expected growth in population
- Increases in intercity travel demand
- Increases in travel delays arising from the growing congestion on California's highways and airports
- Intercity highway system, commercial airports, and conventional passenger rail serving the intercity market at or near capacity
- Negative effects from highway and airport congestion on the economy, quality of life, and air quality in the San Joaquin Valley



What are High-Speed Trains?

- **Intercity passenger trains** operating at speeds up to 220 miles per hour
- **Tracks separated** from roads and highways
- **Proven Technology**
 - Safe and Reliable
 - Successfully operating throughout Europe and Asia



California High-Speed Train Concept

Other High-Speed Trains Around the World



Shinkansen, Japan

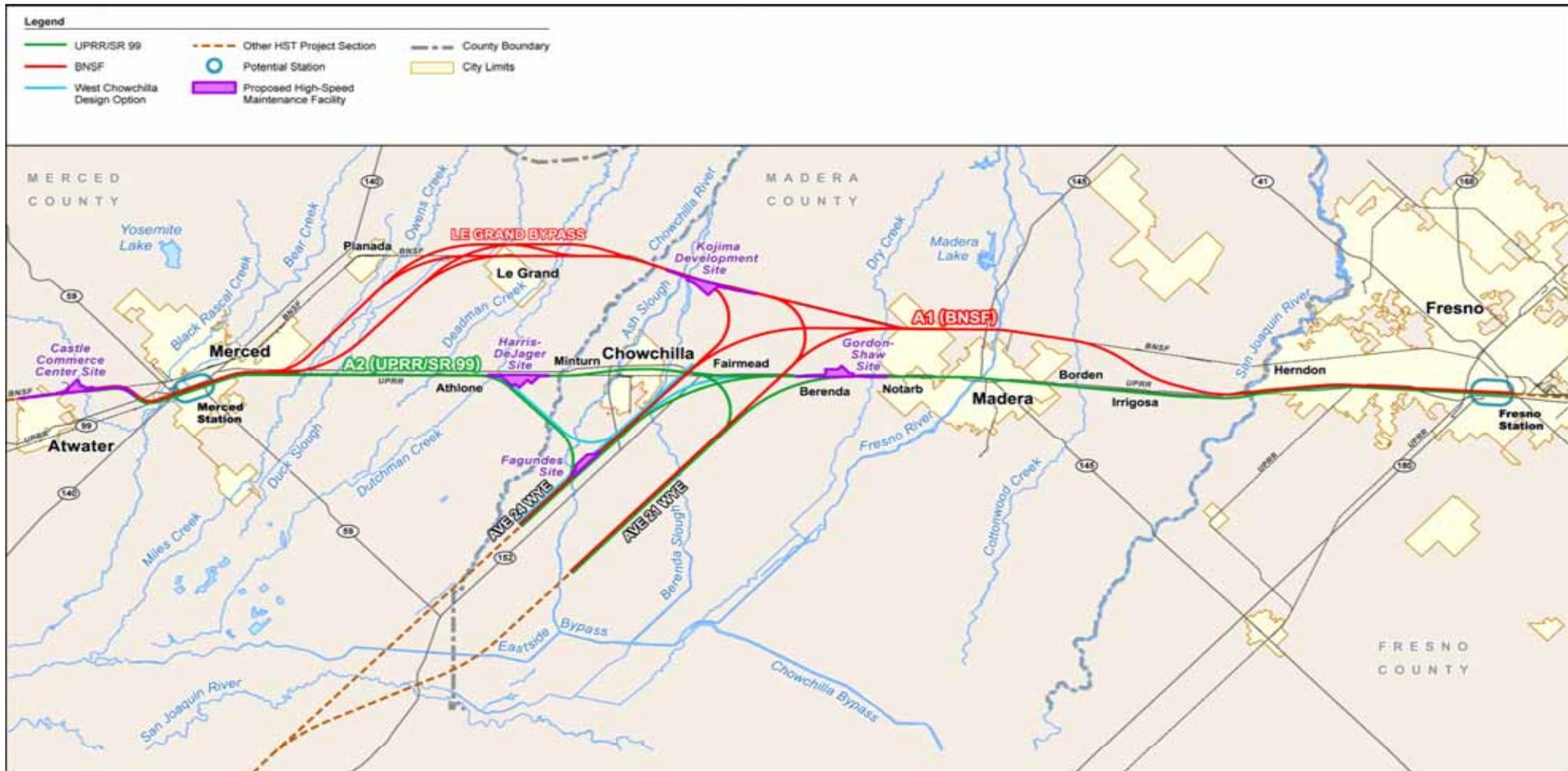


TGV, France

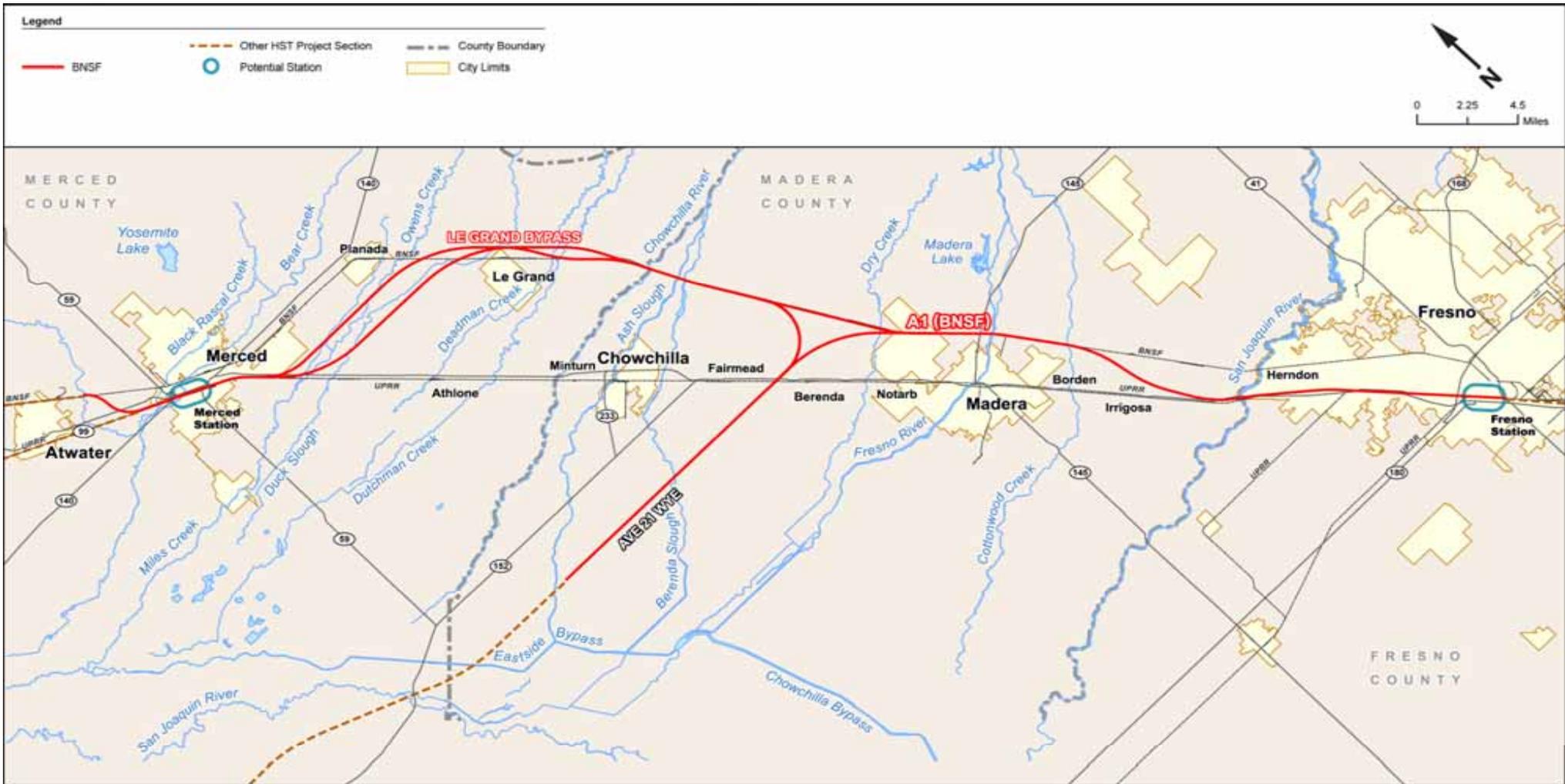


Intercity Express, Germany

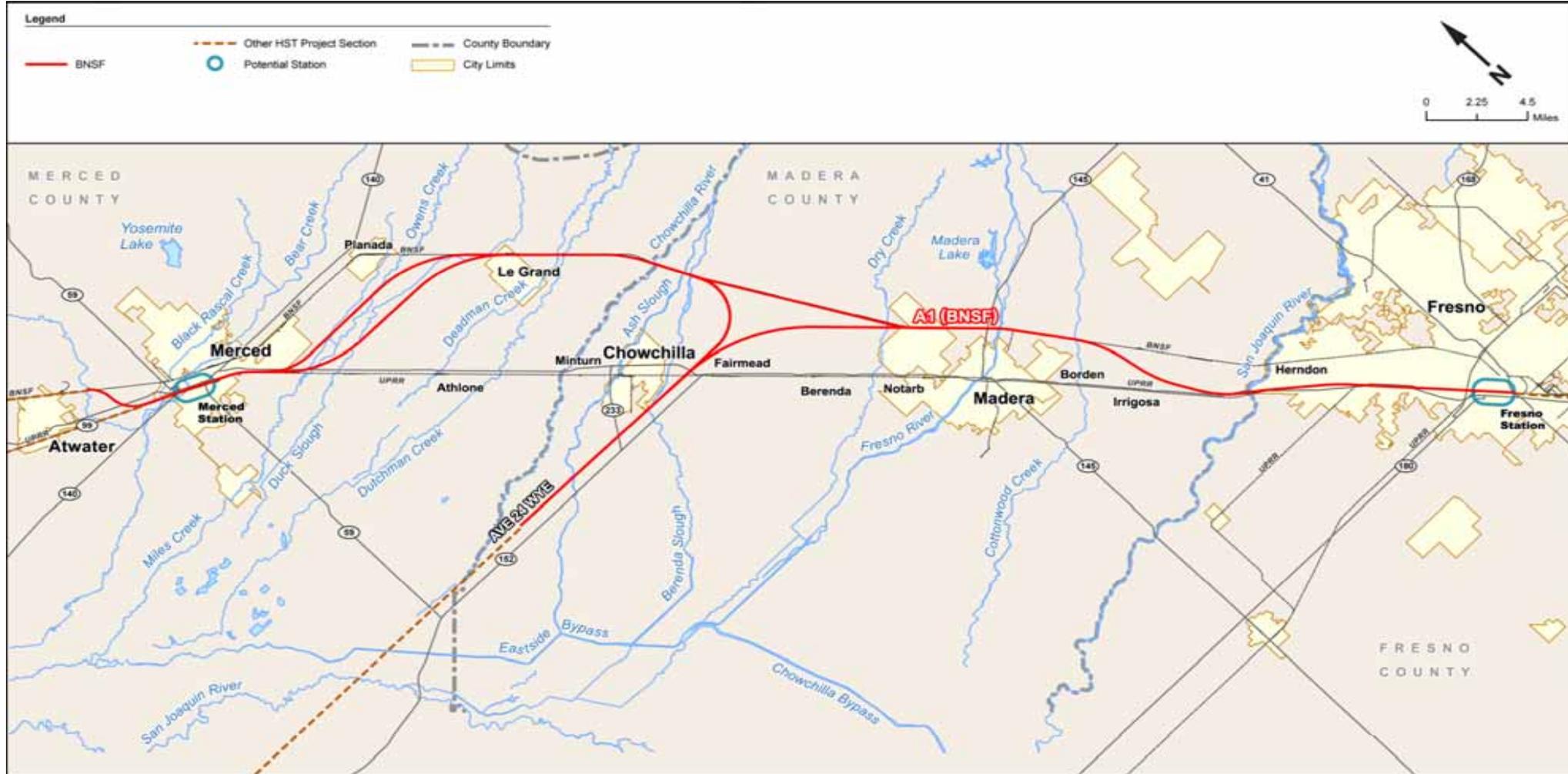
Refined Alternatives Advanced



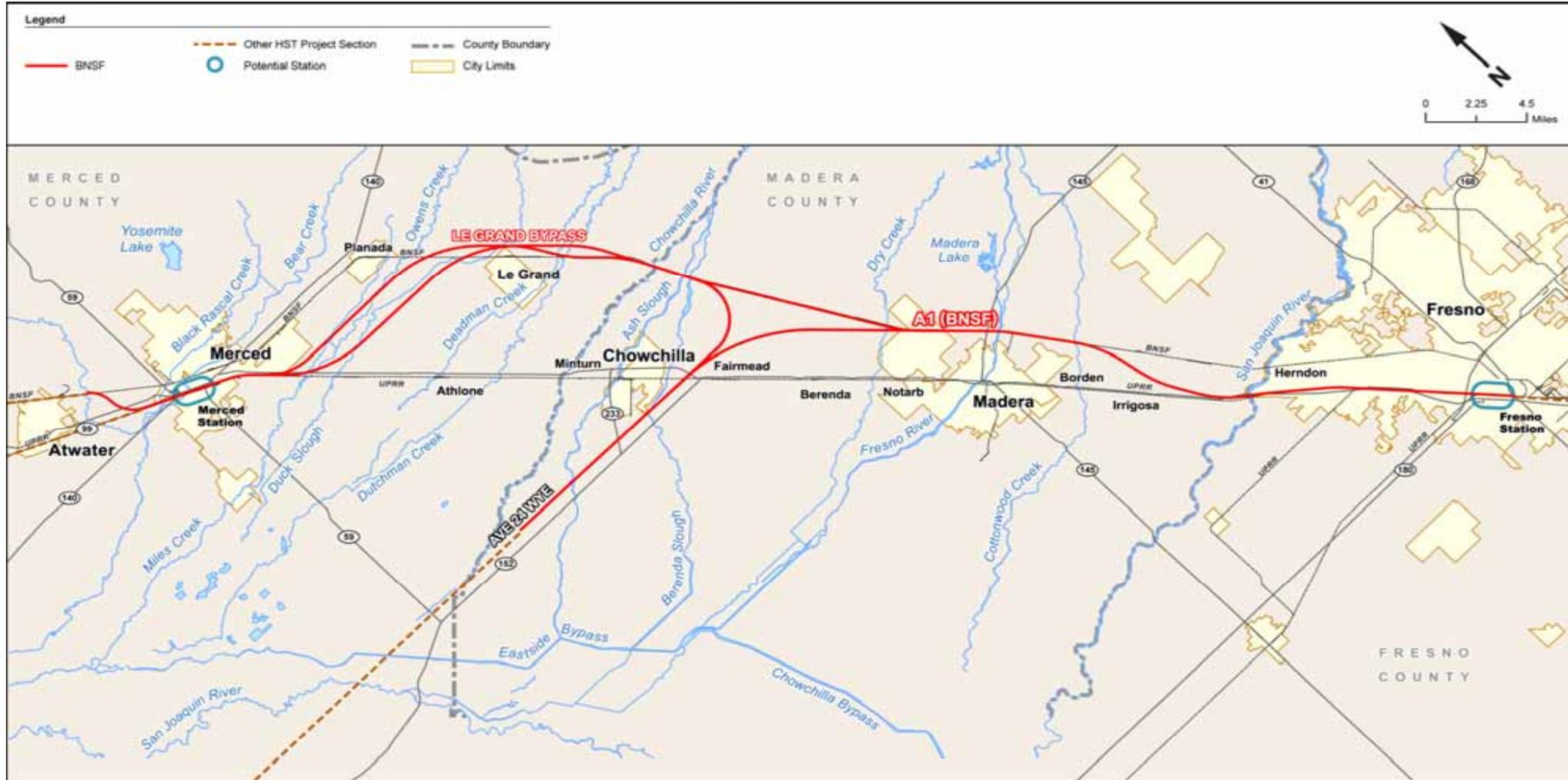
A1 (BNSF) - Ave 21 Wye Le Grand Bypass



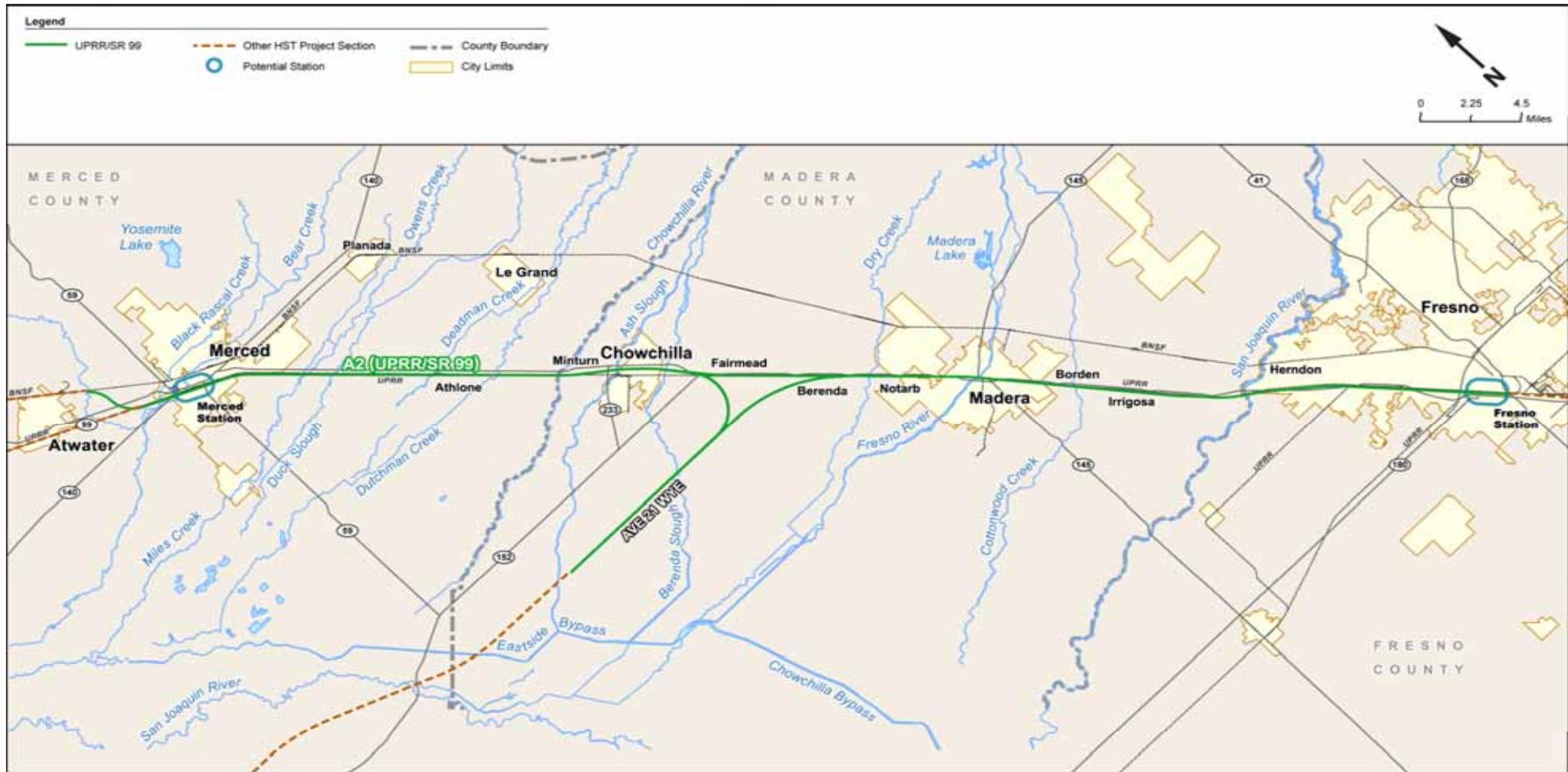
A1 (BNSF) - Ave 24 Wye Through Le Grand



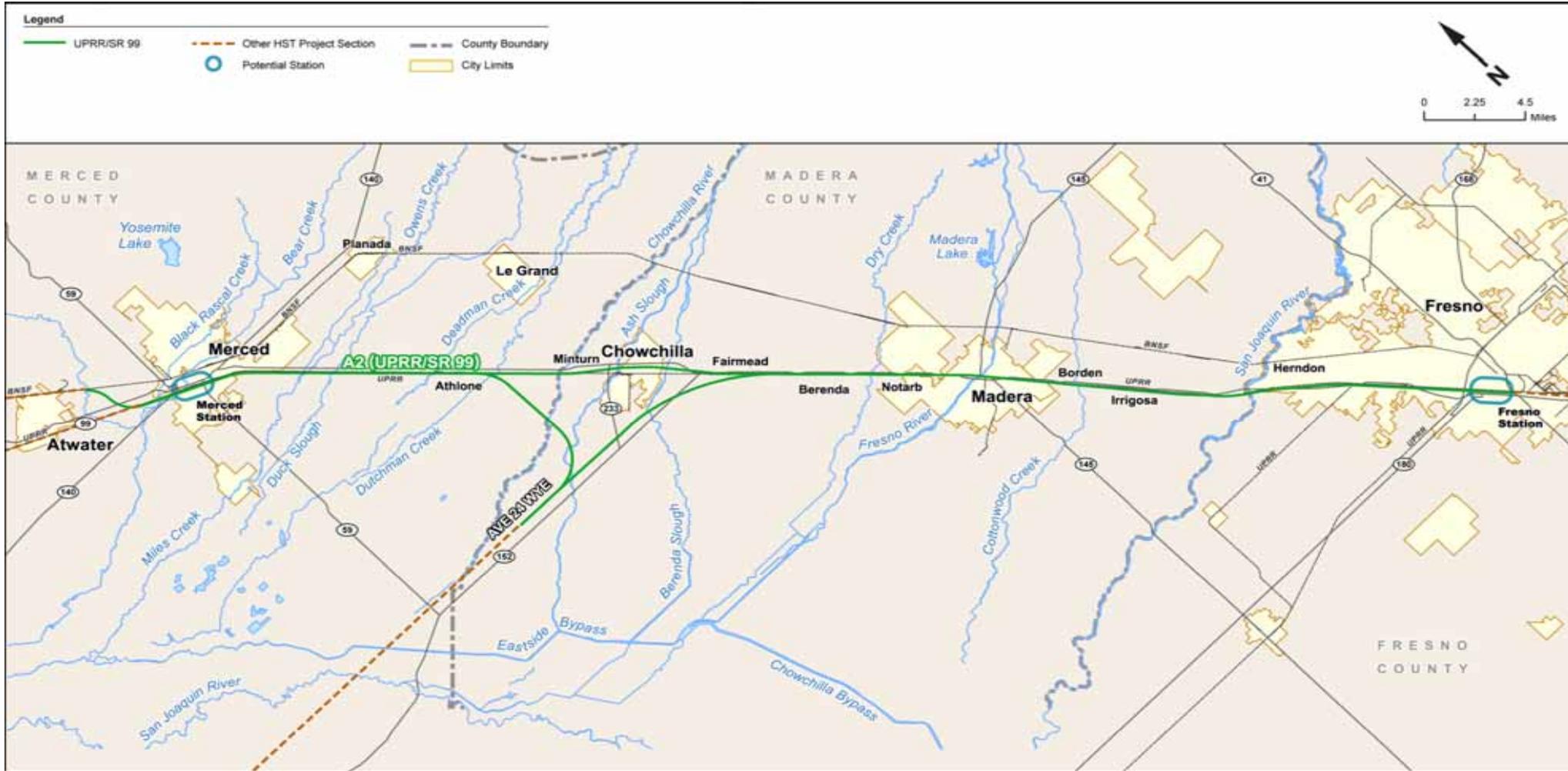
A1 (BNSF) - Ave 24 Wye Le Grand Bypass



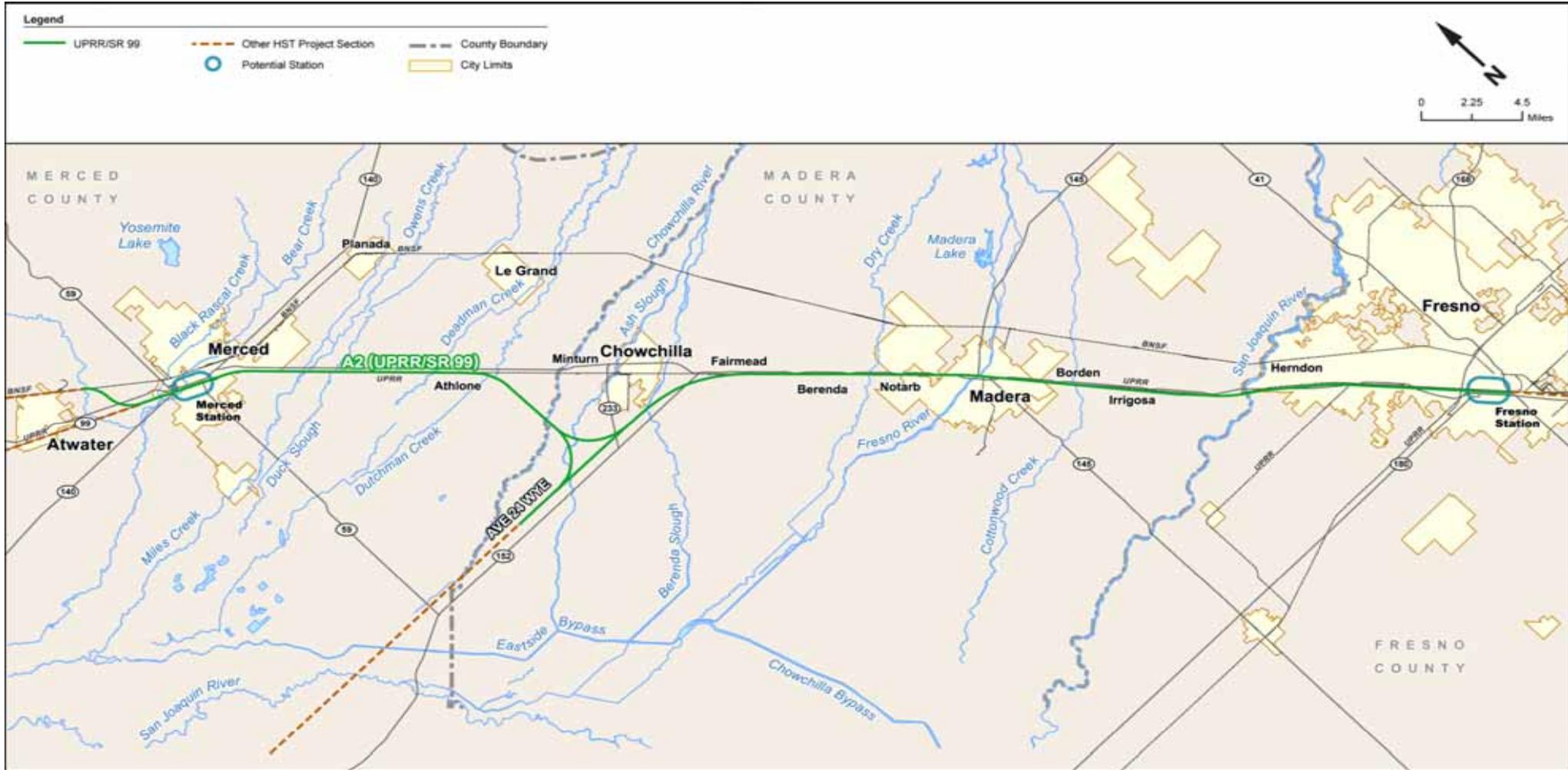
A2 (UPRR) - Ave 21 Wye



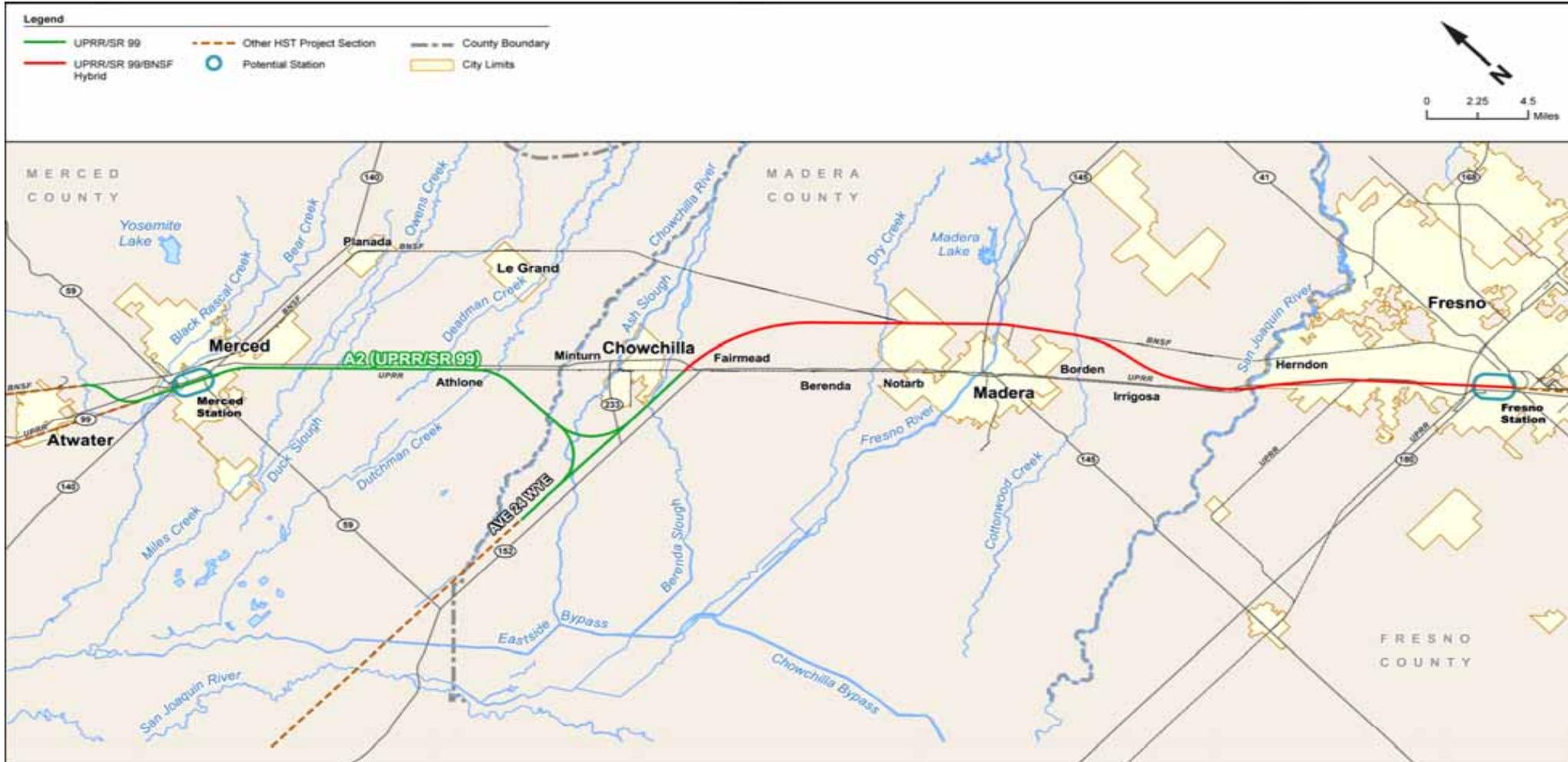
A2 (UPRR) - Ave 24 Wye Through Chowchilla



A2 (UPRR) – Ave 24 Wye West Chowchilla Design Option



A2 (UPRR) / A1 (BNSF) – Ave 24 Wye West Chowchilla Design Option



Environmental Review Process

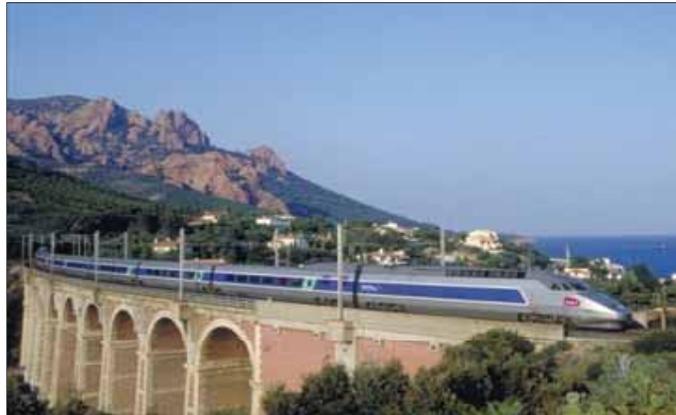
The Environmental Review Process and planning activities associated with the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA) will:



- **Identify** all environmental impacts
- **Evaluate** reasonable alternatives that could avoid or minimize environmental impacts
- **Develop** detailed mitigation (ways to reduce or avoid environmental impacts)
- **Provide** information for public review and comment
- **Disclose** to decision makers the impacts, mitigation, and public comments



Flexibility of Design



Flexibility of Design



Mitigation Measures Under Elevated Guideway

- FRA has approved joint use under HST Guideway
- Linear parks, paths and roadways may be considered



Rendering Example



Joint Use in Italy



Agricultural use under guideway

Grade Separations



Before
Typical Underpass
After



- Grade separations are underpasses and overpasses where roadways cross railroad tracks
- Grade separations reduce congestion and noise and improve safety
- California High-Speed Train tracks will be grade-separated from adjacent roadways

Typical Overpass



Grade Separated from Roadway



Right of Way (ROW) Overview

Community Impact Assessment Process

Environmental laws require consideration of the social and economic impacts of projects during the preparation of environmental documents. To satisfy these requirements, a “community impact assessment” is conducted to determine how a proposed project will affect people, institutions, neighborhoods, communities, and organizations as well as social and economic systems. A wide variety of social and economic considerations fall under the umbrella of the community impact assessment, and may include:

- Relocations
- Community stability and cohesion
- Land use and growth
- Environmental justice
- Employment and tax base changes
- Public service impacts

The results of the community impact assessment will be documented in a technical report and reported in the project environmental document.

After an Alignment is Selected Right of Way Staff Will Conduct the following:

- Permits to Enter
- Appraisal
- Acquisitions
- Relocation Assistance
- Property Management
- Utility Relocation
- Excess Land Sales
- Clearance and Demolition



Right of Way (ROW) & Real Estate Evaluation Process

Example Rural ROW Map



Example Urban ROW Map



Evaluation Steps for Draft EIR/EIS

- Map the Project alternatives and components
- Determine temporary and permanent acquisition area
- Assess public and private property encroachments
- Identify affected land uses, buildings, and community resources
- Determine the level of impact
- Identify potential displacements
- Assess availability of supply of relocation sites
- Incorporate redevelopment planning and TOD

Steps After Final EIR/EIS and Project Approval

- Outreach to Property Owners, Community and Stakeholders
- Relocation Planning and Assistance

California High-Speed Train – Creates Jobs

- ~880 people: 1/5th of the project's work force
 - Drivers
 - Conductors
 - On-board service
- ~1,100 people: 1/4th of the project work force
 - Ticketing
 - Security
 - Passenger service
 - HQ management and administration

Positions include a broad range of personnel from security staff to ticket machine maintenance, to customer service, accounting, finance, scheduling, administration

- ~100 people
 - Operations control
 - Power management
- ~440 people: 1/10th of the project's work force
 - Track
 - Ballast
 - Power systems
 - Signaling/telecommunications
 - Structures maintenance
- ~1,500+ people: 1/3rd of the project's work force
 - Train maintenance and overhauls
 - Basic body and paint shop work
 - Upholstery and fabric people

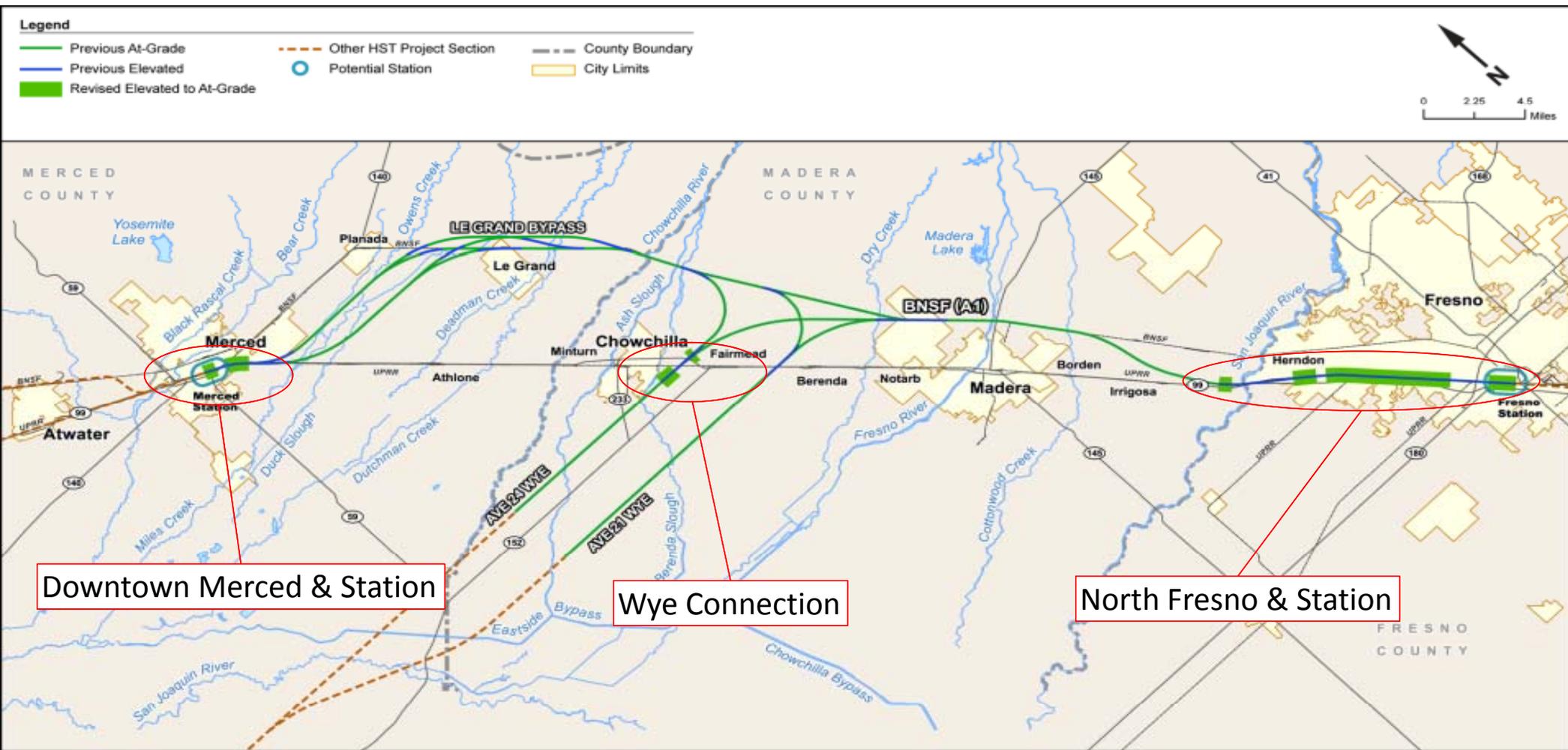


California High-Speed Train - Creates Jobs

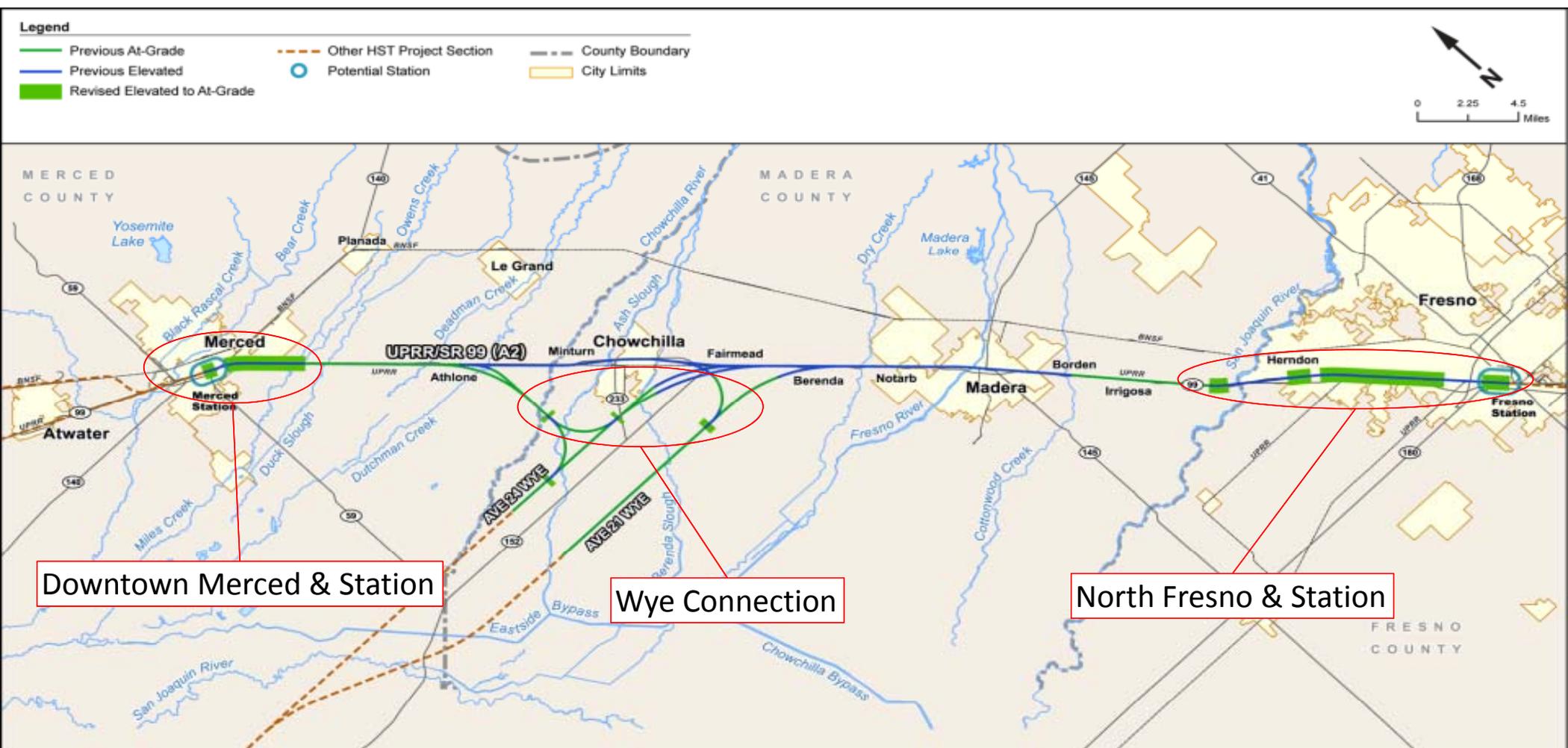
- Equivalent of nearly 600,000 full-time, one-year jobs over the course of construction
- About 4,400 full-time jobs from San Francisco to Anaheim
- Operations Jobs
 - Service planning & fare setting
 - Operations planning, scheduling, fares
 - Train driving & dispatching
 - On-board passenger services
 - Ticketing & revenue accounting
 - Station services & security
- Maintenance Jobs
 - Train servicing & inspection
 - Train maintenance
 - Fixed core system & infrastructure inspection & maintenance



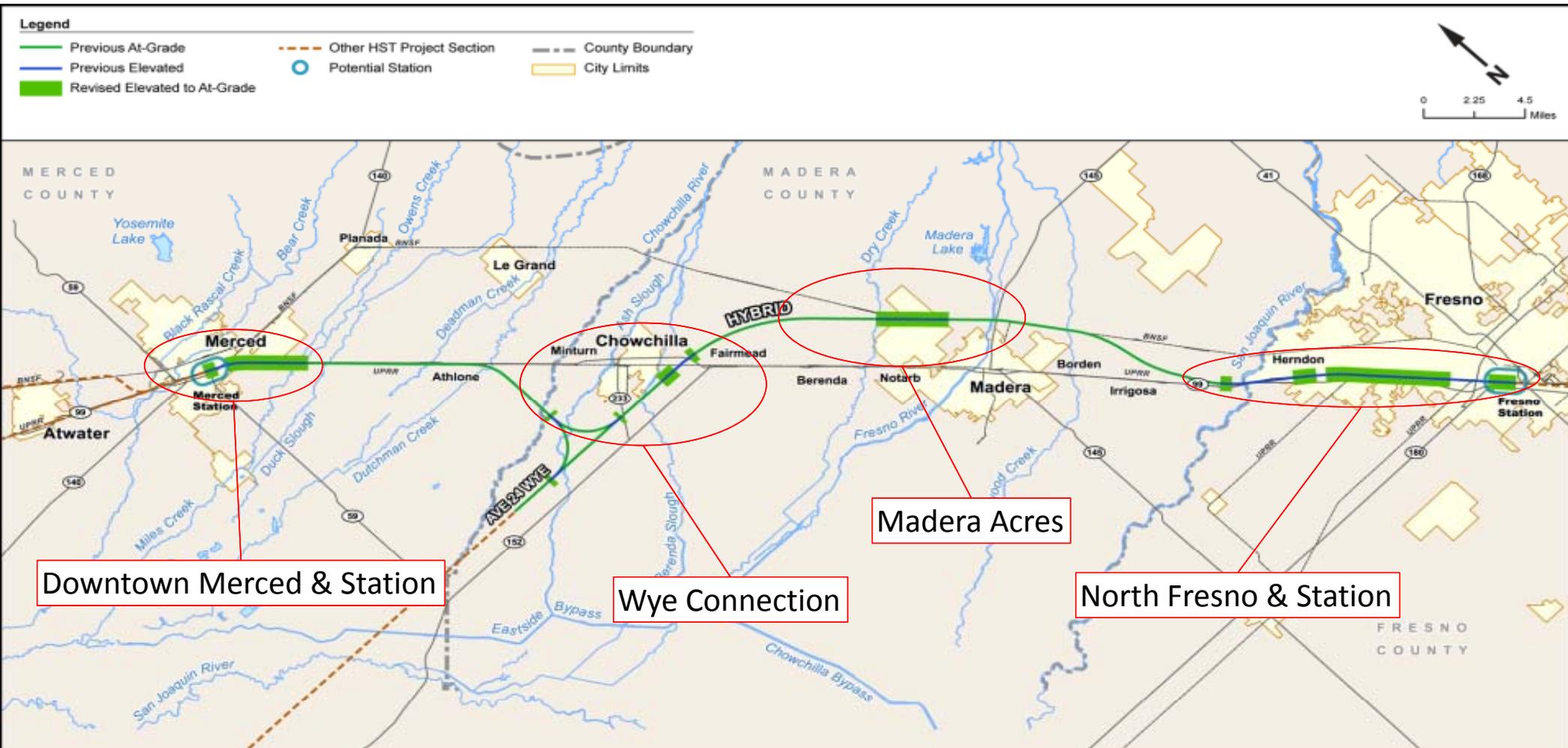
BNSF (A1) Alternative Optimized Profile



UPRR/SR99 (A2) Alternative Optimized Profile



Hybrid Alternative Optimized Profile



Phase 1 Moving Forward

Building outward north and south

First step:

 Merced—Fresno

 Fresno—Bakersfield

Second Step:

 San Jose—Merced

 Bakersfield—Palmdale

 Palmdale—Los Angeles

Third Step:

 San Francisco—San Jose

 Los Angeles—Anaheim



Current Public Funding Summary

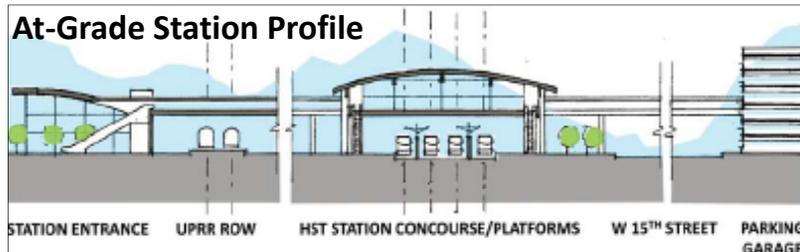
Funding Source	Award	State Match	TOTAL
American Recovery and Reinvestment Act (ARRA) January 2010	\$1.85 billion	\$1.85 billion	\$3.7 billion
High-Speed Intercity Passenger Rail (HSIPR) Federal FY 10-11 October 2010	\$715 million	\$306 million	\$1.02 billion
American Recovery and Reinvestment Act (ARRA) December 2010	\$616 million	\$616 million	\$1.234 billion
American Recovery and Reinvestment Act (ARRA) May 2011	\$300 million	\$75 million	\$375 million



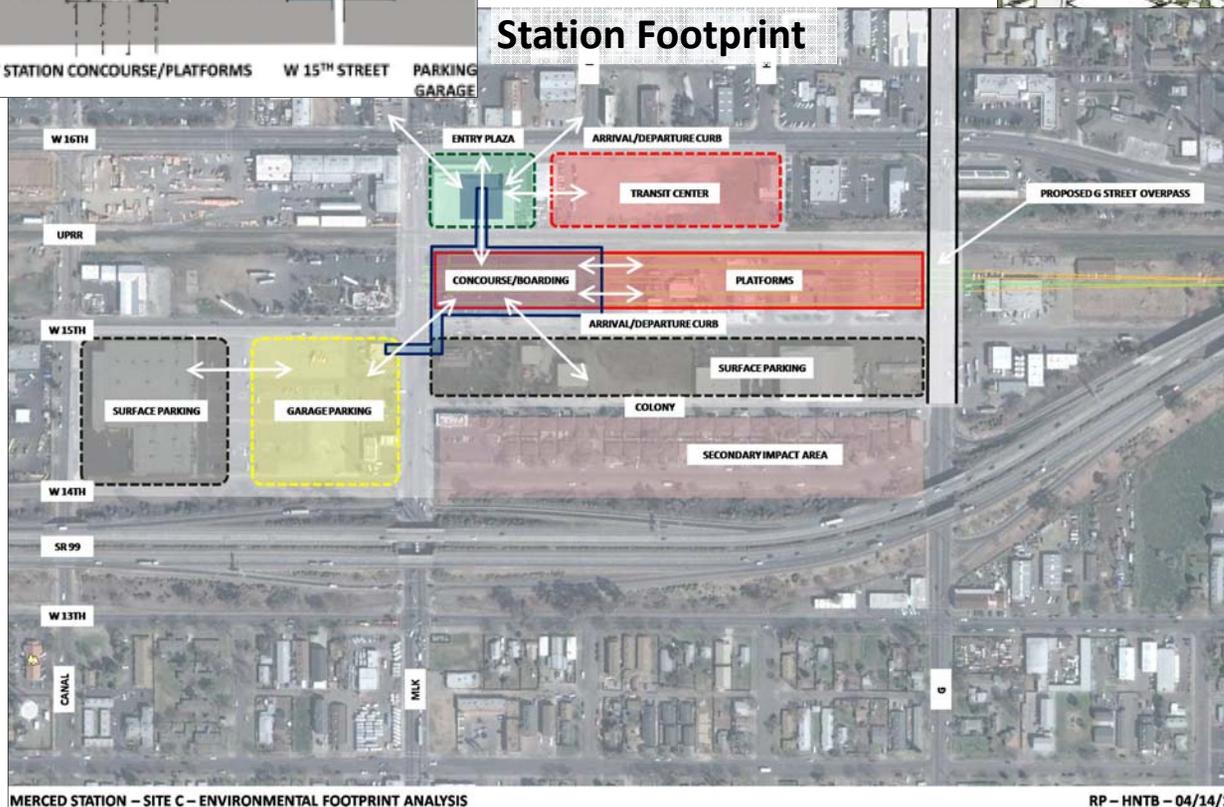
Approximately \$6.33 billion is available for initial construction



Downtown Merced Station



Station Footprint



MERCED STATION – SITE C – ENVIRONMENTAL FOOTPRINT ANALYSIS

RP – HNTB – 04/14/11

- Now located between **Martin Luther King Jr. Way** and **G Street**
- The station would be accessible from both sides of the UPRR
- Primary station entrance would be on 16th Street

- Best access to the regional highway and public transit system
- Fewest residential impacts
- Adjacent to the UPRR right-of-way in Downtown Merced
- At-grade profile reduces visual impacts

Farmland Resources

High-speed train project could potentially affect farmlands by:

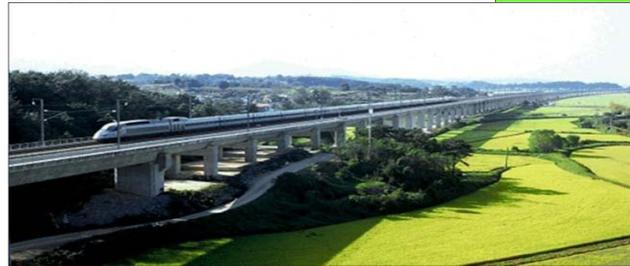
- Acquiring farmland for right-of-way (consider Williamson Act contracts)
- Severing parcels and access

Mitigation measures to be considered:

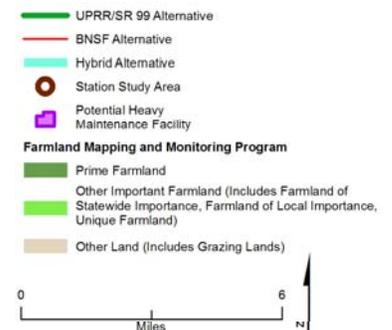
- Avoiding farmlands (such as by aligning HST features adjacent to existing rail rights-of-way)
- Reduce width of right-of-way
- Preserve access through HST for farm equipment
- Protecting other farmlands

Agricultural benefits of HST:

- Reducing pressure for farmland conversion to urban uses by fostering higher-density development around HST stations



1) Farmland as defined by the California Department of Conservation, Farmland Mapping and Monitoring Program (FMMP). FMMP data is for general planning purposes, and has a minimum mapping unit of 10 acres. "Other Important Farmland" includes the following FMMP categories: Farmland of Statewide Importance, Farmland of Local Importance, and Unique Farmland. "Other Lands" category includes the following FMMP categories: Grazing Lands and Other Land. Based on 2008 FMMP GIS data for Merced, Madera, and Fresno Counties.



Community Impacts

High-speed train project effects on community could include:

- Potential noise impacts from the aerodynamic movement of air from high train speeds
- Potential visual effects of elevated structures
- Construction disturbances

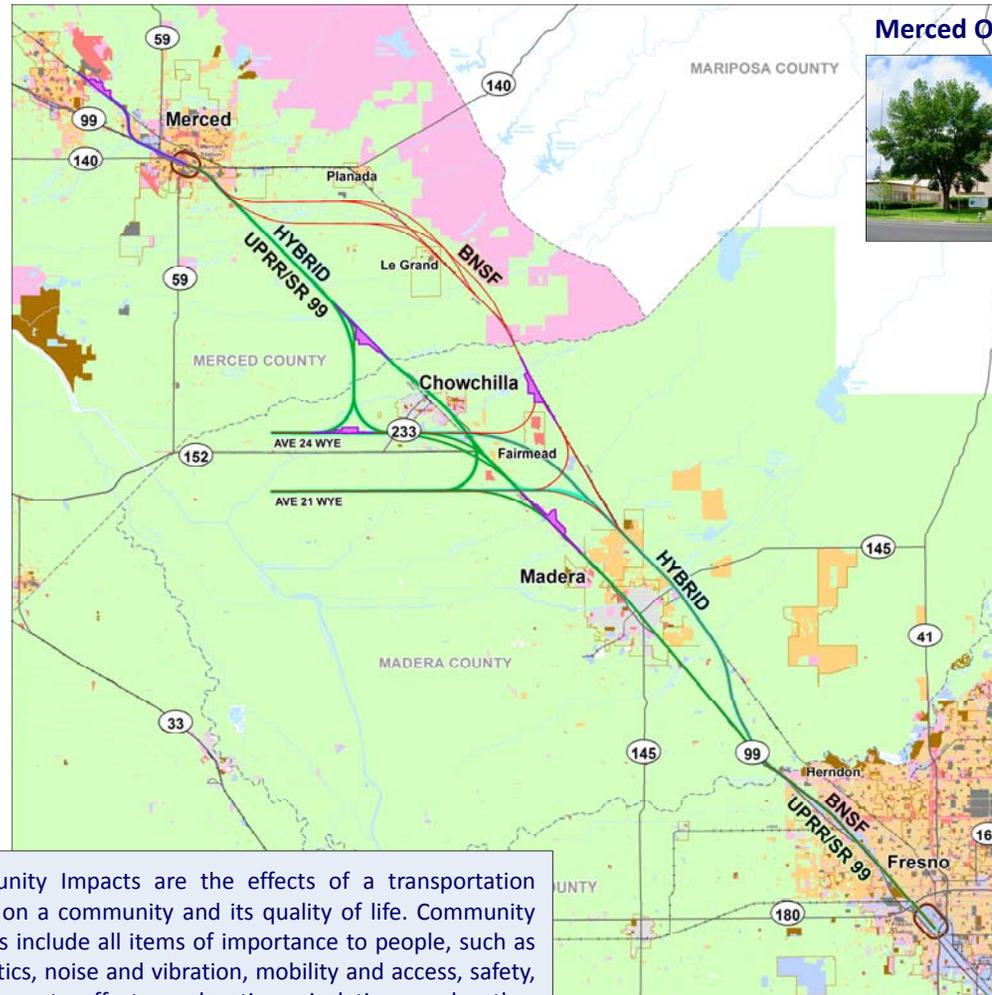
Methods of minimizing effects on community

- Avoid residential corridors when possible
- Plan for future road crossing needs
- Crossings at designated locations prevent bifurcating neighborhoods
- Minimize elevated structures where practical, or integrate structures within urban centers

High-speed train project benefits to community

- Economic connectivity/attraction
- Enhance intercity accessibility
- Reduce dependence on non-sustainable fuels
- Improve air quality
- Stimulate economy by creating thousands of new jobs
- Create new meeting places in the station areas

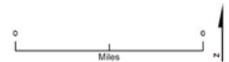
Community Impacts are the effects of a transportation **action** on a community and its quality of life. Community impacts include all items of importance to people, such as aesthetics, noise and vibration, mobility and access, safety, employment effects, relocation, isolation and other community issues specific to each project



Merced Old Library



Madera County Courthouse



Next Steps – NEPA/CEQA Analysis

- Meet with members of the public/stakeholders
- Complete Environmental technical studies:
 - **Natural Environment:** Wetland, Fisheries/Aquatic, Wildlife, Water Resources, Geology, Agriculture
 - **Social Environment:** Transportation, Air Quality, Neighborhood/Community impacts, Economics, Cultural Resources, Land use, Parks
 - **Built Environment:** Property Acquisition, Electromagnetic Fields, Noise/Vibration, Public Utilities/Energy, Safety & Security, Visual
- Circulate Draft EIR/EIS – July 2011
- Release Final EIR/EIS – January 2012
- Record of Decision/Notice of Determination – February 2012

*dates subject to change



Public Participation — How to Comment

Thank you for attending today's public information meeting. Please fill out a comment sheet, hand it to a staff person or leave it in the comment boxes provided at each station.

If you want to comment outside the meeting, here is how to provide input:

Written Comments:

California High-Speed Rail Authority
Mr. Jeff Abercrombie, Regional Director
Attn: Merced to Fresno
HST Project EIR/EIS
770 L Street, Suite 800
Sacramento, CA 95814

Emailed Comments:

California High-Speed Rail Authority
Merced_Fresno@ca.hsr.gov

Include in the subject line:

Merced to Fresno HST

For more project information visit the authority's website:

www.cahighspeedrail.ca.gov



Reducing Visual Impacts

Visual quality is an assessment of the composition of the character-defining features of the landscape. Visual quality is determined by evaluating the viewed landscape's characteristics in terms of vividness, intactness, and unity.

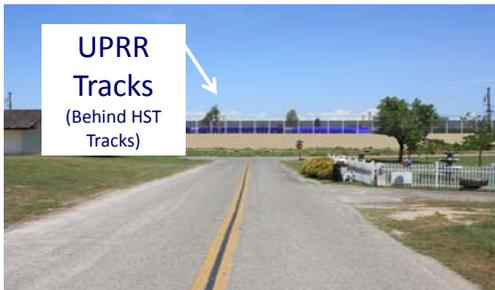
Avenue 19 at Pickfair Way
At-Grade



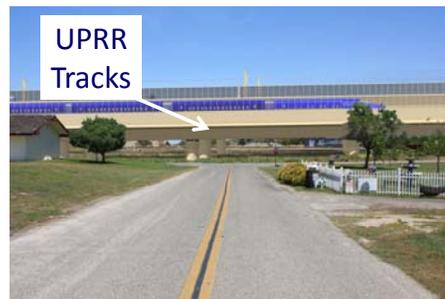
Avenue 19 at Pickfair Way -
Elevated Structure



Avenue 18 ¾ at Old Mill Way
At-grade



Avenue 18 ¾ at Old Mill Way -
Elevated Structure



According to CEQA Guidelines, the project would result in a significant impact on aesthetics and visual quality in the following instances:

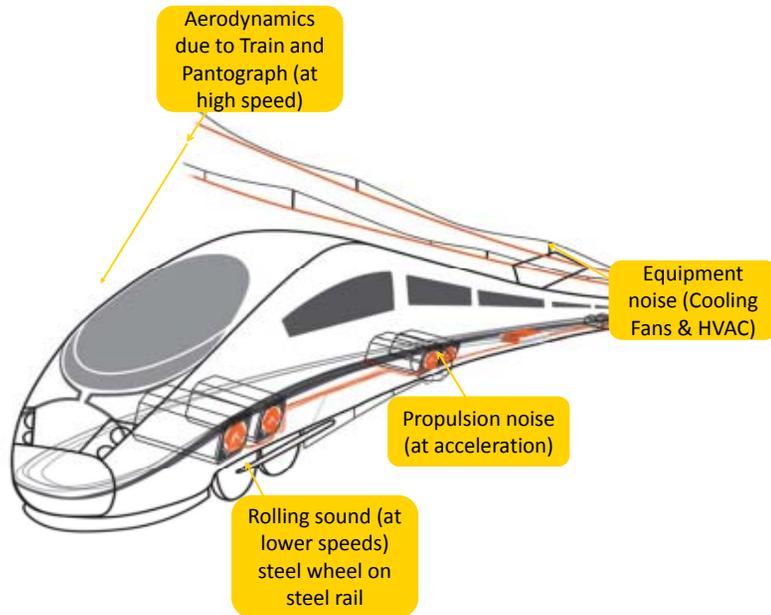
- The project would have a substantial adverse impact on a scenic vista.
- The project would substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historical buildings within a state scenic highway.
- The project would substantially degrade the site's and its surroundings' existing visual character or quality.
- The project would create a new source of substantial light or glare, which would adversely affect day or nighttime area views.

Where feasible, designing the tracks at-grade reduces noise and visual impacts.

The visual simulations on the left represent differences in appearance between aerial structures and at-grade alignments.

High-Speed Trains Sound

High Speed trains make four kinds of sound

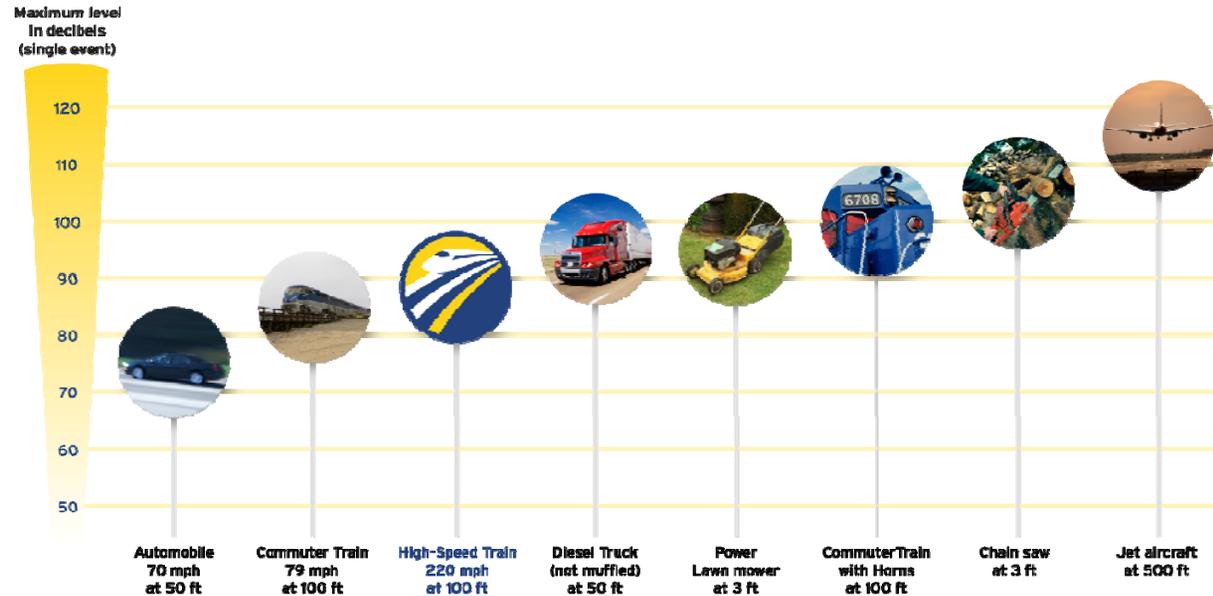


Rolling – sound from the wheels as trains move along the tracks.

Equipment – sound from cooling fans and air conditioners.

Propulsion – sound from motors and gears that make the train move.

Aerodynamics – sound from the flow of air moving past the train at high speed.



Comparing the sound of High-Speed Trains

Assessing Sound Impacts

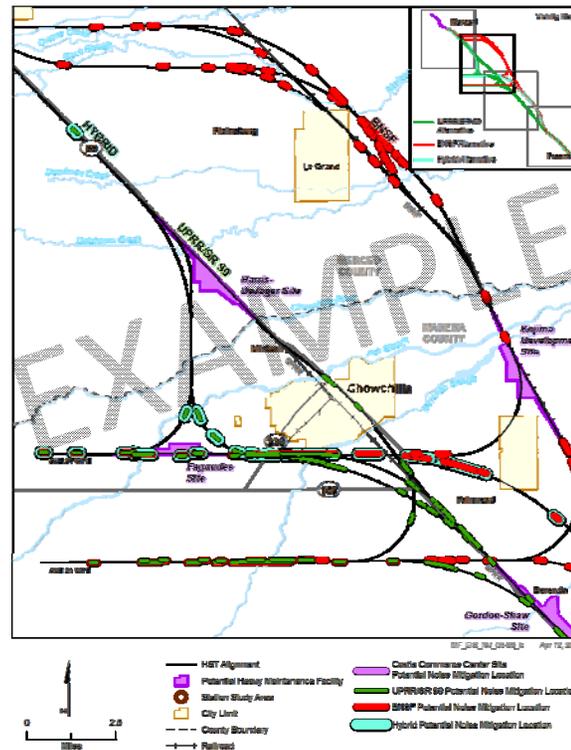
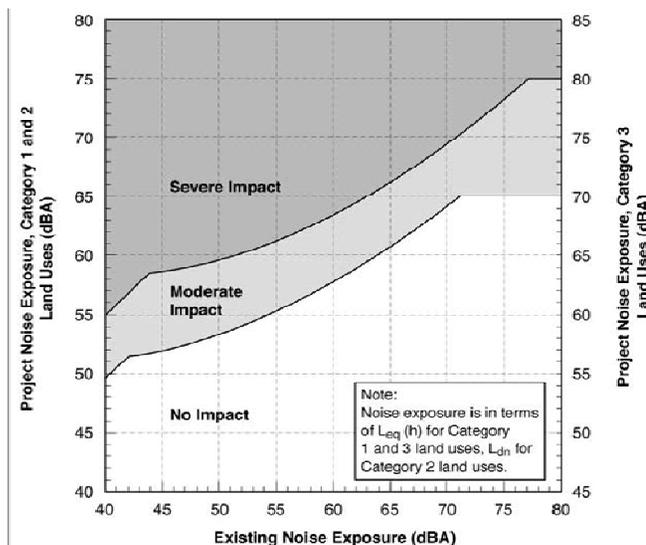
Measuring Sound: Sound is measured in terms of sound pressure level expressed in decibels (dB). In order to account for human response to high and low frequencies, the A-weighting system is used. These measurements are referred to as dBA.

The figure below is an example of how sound impacts will be shown in the Draft EIR/S.

Sound measurements are used to assess the level of impact. Impacts are categorized as:

1. **No Impact**
2. **Moderate impact** – the change in cumulative noise level would be noticeable to most people, but may not be sufficient to generate strong, adverse reactions.
3. **Severe impact** – a significant percentage of people would be highly annoyed by the project's noise.

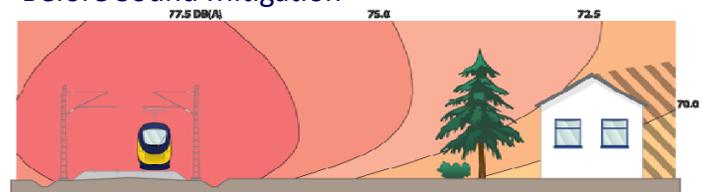
Federal Railroad Administration Noise Criteria



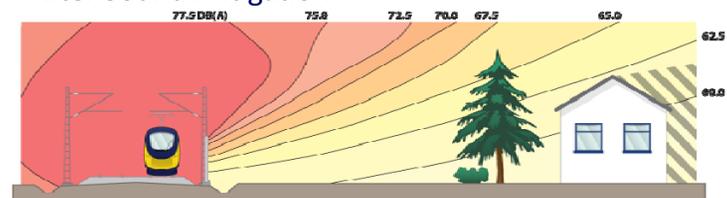
Potential Sound Mitigation Options

- Install sound barriers
 - Work with communities to determine how the use and height of sound barriers would be determined
- Install building sound insulation
- Purchase properties severely affected by noise

Before Sound Mitigation



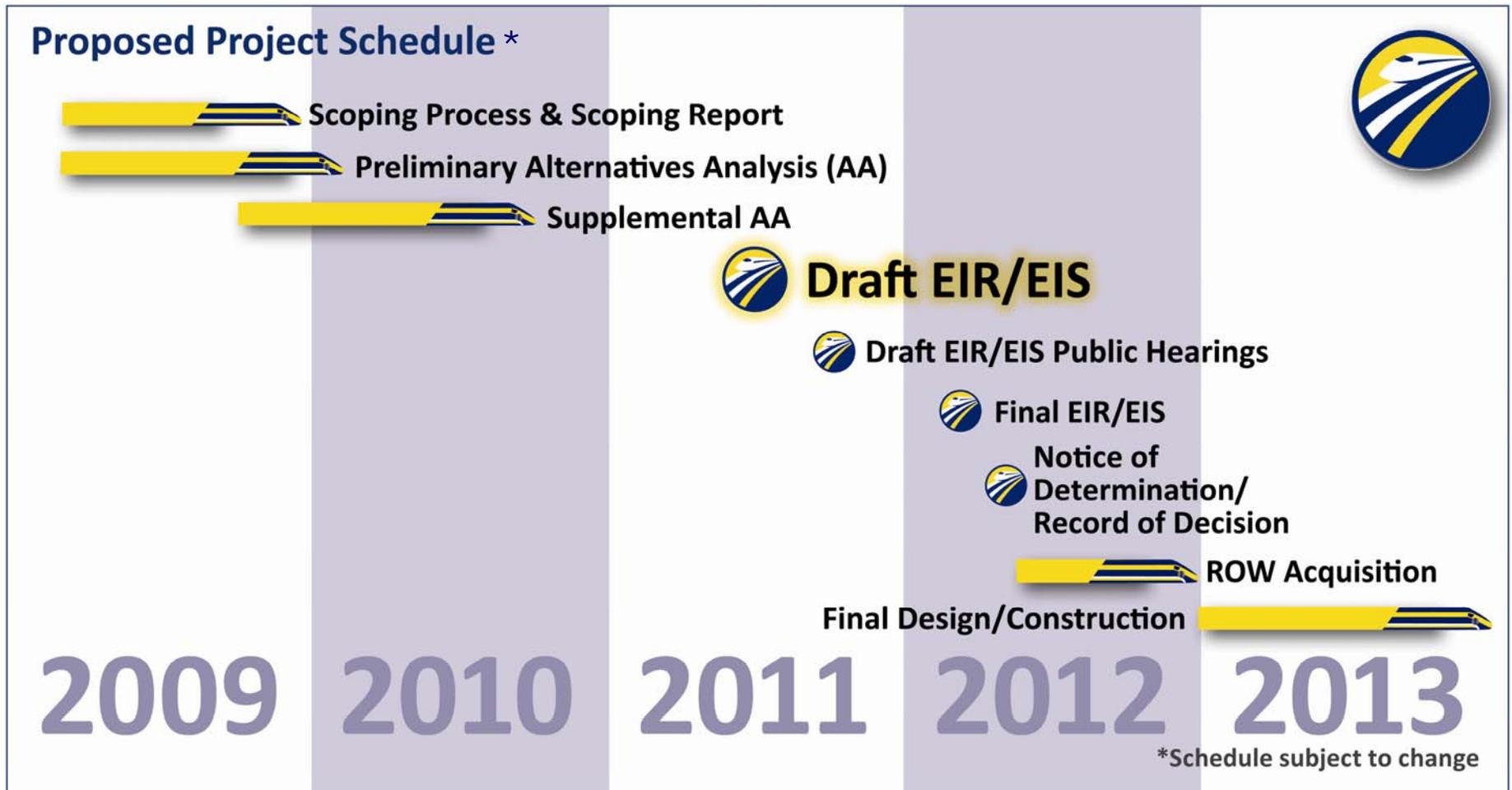
After Sound Mitigation



Conceptual sound barrier options

Photos provided by HMMH

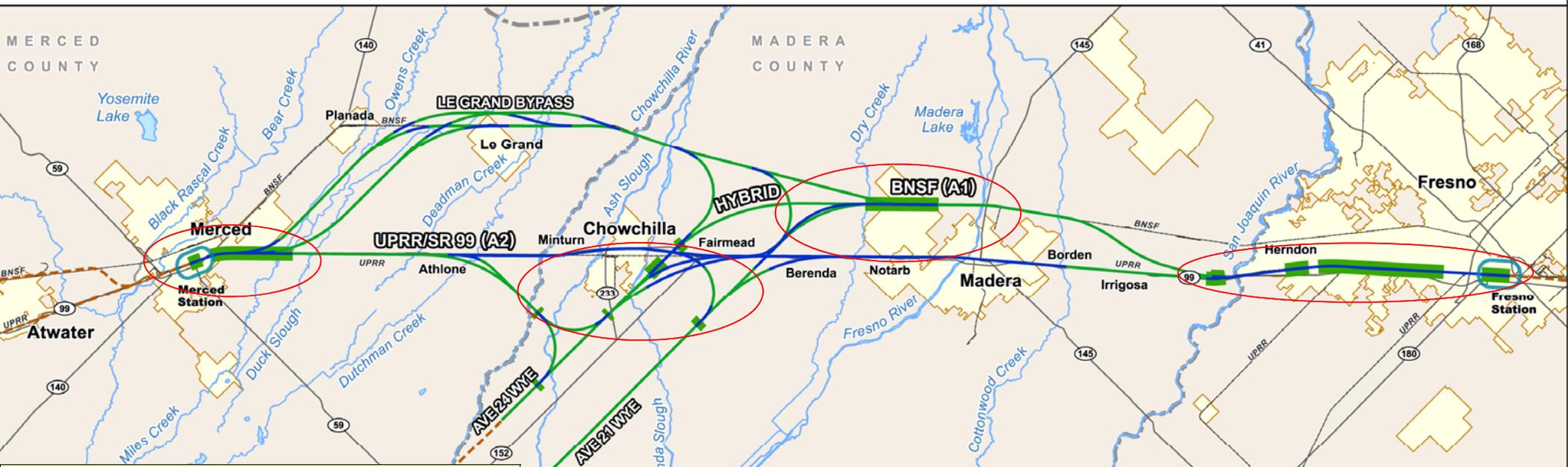
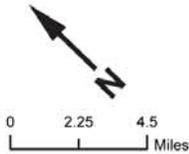
Proposed Schedule



All 3 Alternatives Optimized Profile

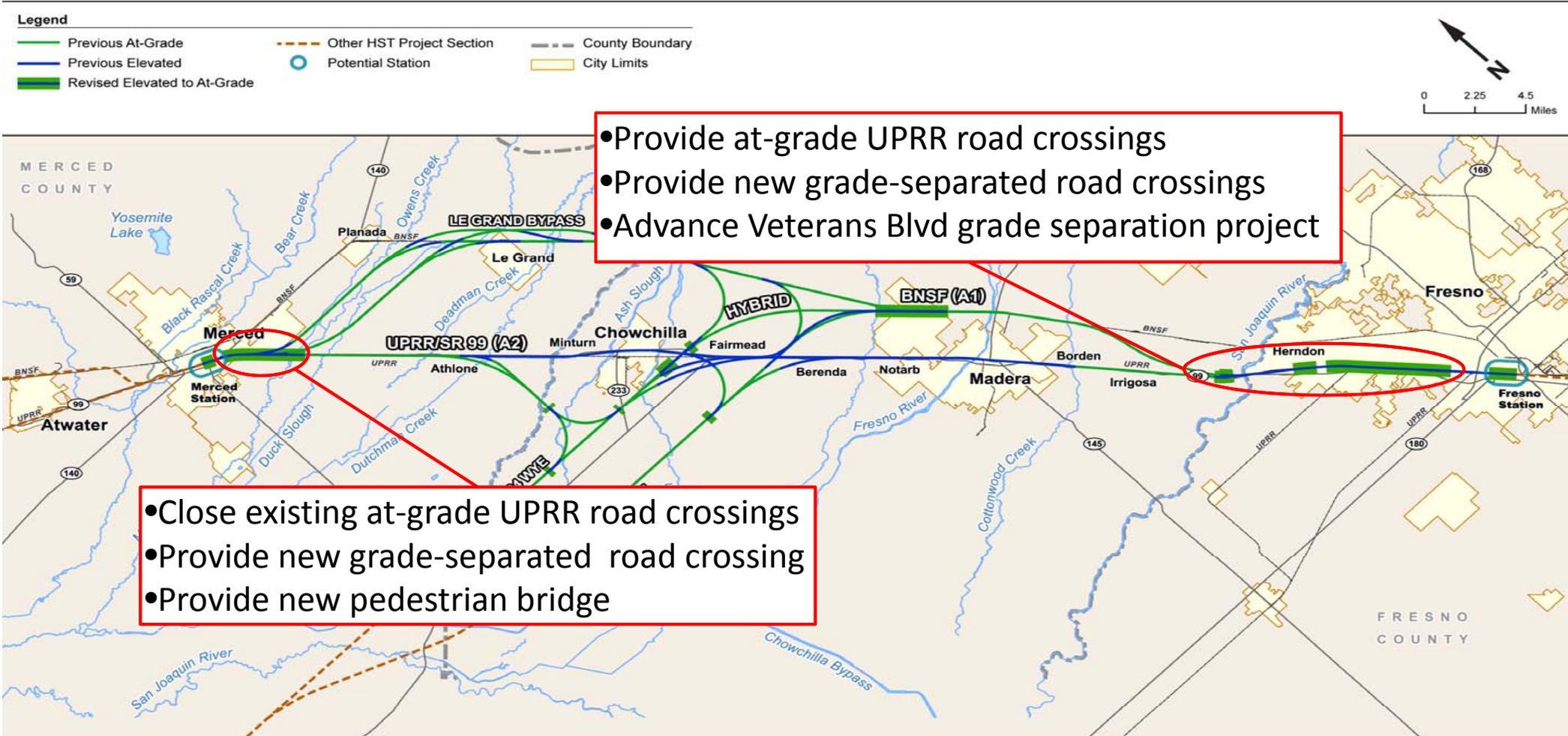
Legend

- Previous At-Grade
- Previous Elevated
- Revised Elevated to At-Grade
- - - Other HST Project Section
- Potential Station
- County Boundary
- City Limits



Profile Legend	Alignment	Revised Elevated to At-grade
Previous Elevated: —	BNSF (A1)	9 to 10 miles
Previous At-Grade —	UPRR/SR99 (A2)	9 miles
Revised to At-Grade: —	Hybrid	13 miles

Optimized Profile Road Closures and Modifications



The road closures and modifications identified here are in addition to the road closures and modifications that were identified before the alignment was optimized for an at-grade profile.

A2 (UPRR) / A1 (BNSF) – Ave 21 Wye

