

California High-Speed Rail Authority

Merced to Fresno Section: Central Valley Wye

Draft Relocation Impact
Report

December 2016



TABLE OF CONTENTS

EXECUTIVE SUMMARY	VII
Summary of Effects.....	vii
Residences.....	vii
Commercial and Industrial Businesses	vii
Agricultural Parcels and Facilities.....	viii
Community and Public Facilities.....	viii
1 INTRODUCTION.....	1-1
1.1 Background of HSR Program	1-1
1.2 Organization of this Report.....	1-1
2 MERCED TO FRESNO SECTION: CENTRAL VALLEY WYE	2-1
2.1 Common Features.....	2-1
2.2 SR 152 (North) to Road 13 Wye Alternative.....	2-2
2.2.1 Alignment and Ancillary Features	2-2
2.2.2 State Highway or Local Roadway Modifications	2-4
2.2.3 Freight or Passenger Railroad Modifications	2-4
2.2.4 Summary	2-4
2.3 SR 152 (North) to Road 19 Wye Alternative.....	2-5
2.3.1 Alignment and Ancillary Features	2-5
2.3.2 State Highway or Local Roadway Modifications	2-7
2.3.3 Freight or Passenger Railroad Modifications	2-8
2.3.4 Summary	2-8
2.4 Avenue 21 to Road 13 Wye Alternative.....	2-9
2.4.1 Alignment and Ancillary Features	2-9
2.4.2 State Highway or Local Roadway Modifications	2-11
2.4.3 Freight or Passenger Railroad Modifications	2-11
2.4.4 Summary	2-11
2.5 SR 152 (North) to Road 11 Wye Alternative.....	2-12
2.5.1 Alignment and Ancillary Features	2-12
2.5.2 State Highway or Local Roadway Modifications	2-14
2.5.3 Freight or Passenger Railroad Modifications	2-14
2.5.4 Summary	2-15
3 LAWS, REGULATIONS, AND ORDERS	3-1
3.1 Federal	3-1
3.1.1 Improving Access to Services for Persons with Limited English Proficiency (USEO 13166).....	3-1
3.1.2 Americans with Disabilities Act (42 U.S.C. §§ 12101–12213)	3-1
3.1.3 Uniform Relocation Assistance and Real Property Acquisition Policies Act (42 U.S.C. § 61)	3-1
3.2 State	3-1
3.3 Regional and Local.....	3-1
4 METHODS FOR EVALUATING EFFECTS	4-1
4.1 Definition of Resource Study Area	4-1
4.2 Methods of Effects Analysis	4-1
4.2.1 Parcel Analysis	4-2
5 AFFECTED ENVIRONMENT.....	5-1
5.1 Population Characteristics.....	5-1

5.1.1	Population and Ethnicity	5-1
5.1.2	Income	5-3
5.1.3	Households	5-4
5.2	Housing	5-6
5.2.1	Region	5-6
5.2.2	City of Chowchilla	5-8
5.2.3	Community of Fairmead	5-8
5.2.4	Community of Madera Acres	5-8
5.3	Local Economy	5-9
5.3.1	Region	5-9
5.3.2	City of Chowchilla	5-11
5.3.3	Community of Fairmead	5-11
5.3.4	Community of Madera Acres	5-11
6	EFFECTS ANALYSIS	6-1
6.1	Introduction	6-1
6.2	Residential Displacements and Relocations	6-1
6.2.1	SR 152 (North) to Road 13 Wye Alternative	6-4
6.2.2	SR 152 (North) to Road 19 Wye Alternative	6-5
6.2.3	Avenue 21 to Road 13 Wye Alternative	6-5
6.2.4	SR 152 (North) to Road 11 Wye Alternative	6-5
6.3	Commercial and Industrial Businesses	6-6
6.3.1	SR 152 (North) to Road 13 Wye Alternative	6-6
6.3.2	SR 152 (North) to Road 19 Wye Alternative	6-7
6.3.3	Avenue 21 to Road 13 Wye Alternative	6-7
6.3.4	SR 152 (North) to Road 11 Wye Alternative	6-7
6.3.5	SR 152 (North) to Road 13 Wye Alternative	6-8
6.3.6	SR 152 (North) to Road 19 Wye Alternative	6-8
6.3.7	Avenue 21 to Road 13 Wye Alternative	6-8
6.3.8	SR 152 (North) to Road 11 Wye Alternative	6-8
6.4	Community and Public Facilities	6-8
6.4.1	SR 152 (North) to Road 13 Wye Alternative	6-8
6.4.2	SR 152 (North) to Road 19 Wye Alternative	6-8
6.4.3	Avenue 21 to Road 13 Wye Alternative	6-8
6.4.4	SR 152 (North) to Road 11 Wye Alternative	6-9
7	RELOCATION RESOURCES AND RELOCATION PLAN	7-1
7.1	The Uniform Act and the California Relocation Assistance Act	7-1
7.2	California High-Speed Rail Authority Title VI Plan	7-1
7.3	California High-Speed Rail Authority Limited English Proficiency Plan and Policy	7-2
7.4	Residential Relocations	7-2
7.4.1	Residential Property Resources	7-3
7.4.2	Other Residential Resources	7-5
7.5	Commercial and Industrial Businesses	7-6
7.5.1	Commercial and Industrial Property Resources	7-6
7.5.2	Other Business Relocation Resources	7-6
7.6	Agricultural Parcels and Facilities	7-7
7.6.1	Agricultural Resources	7-8
7.6.2	Other Agricultural Relocation Resources	7-8
7.7	Relocation Plan Elements and Recommendations	7-8
7.7.1	Assumptions	7-9

7.7.2 Relocation Plan Elements.....7-9

7.7.3 Special Relocation Considerations and Steps to Address Them.....7-9

8 REFERENCES.....8-1

9 PREPARER QUALIFICATIONS9-1

Tables

Table 2-1 Design Features of the SR 152 (North) to Road 13 Wye Alternative2-5

Table 2-2 Design Features of the SR 152 (North) to Road 19 Wye Alternative2-8

Table 2-3 Design Features of the Avenue 21 to Road 13 Wye Alternative2-11

Table 2-4 Design Features of the SR 152 (North) to Road 11 Wye Alternative2-15

Table 3-1 Regional and Local Policies3-2

Table 5-1 Past, Present, and Projected Populations5-1

Table 5-2 Minority Group Representation (2000)5-2

Table 5-3 Minority Group Representation (2014)5-2

Table 5-4 Median Annual Household Income (1999 and 2014)5-4

Table 5-5 Household Characteristics (2000)5-4

Table 5-6 Household Characteristics (2014)5-5

Table 5-7 Housing Stock Inventory (2000)5-6

Table 5-8 Housing Stock Inventory (2014)5-6

Table 5-9 Housing Tenure and Vacancy (2000)5-7

Table 5-10 Housing Tenure and Vacancy (2014)5-7

Table 5-11 Unemployment Rates (2000 and 2014)5-9

Table 5-12 Employment by Industry (2000 and 2014)5-10

Table 6-1 Estimated Number of Displaced Residential Units by Type6-1

Table 6-2 Estimated Number of Residential Displacements by Alternative6-2

Table 6-3 Gap Analysis of Residential Developments by Alternative6-3

Table 6-4 Estimated Number of Displaced Commercial and Industrial Units.....6-6

Table 6-5 Estimated Effects on Agricultural Resources by Alternative6-7

Table 7-1 Summary Characteristics of Available Residential Properties and Vacant Lots7-4

Figures

Figure 2-1 SR 152 (North) to Road 13 Wye Alternative Alignment and Key Design Features.....	2-3
Figure 2-2 SR 152 (North) to Road 19 Wye Alternative Alignment and Key Design Features.....	2-6
Figure 2-3 Avenue 21 to Road 13 Wye Alternative Alignment and Key Design Features.....	2-10
Figure 2-4 SR 152 (North) to Road 11 Wye Alternative Alignment and Key Design Features.....	2-13

Appendices

Appendix A: Relocation Assistance Documents

DRAFT

ACRONYMS AND ABBREVIATIONS

Authority	California High-Speed Rail Authority
Bay Area	San Francisco Bay Area
BNSF	BNSF Railway
Caltrans	California Department of Transportation
Central Valley Wye	Merced to Fresno Section: Central Valley Wye
DRIR	Draft Relocation Impact Report
EIR	environmental impact report
EIS	environmental impact statement
FRA	Federal Railroad Administration
HSR	high-speed rail
Hybrid Alignment	Merced to Fresno Section: Hybrid Alignment
IAMF	impact avoidance and minimization feature
LEP	limited English proficiency
RSA	resource study area
SR	state route
U.S.C.	United States Code
Uniform Act	Uniform Relocation Assistance and Real Property Acquisition Policies Act
UPRR	Union Pacific Railroad
USEO	U.S. Presidential Executive Order
USEPA	U.S. Environmental Protection Act

EXECUTIVE SUMMARY

The California High-Speed Rail Authority (Authority) has prepared this *Merced to Fresno Section: Central Valley Wye Draft Relocation Impact Report* (Central Valley Wye DRIR) to support the *Merced to Fresno Section: Central Valley Wye Supplemental Environmental Impact Report (EIR)/Supplemental Environmental Impact Statement (EIS)* (Supplemental EIR/EIS) (Authority and FRA 2016a). The Supplemental EIR/EIS tiers from the original *Merced to Fresno Section Final EIR/EIS* (Merced to Fresno Final EIR/EIS) (Authority and FRA 2012a). When the Authority Board of Directors and the Federal Railroad Administration approved the Merced to Fresno Section in 2012, they deferred a decision on the wye connection for a future environmental analysis. Since then, the Authority and Federal Railroad Administration have identified four new alternatives for consideration.

This Central Valley Wye DRIR characterizes existing conditions and analyzes potential displacement and relocation effects of the four Central Valley Wye alternatives:

- State Route (SR) 152 (North) to Road 13 Wye Alternative
- SR 152 (North) to Road 19 Wye Alternative
- Avenue 21 to Road 13 Wye Alternative
- SR 152 (North) to Road 11 Wye Alternative

Displacement and relocation effects consist of effects on residences, commercial and industrial businesses, agricultural parcels and facilities, and community and public facilities. This report includes federal, state, regional, and local regulations and requirements, methods used for the analysis of effects, a description of the affected environment, applicable impact avoidance and minimization features (IAMF), and a discussion of the displacement and relocation effects that could result from construction of the Central Valley Wye alternatives. The report also provides an assessment of the availability and suitability of relocation resources within the resource study area (RSA).

Summary of Effects

The displacement and relocation effects of the Central Valley Wye alternatives include the following direct effects. Indirect effects associated with the Central Valley Wye are addressed in the *Merced to Fresno Section: Central Valley Wye Community Impact Assessment* (Authority and FRA 2016b).

Residences

The acquisition of land for construction of the Central Valley Wye alternatives could result in the displacement of 62 to 119 residential properties, depending on the alternative selected. An analysis of available residential properties for sale or rent indicated that there would likely be a sufficient number of comparable replacement residences available in the relocation resource study area (RSA); although residents in Fairmead and unincorporated Madera County may be unable to relocate within the same community. The geographic dispersal of available residences accounts for the difficulty that displaced individuals in Fairmead and unincorporated Madera County face in finding replacement housing. The Authority will implement an IAMF to confirm that displaced persons or owners of acquired property are provided relocation assistance and counseling. With implementation of this IAMF, direct effects as a result of residential displacements would be minimized.

Commercial and Industrial Businesses

Construction of the Central Valley Wye alternatives could result in the displacement of 0–8 commercial and industrial businesses. The types of displaced businesses could include manufacturing or processing facilities, automotive/trucking facilities, markets, a gas station, and a small office. A sufficient number and types of available properties and businesses are located within the RSA to relocate displaced businesses. Additionally, the Authority will implement an IAMF to make certain that displaced businesses are provided relocation assistance and

counseling. This IAMF would minimize effects as a result of the displacement of commercial and industrial businesses.

Agricultural Parcels and Facilities

Construction of the Central Valley Wye would result in the acquisition of agricultural lands within the Central Valley Wye alternatives' footprints, parcel severance, and the displacement of agricultural facilities (e.g., barns, corrals, stables, silos, dairy pens). It is expected that suitable agricultural land is available in the region for agricultural operations that are required to relocate. The Authority will implement IAMFs to confirm that displaced farm operations are provided relocation assistance and counseling, and to assist owners of confined animal agricultural facilities affected by the Central Valley Wye with permit assistance necessary for continued operation or relocation of the facilities. These IAMFs would reduce or minimize effects on agricultural operations and encourage owners of confined animal agricultural facilities to continue to operate rather than close facilities.

Community and Public Facilities

Construction of the Central Valley Wye would not result in the displacement of any community and public facilities. Therefore, community and public facilities would not be directly affected by displacement and relocation effects.

1 INTRODUCTION

1.1 Background of HSR Program

The California High-Speed Rail Authority (Authority) proposes to construct, operate, and maintain an electric-powered high-speed rail (HSR) system in California. When completed, the nearly 800-mile train system would provide new passenger rail service to more than 90 percent of the state's population. More than 200 weekday trains would serve the statewide intercity travel market. The HSR would be capable of operating speeds of up to 220 miles per hour, with state-of-the-art safety, signaling, and automatic train control systems. The system would connect and serve the major metropolitan areas of California, extending from San Francisco and Sacramento in the north to San Diego in the south.

The Authority commenced its environmental planning process with the 2005 *Final Program Environmental Impact Report (EIR)/Environmental Impact Statement (EIS) for the Proposed California High-Speed Train System* (Statewide Program EIR/EIS) (Authority and FRA 2005), and then began preparing second-tier, project environmental evaluations for sections of the statewide HSR system. The 2012 *Merced to Fresno Section Final EIR/EIS* (Merced to Fresno Final EIR/EIS) (Authority and FRA 2012a) was the first project-level EIR/EIS that the Authority certified and the Federal Railroad Administration (FRA) approved. The Merced to Fresno Final EIR/EIS identified the Hybrid Alignment as the preferred alternative and examined two design options for an east-west connection to the San Jose to Merced Section, referred to as the “wye connection” (Authority and FRA 2012a: pages 2-3 and 2-21). When the Board of Directors and the FRA approved the Merced to Fresno Section later in 2012, they deferred a decision on the wye connection for a future environmental analysis. The Authority and FRA have prepared the *Merced to Fresno Section: Central Valley Wye Supplemental EIR/Supplemental EIS* (Supplemental EIR/EIS) as the next step in the environmental review process to select a Central Valley Wye connection (Authority and FRA 2016a). Chapter 2, Alternatives, of the Supplemental EIR/EIS provides a detailed history of how the Authority developed the Central Valley Wye alternatives.

1.2 Organization of this Report

This technical report includes the following sections:

- Section 2, Merced to Fresno Section: Central Valley Wye, provides a description of the Central Valley Wye alternatives.
- Section 3, Laws, Regulations, and Orders, identifies the federal, state, and local laws, guidance, and policies relevant to relocations for the Central Valley Wye.
- Section 4, Methods for Evaluating Effects, describes the methods used to determine and evaluate potential effects.
- Section 5, Affected Environment, describes existing conditions.
- Section 6, Effects Analysis, describes direct effects, both adverse and beneficial.
- Section 7, Relocation Resources and Relocation Plan, identifies relocation resources that would be available to displacees.
- Section 8, References, provides a list of the references cited in this technical report.
- Section 9, Preparer Qualifications, identifies the individuals involved in preparing this report and their credentials.

Additional details on relocation resources are provided in:

- Appendix A, Relocation Assistance Documents, provides information about the Authority's relocation assistance programs.

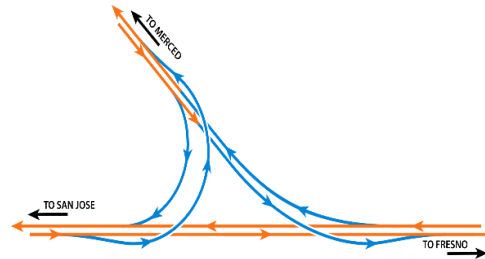
2 MERCED TO FRESNO SECTION: CENTRAL VALLEY WYE

The Central Valley Wye would create the east-west HSR connection between the San Jose to Merced Section to the west and the north-south Merced to Fresno Section to the east.¹ The four Central Valley Wye alternatives addressed in the Supplemental EIR/EIS (Figures 2-1 to 2-4) are:

- SR 152 (North) to Road 13 Wye Alternative
- SR 152 (North) to Road 19 Wye Alternative
- Avenue 21 to Road 13 Wye Alternative
- SR 152 (North) to Road 11 Wye Alternative

This section describes the common design features of the four alternatives, followed by descriptions of each alternative. Volume 2, Appendix 2-A, System Infrastructure, of the Supplemental EIR/EIS provides further detail on performance criteria, infrastructure components and systems, and function of the Central Valley Wye and the HSR system as a whole.

Central Valley Wye Schematic



2.1 Common Features

The Central Valley Wye alternatives would cross rural areas in unincorporated Merced and Madera Counties, and would travel through the southern portion of Chowchilla and the rural-residential community of Fairmead. Volume 3 of the Supplemental EIR/EIS provides detailed design drawings that support the descriptions of the Central Valley Wye alternatives.

The HSR alignment would be entirely grade-separated, meaning that crossings of roads, railroads, and other transport facilities would use overpasses or underpasses so that the HSR would operate independently of other modes of transport. The HSR right-of-way would also be fenced to prevent public or vehicle access. The Central Valley Wye project footprint would primarily consist of the train right-of-way, which would accommodate two sets of tracks in an area with a minimum width of 100 feet. Additional right-of-way would be required to accommodate grade separations, embankments, traction power facilities, and transitional portions of the Central Valley Wye that allow for bidirectional interface between north-south and east-west trending alignments.

The Central Valley Wye alternatives would include at-grade, below-grade, and above-grade (elevated) track segments. The at-grade track would be laid on an earthen railbed raised 6–10 feet (embankment heights are in excess of 35 feet) off the ground level, set on ties with rock ballast; fill and ballast for the railbed would be obtained from permitted borrow sites and quarries. Below-grade track would be laid in open cut, trench, or cut-and-cover tunnel at a depth that would allow roadway and other grade-level uses above the track. Elevated track segments would span some waterways, roadways, railroad, and other HSR tracks, and would consist of precast, prestressed concrete box girders, cast-in-place concrete box girders, or steel box girders. The height of elevated track sections would depend on the height of existing structures below, or clearances to existing roads or other HSR facilities, and would range from 35 to 90 feet above grade. Columns would be spaced approximately 100–120 feet apart on average.

¹ The term *wye* refers to the Y-like formation created at the point where train tracks branch off the mainline to continue in different directions. The transition of mainline track to a wye requires splitting two tracks into four tracks that cross over one another before the wye “legs” (segments) can diverge in opposite directions to allow two-way travel. For the Merced to Fresno Section of the HSR system, the two tracks traveling east-west from the San Jose to Merced Section must become four tracks—a set of two tracks branching toward Merced to the north and a set of two tracks branching toward Fresno to the south.

2.2 SR 152 (North) to Road 13 Wye Alternative

The SR 152 (North) to Road 13 Wye Alternative (Figure 2-1) follows the existing Henry Miller Road and SR 152 rights-of-way as closely as possible in the east-west direction, and the Road 13, SR 99, and BNSF Railway (BNSF) rights-of-way in the north-south direction. Deviations from these existing transportation routes or corridors are necessary to accommodate design requirements; specifically, wider curves are necessary to accommodate the speed of the HSR compared to lower-speed roadway alignments. The SR 152 (North) to Road 13 Wye Alternative would not follow existing transportation rights-of-way where it transitions from following one transportation corridor to another.

2.2.1 Alignment and Ancillary Features

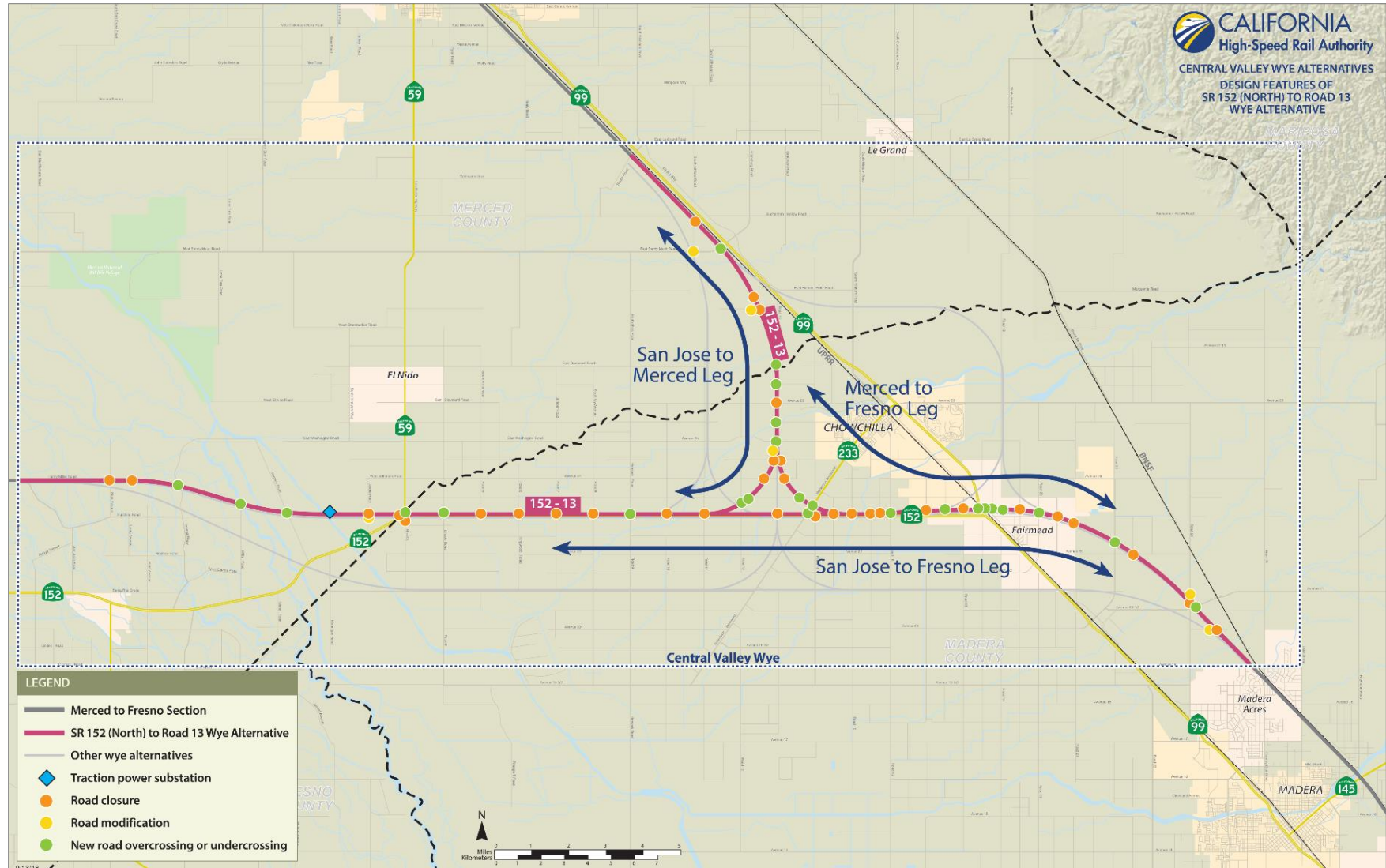
The SR 152 (North) to Road 13 Wye Alternative would extend approximately 52 miles, mostly at-grade on raised embankment, although it would also have aerial structures and a segment of retained cut (depressed alignment). The wye configuration of this alternative would be located southwest of the city of Chowchilla, with the east-west axis along the north side of SR 152 and the north-south axis on the east side of Road 13.

As shown on Figure 2-1, this alternative would begin in Merced County at the intersection of Henry Miller Road and Carlucci Road, and would continue at-grade on embankment due east toward Elgin Avenue, where it would curve southeast toward the San Joaquin River and Eastside Bypass. Approaching Willis Road, the alignment would cross the San Joaquin River on an aerial structure, then would return to embankment. It would then cross the Eastside Bypass on an aerial structure. After crossing the Eastside Bypass, the alignment would continue east and cross SR 59 at-grade just north of the existing SR 152/SR 59 interchange, entering Madera County. The SR 152/SR 59 interchange would be reconstructed a little to the south and SR 59 would be grade-separated to pass above the HSR on an aerial structure. The alignment would continue east at-grade along the north side of SR 152 toward Chowchilla, splitting into two legs (four tracks) near Road 11 to transition to the Merced to Fresno Section: Hybrid Alignment, and would cross Ash Slough on an aerial structure. All but the northbound track of the San Jose to Merced section of the alignment (leg) would then return to at-grade embankment. The northbound track would rise to cross over the tracks of the San Jose to Fresno leg on aerial structure as it curves north toward Merced. The SR 152 (North) to Road 13 Wye Alternative legs would be routed as described below and as shown on Figure 2-1:

- The southbound track of the San Jose to Merced leg² would be at-grade. This split (where tracks separate) would be west of Chowchilla, at approximately Road 11. The two San Jose to Merced tracks would continue north on the eastern side of Road 13, crossing Ash Slough and the Chowchilla River, and then would cross over Road 13 to its west side. As the tracks return to grade, they would curve northwest, crossing Dutchman Creek on an aerial structure, and follow the west side of the Union Pacific Railroad (UPRR)/SR 99 corridor. At Sandy Mush Road, the alignment would descend into a shallow cut (depressed) section for approximately 0.5 mile, with a retained cut-and-cover undercrossing³ at Caltrans' Sandy Mush Road overhead. The alignment would return to grade and continue along the west side of the UPRR/SR 99 corridor, connecting to the Merced to Fresno Section: Hybrid Alignment at Ranch Road.

² A track is included within a leg; e.g., southbound track of the San Jose to Merced leg.

³ An undercrossing is a road or track crossing under an existing road or track.



Source: Authority and FRA 2016a; ESRI, 2013; CAL FIRE, 2004; ESRI/National Geographic, 2015

FINAL – SEPTEMBER 13, 2016

Figure 2-1 SR 152 (North) to Road 13 Wye Alternative Alignment and Key Design Features

- The San Jose to Fresno leg of this alternative would continue east from the split near Road 11 and along the north side of SR 152 toward Chowchilla. It would be predominantly at-grade, crossing several roads and Berenda Slough on aerial structures. The alignment would pass south of Chowchilla at-grade then would rise to cross over the UPRR/SR 99 corridor and Fairmead Boulevard on an aerial structure. East of the UPRR/SR 99 corridor, the alternative would extend at-grade through Fairmead, north of Avenue 23. At approximately Road 20, the alignment would curve southeast toward the BNSF corridor and cross Dry Creek on a short aerial structure. The San Jose to Fresno leg would align parallel to the west side of the BNSF corridor as it meets the Merced to Fresno Section: Hybrid Alignment at Avenue 19.
- The Merced to Fresno leg of the alternative would split from the San Jose to Fresno leg near Road 14, where the southbound track of the Merced to Fresno leg would ascend on aerial structure, crossing over the tracks of the San Jose to Fresno leg. The northbound track would curve northwest, rise on a high embankment crossing over several roads, and continue on an at-grade embankment until joining the San Jose to Merced leg near Avenue 25.

Wildlife undercrossing structures would be installed in at-grade embankments along this alternative where the alignment intersects wildlife corridors.

2.2.2 State Highway or Local Roadway Modifications

The SR 152 (North) to Road 13 Wye Alternative would require the permanent closure of 38 public roadways at selected locations and the construction of 24 overcrossings⁴ or undercrossings in lieu of closure. Figure 2-1 shows the anticipated state highway and local roadway closures and modifications. Fourteen of these permanent road closures would be located at SR 152, where roads currently cross at-grade but need to be closed to convert SR 152 to a fully access-controlled corridor. The 14 proposed closures are Road 5, Road 6, Road 7, Road 8, Road 10, Road 11, Road 13, Road 14, Road 14 1/2, Road 15, Road 15 1/2, Road 15 3/4, Road 17, and Road 18. Planned new grade separations along SR 152 at the SR 59/SR 152 Interchange, Road 4/Lincoln Road, Road 12, and Road 17 1/2 would maintain access to, and across, SR 152. These roadways would be reconfigured to two 12-foot lanes with two 8-foot shoulders. Each of the new interchanges would require realigning SR 152. Three new interchanges are proposed between SR 59 and SR 99 to provide access to SR 152: at Road 9/Hemlock Road, SR 233/Robertson Boulevard, and Road 16.

The distance between over- or undercrossings would vary from less than 2 miles to approximately 5 miles where other roads are perpendicular to the proposed HSR. Between these over- or undercrossings, 24 additional roads would be closed, as shown on Figure 2-1. Local roads paralleling the proposed HSR alignment and used by small communities and farm operations may be shifted and reconstructed to maintain their function. Access easements would be provided to maintain access to properties severed by HSR.

2.2.3 Freight or Passenger Railroad Modifications

The SR 152 (North) to Road 13 Wye Alternative would cross over the UPRR right-of-way south of Chowchilla. This alternative would maintain required vertical (at least 23.3 feet) clearance over UPRR operational right-of-way to avoid or minimize impacts on UPRR rights-of-way, spurs, and facilities (UPRR 2007). In areas where the SR 152 (North) to Road 13 Wye Alternative parallels the UPRR right-of-way, the alternative maintains a minimum horizontal clearance of 102 feet from the centerline to the UPRR right-of-way.

2.2.4 Summary

Table 2-1 summarizes the design features for the SR 152 (North) to Road 13 Wye Alternative.

⁴ An overcrossing is a road or track crossing over an existing road or track.

Table 2-1 Design Features of the SR 152 (North) to Road 13 Wye Alternative

Feature	SR 152 (North) to Road 13 Wye
Total length (linear miles) ¹	52
At-grade profile (linear miles) ¹	48.5
Elevated profile (linear miles) ¹	3
Below-grade profile (linear miles) ¹	0.5
Number of straddle bents	32
Number of railroad crossings	1
Number of major water crossings	12
Number of road crossings	62
Approximate number of public roadway closures	38
Number of roadway overcrossings and undercrossings	24
Traction power substation sites	1
Switching and paralleling stations	1 switching station, 8 paralleling stations
Signaling and train-control elements	18
Communication towers	9
Wildlife crossing structures	39

Source: Authority, 2015

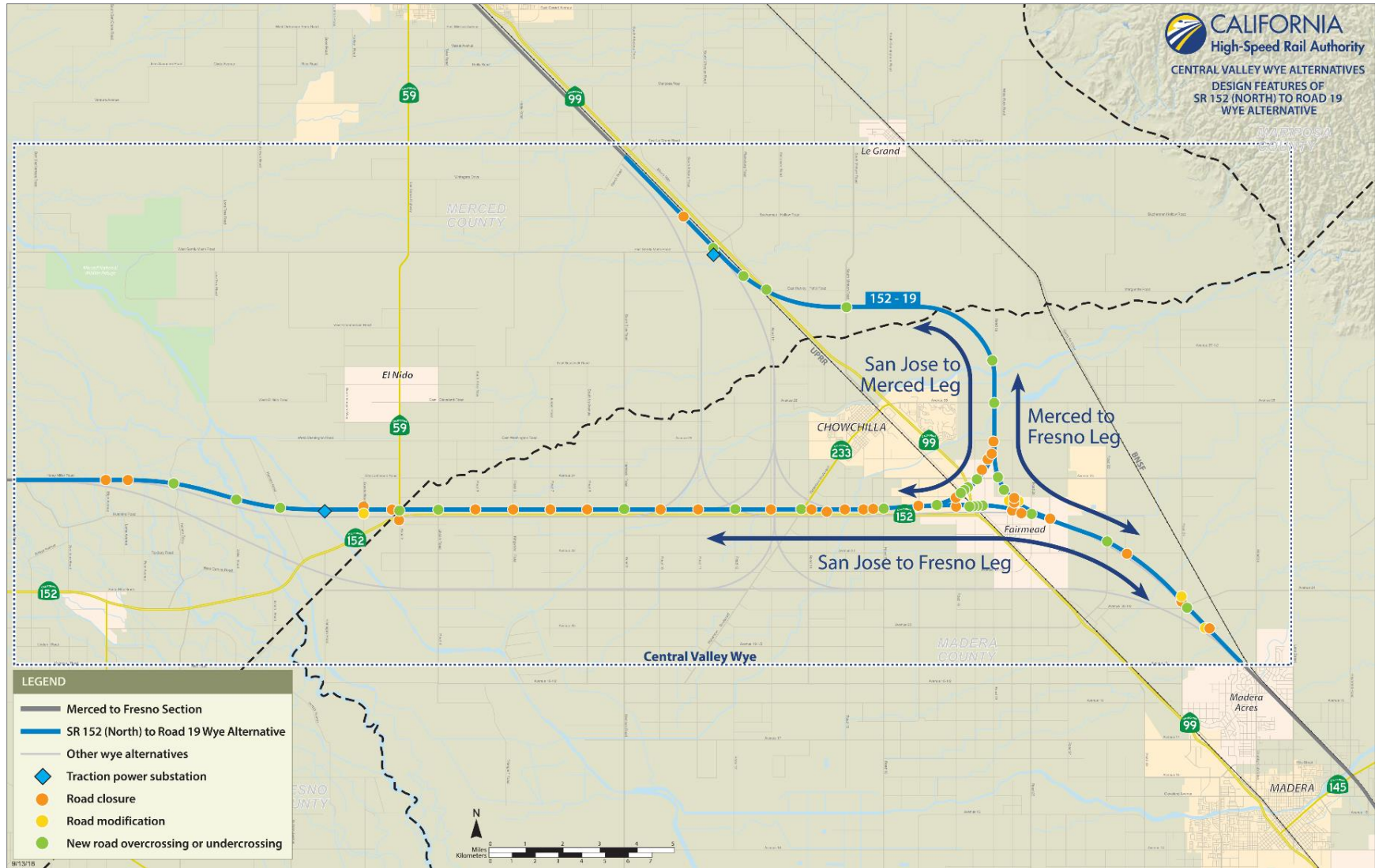
¹ Lengths shown are based on equivalent dual-track alignments and are one-way mileages. For example, the length of single-track elevated structure will be divided by a factor of 2 to convert to dual-track equivalents.

2.3 SR 152 (North) to Road 19 Wye Alternative

The SR 152 (North) to Road 19 Wye Alternative (Figure 2-2) is designed to follow the existing Henry Miller Road and SR 152 rights-of-way as closely as practicable in the east-west direction and Road 19, SR 99, and BNSF rights-of-way in the north-south direction. Deviations from these existing transportation corridors would be necessary to accommodate design requirements; specifically, larger curves would be necessary to accommodate the high speed of the HSR compared to lower-speed roadway alignments. The SR 152 (North) to Road 19 Wye Alternative would not follow existing transportation rights-of-way as it transitions from following one transportation corridor to another.

2.3.1 Alignment and Ancillary Features

The SR 152 (North) to Road 19 Wye Alternative would extend approximately 55 miles, mostly at-grade on embankment, although it would also have aerial structures, retained cut (depressed alignment), and depressed tunnel undercrossings of major railroad and highway corridors. The wye configuration of this alternative would be located southeast of the city of Chowchilla and north of Fairmead, with the east-west axis along the north side of SR 152 and the north-south axis on the east side of Road 19.



Source: Authority and FRA 2016a; ESRI, 2013; CAL FIRE, 2004; ESRI/National Geographic, 2015

FINAL – SEPTEMBER 13, 2016

Figure 2-2 SR 152 (North) to Road 19 Wye Alternative Alignment and Key Design Features

Beginning at the intersection of Henry Miller Road and Carlucci Road (at the same point in Merced County as the SR 152 [North] to Road 13 Wye Alternative), this alternative would continue east toward Elgin Avenue, where it would curve southeast toward the San Joaquin River. It would cross the river on an aerial structure, returning to an at-grade embankment, then onto another aerial structure to cross the Eastside Bypass. After crossing the Eastside Bypass, the alignment would continue east and cross SR 59 at-grade just north of the existing SR 152/SR 59 interchange, where it would enter Madera County. It would continue east at-grade along the north side of SR 152 toward Chowchilla, crossing Ash Slough and Berenda Slough on aerial structures. As it crosses Road 16, the alignment would split into two legs (four tracks) to transition to the Merced to Fresno Section: Hybrid Alignment. East of Road 17, the San Jose to Merced leg would curve northeast, rising to cross the UPRR/SR 99 corridor on an aerial structure, and then would continue north along the east side of Road 19.

As the alignment approaches Avenue 25, the San Jose to Merced and Merced to Fresno legs would converge, requiring the northbound track of the San Jose to Merced leg to rise on an aerial structure and cross over the tracks of the Merced to Fresno leg.

- The San Jose to Merced leg would continue north to just south of Ash Slough, where it would curve west, cross Ash Slough and the Chowchilla River on aerial structures, and continue west approximately 0.5 mile south of Harvey Pettit Road. West of South Minturn Road, the leg would curve northwest and descend below-grade into a series of three tunnels crossing under the SR 99 and UPRR corridors and the Caltrans Sandy Mush Road overhead. The UPRR tracks would be reconstructed on the roof of the HSR cut-and-cover tunnels, while maintaining the same horizontal and vertical alignment. Construction of this type of below-grade crossing would require temporarily realigning the UPRR tracks. Approximately 0.6 mile north of Sandy Mush Road, the alternative would ascend to grade and continue along the UPRR/SR 99 corridor to connect with the Merced to Fresno Section: Hybrid Alignment at Ranch Road.
- The San Jose to Fresno leg would continue east from Road 16 and, east of Road 18, ascend on an aerial structure to cross SR 99 north of the SR 99/SR 152 interchange. East of the UPRR/SR 99 corridor, the leg would continue north of Avenue 23 through Fairmead, descending to grade east of Road 18 3/4. The alternative would then curve southeast toward the BNSF corridor, crossing Dry Creek on a short aerial structure, and continuing along the west side of the BNSF corridor to join the Merced to Fresno Section: Hybrid Alignment at Avenue 19.
- The Merced to Fresno leg would split from the San Jose to Fresno leg near Road 20 1/2. The southbound track of the Merced to Fresno leg would ascend on an aerial structure and cross over the tracks of the San Jose to Fresno leg. The Merced to Fresno leg would curve northwest, rise on aerial structures over several road crossings, and then continue at-grade to join the San Jose to Merced leg near Avenue 25.

Wildlife undercrossing structures would be provided in at-grade embankments where the alignment intersects wildlife corridors.

2.3.2 State Highway or Local Roadway Modifications

The SR 152 (North) to Road 19 Wye Alternative would require the permanent closure of 36 public roadways at selected locations and the construction of 29 overcrossings or undercrossings. Table 2-2 and Figure 2-2 show the anticipated state highway and local roadway closures and modifications. Fourteen of these permanent road closures would be located at SR 152 where roads currently cross at-grade but must be closed to convert SR 152 to a fully access-controlled corridor. The proposed 14 closures are Road 5, Road 6, Road 7, Road 8, Road 10, Road 11, Road 13, Road 14, Road 14 1/2, Road 15, Road 15 1/2, Road 15 3/4, Road 17, and Road 18. New grade separations are planned along SR 152 at the SR 59/SR 152 interchange, Road 4/Lincoln Road, Road 12, SR and Road 17 1/2. These roadways would be reconfigured to two 12-foot lanes with two 8-foot shoulders, and several of these interchanges would require realigning SR 152. Interchanges between SR 59 and SR 99 that would provide access to SR 152 are Road 9/Hemlock Road, SR 233/Robertson Boulevard, and Road 16.

The distance between over- or undercrossings would vary from less than 2 miles to approximately 5 miles where roads would be perpendicular to the proposed HSR. Between these over- or undercrossings, 22 additional roads would be closed (Figure 2-2). Local roads paralleling the proposed HSR alignment and used by small communities and farm operations may be shifted and reconstructed to maintain their function. Access easements would be provided to maintain access to properties severed by HSR.

The SR 152 (North) to Road 19 Wye Alternative would cross over SR 99 at three locations. South of Chowchilla, both the San Jose to Merced and the San Jose to Fresno legs would rise on aerial structures to cross SR 99. Another crossing of SR 99 would be at the northern end of the alternative, where it descends below-grade into an undercrossing tunnel segment. SR 99 would be temporarily realigned during construction, and would be reconstructed on the roof of the undercrossing tunnel.

2.3.3 Freight or Passenger Railroad Modifications

The SR 152 (North) to Road 19 Wye Alternative would cross over the UPRR corridor at three separate locations. South of Chowchilla, both the San Jose to Merced and the San Jose to Fresno legs would rise on aerial structures to cross the UPRR operational right-of-way. In these instances, the alternative would maintain required vertical (at least 23.3 feet) clearance over UPRR operational right-of-way to avoid or minimize impacts on UPRR rights-of-way, spurs, and facilities (UPRR 2007). The third crossing of the UPRR corridor would be at the northern end of the alternative, where the alignment would descend into an undercrossing tunnel. The UPRR tracks would be reconstructed on the roof of the HSR tunnel, maintaining the same vertical alignment. Construction of this crossing would require the temporary detour (shoofly)⁵ of the UPRR tracks. In areas where the SR 152 (North) to Road 19 Wye Alternative parallels the UPRR right-of-way, the alternative maintains a minimum horizontal clearance of 102 feet from the centerline to the UPRR right-of-way.

2.3.4 Summary

Table 2-2 summarizes the design features for the SR 152 (North) to Road 19 Wye Alternative.

Table 2-2 Design Features of the SR 152 (North) to Road 19 Wye Alternative

Feature	SR 152 (North) to Road 19 Wye
Total length (linear miles) ¹	55
At-grade profile (linear miles) ¹	48.5
Elevated profile (linear miles) ¹	3.5
Below-grade profile (linear miles) ¹	3
Number of straddle bents	31
Number of railroad crossings	3
Number of major water crossings	13
Number of road crossings	65
Approximate number of public roadway closures	36
Number of roadway overcrossings and undercrossings	29
Traction power substation sites	2

⁵ A shoofly is a temporary track alignment that detours trains around a construction site.

Feature	SR 152 (North) to Road 19 Wye
Switching and paralleling stations	2 switching stations, 7 paralleling stations
Signaling and train-control elements	21
Communication towers	6
Wildlife crossing structures	41

Source: Authority, 2015

¹ Lengths shown are based on equivalent dual-track alignments and are one-way mileages. For example, the length of single-track elevated structure will be divided by a factor of 2 to convert to dual-track equivalents.

2.4 Avenue 21 to Road 13 Wye Alternative

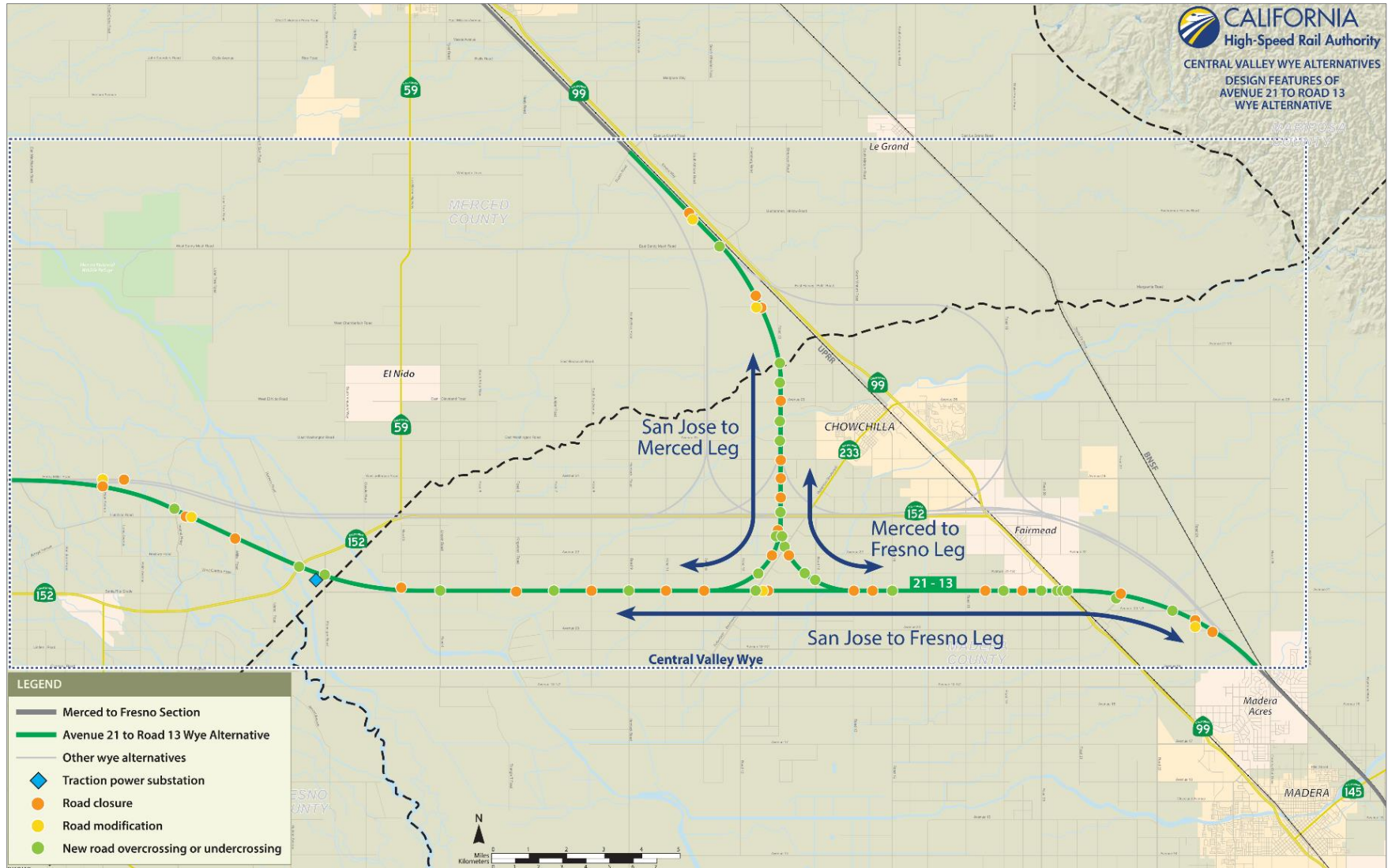
The Avenue 21 to Road 13 Wye Alternative (Figure 2-3) is designed to follow the existing Henry Miller Road and Avenue 21 rights-of-way as closely as practicable in the east-west direction and the Road 13, SR 99, and BNSF rights-of-way in the north-south direction. Deviations from these existing transportation corridors would be necessary to accommodate design requirements; specifically, larger curves would be necessary to accommodate the high speeds of the HSR compared to lower-speed roadway alignments. The Avenue 21 to Road 13 Wye Alternative would not follow existing transportation rights-of-way as it transitions from following one transportation corridor to another.

2.4.1 Alignment and Ancillary Features

The Avenue 21 to Road 13 Wye Alternative would extend approximately 53 miles, mostly at-grade on embankment, although it would also have aerial structures and a short segment of retained cut (depressed alignment). The wye configuration of this alternative would be located approximately 4 miles southwest of the city of Chowchilla, with the east-west axis along the north side of Avenue 21 and the north-south axis on the east side of Road 13.

Beginning at the intersection of Henry Miller Road and Carlucci Road (at the same point in Merced County as the SR 152 [North] to Road 13 Wye Alternative), west of Elgin Avenue this alternative would curve southeast toward the San Joaquin River and Eastside Bypass. East of Willis Road, the alignment would rise to an aerial structure to cross the river, SR 152, and the Eastside Bypass. The alignment would continue east along the north side of Avenue 21, crossing Ash Slough on an aerial structure. Southwest of Chowchilla, near Road 11, the alignment would split into two legs (four tracks) for transition to the Merced to Fresno Section: Hybrid Alignment. The San Jose to Merced leg would curve northeast, cross Road 13, and continue north along the east side of Road 13. At the beginning of the San Jose to Merced leg, the northbound track alternative would rise onto an aerial structure to cross over the tracks of the San Jose to Fresno leg. The Avenue 21 to Road 13 Wye Alternative legs would be routed as described below and shown on Figure 2-3:

- As the San Jose to Merced leg approaches SR 152, it would converge with the Merced to Fresno leg, requiring the northbound track of the San Jose to Merced leg to rise on an aerial structure and cross over the tracks of the Merced to Fresno leg. The San Jose to Merced leg would continue north on an elevated alignment crossing Ash Slough, the Chowchilla River, and Road 13 on aerial structures. As the leg returns to grade, it would curve northwest, cross Dutchman Creek on an aerial structure, and follow along the west side of the UPRR/SR 99 corridor. At Sandy Mush Road, the alternative would descend into a shallow cut (depressed) section for approximately 0.5 mile, with a retained cut-and-cover undercrossing tunnel segment at the Caltrans Sandy Mush Road Overhead. The alternative would return to grade and continue along the UPRR/SR 99 corridor, connecting to the Merced to Fresno Section: Hybrid Alignment at Ranch Road.



FINAL – SEPTEMBER 13, 2016

Figure 2-3 Avenue 21 to Road 13 Wye Alternative Alignment and Key Design Features

- The San Jose to Fresno leg would continue east from the split near Road 11 along the north side of Avenue 21 toward Chowchilla. It would be predominantly at-grade on embankment, ascending to cross Berenda Slough on an aerial structure. East of the wye configuration, the alignment would extend south of Chowchilla, ascend on an aerial structure east of Road 19 1/2, and cross the UPRR/SR 99 corridor. The alternative would extend south of Fairmead and curve southeast toward the BNSF corridor, cross Dry Creek on an aerial structure, and run adjacent to the west side of the BNSF corridor to its meeting with the Merced to Fresno Section: Hybrid Alignment at Avenue 19.
- The Merced to Fresno leg would split from the San Jose to Fresno leg near Road 15. The southbound track of the Merced to Fresno leg would ascend on an aerial structure and cross over the tracks of the San Jose to Fresno leg. The Merced to Fresno leg would curve northwest, rise on aerial structures over several road crossings, and then continue on an at-grade embankment to join the San Jose to Merced leg near SR 152.

Wildlife undercrossing structures would be provided along this alternative in at-grade embankment portions of the HSR corridor where the alignment intersects wildlife corridors.

2.4.2 State Highway or Local Roadway Modifications

The Avenue 21 to Road 13 Wye Alternative would require the permanent closure of 30 public roadways at selected locations and the construction of 28 overcrossings or undercrossings. Table 2-3 and Figure 2-3 show the anticipated state highway and local roadway closures. This alternative would require the fewest roadway and state highway modifications.

The Avenue 21 to Road 13 Wye Alternative would rise on aerial structures and cross over state highway facilities in three locations: SR 59 at Harmon Road, SR 152 at Road 13, and SR 99 at Avenue 21. Where other roads would be perpendicular to the proposed HSR, over- or undercrossings are planned at distances from less than 2 miles to 5 miles. Between these over- and undercrossings, some roads may be closed. Local roads paralleling the HSR alignment and used by small communities and farm operations may be shifted and reconstructed to maintain their function. Access easements would be provided to maintain access to properties severed by HSR.

2.4.3 Freight or Passenger Railroad Modifications

The Avenue 21 to Road 13 Wye Alternative would cross the UPRR operational right-of-way on an aerial structure south of Fairmead and maintain a vertical (at least 23.3 feet) clearance over UPRR operational right-of-way to avoid or minimize impacts on other UPRR rights-of-way, spurs, and facilities. In areas where the Avenue 21 to Road 13 Wye Alternative parallels the UPRR right-of-way, the alternative maintains a minimum horizontal clearance of 102 feet from the centerline to the UPRR right-of-way.

2.4.4 Summary

Table 2-3 summarizes the design features for the Avenue 21 to Road 13 Wye Alternative.

Table 2-3 Design Features of the Avenue 21 to Road 13 Wye Alternative

Feature	Avenue 21 to Road 13 Wye
Total length (linear miles) ¹	53
At-grade profile (linear miles) ¹	48.5
Elevated profile (linear miles) ¹	4
Below-grade profile (linear miles) ¹	0.5
Number of straddle bents	32
Number of railroad crossings	1

Feature	Avenue 21 to Road 13 Wye
Number of major water crossings	11
Number of road crossings	58
Approximate number of public roadway closures	30
Number of roadway overcrossings and undercrossings	28
Traction power substation sites	1
Switching and paralleling stations	1 switching station, 7 paralleling stations
Signaling and train-control elements	15
Communication towers	6
Wildlife crossing structures	44

Source: Authority, 2015

¹ Lengths shown are based on equivalent dual-track alignments and are one-way mileages. For example, the length of single-track elevated structure will be divided by a factor of 2 to convert to dual-track equivalents.

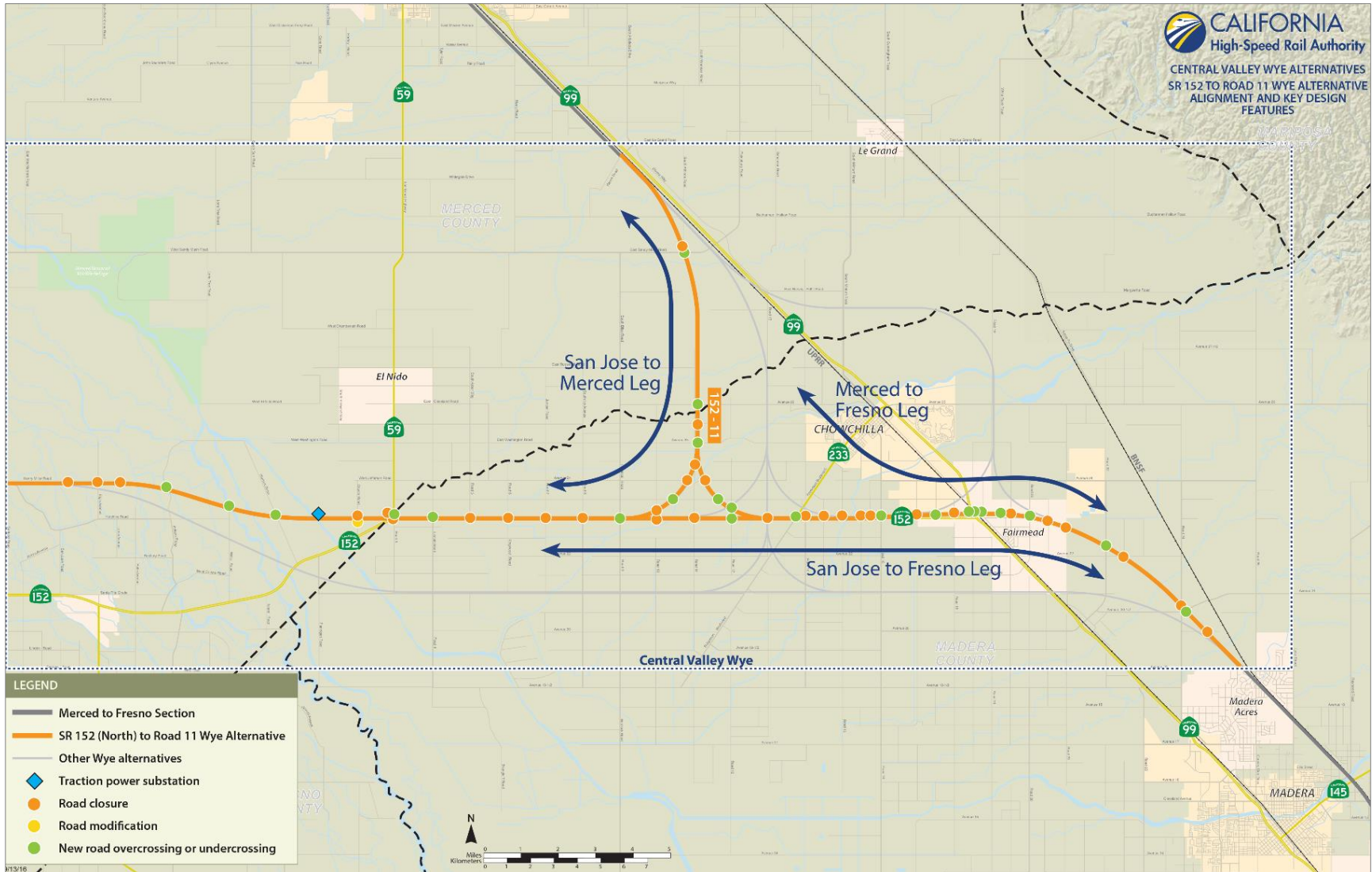
2.5 SR 152 (North) to Road 11 Wye Alternative

The SR 152 (North) to Road 11 Wye Alternative (Figure 2-4) follows the existing Henry Miller Road and SR 152 rights-of-way as closely as practicable in the east-west direction, and the Road 11, SR 99, and BNSF rights-of-way in the north-south direction. Deviations from these existing transportation corridors are necessary to accommodate design requirements; specifically, wider curves are necessary to accommodate the speed of the HSR compared to lower-speed roadway alignments. The SR 152 (North) to Road 11 Wye Alternative would not follow existing transportation rights-of-way where it transitions from following one transportation corridor to another.

2.5.1 Alignment and Ancillary Features

The SR 152 (North) to Road 11 Wye Alternative would extend approximately 51 miles, mostly at-grade on raised embankment, although it would also have aerial structures. The wye configuration of this alternative would be located west-southwest of the city of Chowchilla, with the east-west axis along the north side of SR 152 and the north-south axis on the east side of Road 11.

Like the other three alternatives, this alternative would begin in Merced County at the intersection of Henry Miller Road and Carlucci Road, and would continue at-grade on embankment east toward Elgin Avenue, where it would curve southeast toward the San Joaquin River and Eastside Bypass. Approaching Willis Road, the alignment would rise to cross the San Joaquin River on an aerial structure, return to embankment, then cross the Eastside Bypass on an aerial structure. After crossing the Eastside Bypass, this alternative would continue east, crossing SR 59 at-grade just north of the existing SR 152/SR 59 interchange, entering Madera County. To accommodate the SR 152 (North) to Road 11 Wye Alternative, the SR 152/SR 59 interchange would be reconstructed slightly to the south, and SR 59 would be grade-separated to pass above the HSR on an aerial structure. The alignment would continue east at-grade along the north side of SR 152 toward Chowchilla, splitting into two legs (four tracks) near Road 10 to transition to the Merced to Fresno Section: Hybrid Alignment, and would cross Ash Slough on an aerial structure. All but the northbound track of the San Jose to Merced leg of the alternative would then return to at-grade embankment; the northbound track would rise to cross over the tracks of the San Jose to Fresno leg on an aerial structure as it curves north toward Merced. The SR 152 (North) to Road 11 Wye Alternative legs would be routed as described below and shown on Figure 2-4:



Source: Authority and FRA 2016a; ESRI, 2013; CAL FIRE, 2004; ESRI/National Geographic, 2015

FINAL – SEPTEMBER 13, 2016

Figure 2-4 SR 152 (North) to Road 11 Wye Alternative Alignment and Key Design Features

- The southbound track of the San Jose to Merced leg would turn north at-grade. This split would be west of Chowchilla, at approximately Road 10. The two San Jose to Merced tracks would continue north on the eastern side of Road 11, crossing the Chowchilla River, and then would cross over Road 11 to follow its west side. As the tracks return to grade, they would curve northwest, crossing Dutchman Creek on an aerial structure, following the west side of the UPRR/SR 99 corridor. The alignment would continue north, crossing over Sandy Mush Road on an aerial structure. The alignment would return to grade and continue along the west side of the UPRR/SR 99 corridor, connecting to the Merced to Fresno Section: Hybrid Alignment at Ranch Road.
- The San Jose to Fresno leg would continue east from the wye split near Road 10, along the north side of SR 152 toward Chowchilla. It would be predominantly at-grade, ascending on aerial structures at several road crossings and Berenda Slough. The leg would pass south of Chowchilla at-grade then rise to cross over the UPRR/SR 99 corridor and Fairmead Boulevard on an aerial structure. East of the UPRR/SR 99 corridor, the alignment would extend at-grade through Fairmead, north of Avenue 23. At approximately Road 20, the leg would curve southeast toward the BNSF corridor and cross Dry Creek on a short aerial structure. The SR 152 (North) to Road 11 Wye Alternative would align parallel to the west side of the BNSF corridor as it meets the Merced to Fresno Section: Hybrid Alignment at Avenue 19.
- The Merced to Fresno leg would split from the San Jose to Fresno leg near Road 13. The southbound track of the Merced to Fresno leg would ascend on an aerial structure and cross over the tracks of the San Jose to Fresno leg. The Merced to Fresno leg would curve northwest, rise on a high embankment crossing over several roads, and continue at-grade on embankment to join the San Jose to Merced leg near Avenue 25.

Wildlife undercrossing structures would be installed in at-grade embankments along this alternative where the alignment intersects wildlife corridors.

2.5.2 State Highway or Local Roadway Modifications

The SR 152 (North) to Road 11 Wye Alternative would require the permanent closure of 33 public roadways at selected locations and the construction of 24 overcrossings or undercrossings in lieu of closure. Table 2-4 and Figure 2-4 show the anticipated state highway and local roadway closures and modifications. Fourteen of these permanent road closures would be located at SR 152 where roads currently cross at-grade but need to be closed in order to convert SR 152 to a fully access-controlled corridor. The 14 proposed closures are Road 5, Road 6, Road 7, Road 8, Road 10, Road 11, Road 13, Road 14, Road 14 1/2, Road 15, Road 15 1/2, Road 15 3/4, Road 17, and Road 18. Planned new grade separations along SR 152 at the SR 59/SR 152 Interchange, Road 4/Lincoln Road, Road 12, and Road 17 1/2 would maintain access to SR 152. These roadways would be reconfigured to two 12-foot lanes with two 8-foot shoulders. Several of these new interchanges would require realigning SR 152. Three new interchanges are proposed between SR 59 and SR 99 to provide access to SR 152: at Road 9/Hemlock Road, SR 233/Robertson Boulevard, and Road 16.

The distance between over- or undercrossings would vary from less than 2 miles to approximately 5 miles where other roads are perpendicular to the proposed HSR. Between these over- or undercrossings, 19 additional roads would be closed. Local roads paralleling the proposed HSR alignment and used by small communities and farm operations may be shifted and reconstructed to maintain their function. Access easements would be provided to maintain access to properties severed by HSR.

2.5.3 Freight or Passenger Railroad Modifications

The SR 152 (North) to Road 11 Wye Alternative would cross over the UPRR right-of-way as it passes south of Chowchilla. This alternative would maintain required vertical (at least 23.3 feet) clearance over UPRR operational right-of-way to avoid or minimize impacts on UPRR rights-of-way, spurs, and facilities (UPRR 2007). In areas where the SR 152 (North) to Road 11 Wye

Alternative parallels the UPRR right-of-way, the alternative maintains a minimum horizontal clearance of 102 feet from the centerline to the UPRR right-of-way.

2.5.4 Summary

Table 2-4 summarizes the design features for the SR 152 (North) to Road 11 Wye Alternative.

Table 2-4 Design Features of the SR 152 (North) to Road 11 Wye Alternative

Feature	SR 152 (North) to Road 11 Wye
Total length (linear miles) ¹	51
At-grade profile (linear miles) ¹	46.5
Elevated profile (linear miles) ¹	4.5
Below-grade profile (linear miles) ¹	0
Number of straddle bents	27
Number of railroad crossings	1
Number of major water crossings	13
Number of road crossings	57
Approximate number of public roadway closures	33
Number of roadway overcrossings and undercrossings	24
Traction power substation sites	1
Switching and paralleling stations	1 switching station, 7 paralleling stations
Signaling and train-control elements	19
Communication towers	9
Wildlife crossing structures	37

Source: Authority, 2016

¹ Lengths shown are based on equivalent dual-track alignments and are one-way mileages. For example, the length of single-track elevated structure will be divided by a factor of 2 to convert to dual-track equivalents.

3 LAWS, REGULATIONS, AND ORDERS

This section provides an overview of federal, state, and local laws, regulations, orders, or plans that pertain to the displacement and relocation of residents and businesses as a result of building the Central Valley Wye. For complete descriptions, refer to Section 3.12.2, Laws, Regulations, and Orders, of the Merced to Fresno Final EIR/EIS (Authority and FRA 2012: pages 3.12-1 through 3.12-3). Where applicable, the summaries that follow identify updates or amendments that have been made since the Merced to Fresno Final EIR/EIS was completed.

3.1 Federal

3.1.1 Improving Access to Services for Persons with Limited English Proficiency (USEO 13166)

U.S. Presidential Executive Order 13166 requires each federal agency to confirm that recipients of federal financial assistance provide meaningful access to their programs and activities by limited English proficiency (LEP) applicants and beneficiaries.

3.1.2 Americans with Disabilities Act (42 U.S.C. §§ 12101–12213)

The Americans with Disabilities Act prohibits discrimination for persons with disability and requires equal opportunity in employment, state and local government services, public accommodations, commercial facilities, and transportation.

3.1.3 Uniform Relocation Assistance and Real Property Acquisition Policies Act (42 U.S.C. § 61)

The Uniform Relocation Assistance Program and Real Property Program confirms that persons displaced as a result of a federal action or by an undertaking involving federal funds are treated fairly, consistently, and equitably through the provision of relocation assistance and benefits. If comparable decent, safe, and sanitary housing cannot be provided under the provisions of the replacement housing payments, the act provides for housing of last resort. Housing of last resort involves the use of payments in excess of statutory maximums or the use of other unusual methods of providing comparable housing. This helps to make certain that persons will not suffer disproportionate injuries as a result of projects designed for the benefit of the public as a whole.

3.2 State

California Relocation Act (Gov. Code § 7260 et seq.): In parallel with the federal law, the act requires state and local governments to provide relocation assistance and benefits to displaced persons as a result of projects undertaken by state or local governments that do not involve federal funds. However, because the Central Valley Wye will receive federal funding, the Uniform Act takes precedence.

3.3 Regional and Local

Table 3-1 identifies local regulations, plans, and policies associated with the relocation of displaced residents, businesses, and agricultural farmlands that are applicable to the proposed Central Valley Wye.

Table 3-1 Regional and Local Policies

Policy Title	Summary
Merced County	
<p><i>Merced County Regional Transportation Plan 2014–2040</i> (2014)</p>	<p>Merced County adopted the <i>Merced County Regional Transportation Plan 2014–2040</i> in September 2014 and adopted Amendment 1 on May 19, 2016, updating the previous version of the <i>Merced County Regional Transportation Plan</i> that was included in Section 3.2.2.3 (page 3.2-2) of the Merced to Fresno Final EIR/EIS. The <i>Merced County Regional Transportation Plan 2014–2040</i> includes the following goals and policies:</p> <ul style="list-style-type: none"> ▪ Goal 1: A safe and efficient regional road system that accommodates the demand for movement of people and goods. ▪ Goal 2: Provide an efficient, effective, coordinated regional transit system that increases mobility for urban and rural populations, including transportation of disadvantaged persons. ▪ Goal 3: A rail system that provides safe and reliable service for passengers. ▪ Policy 3.2: Establish a High-Speed Rail system connecting Merced and Los Banos to Sacramento and the Bay Area. ▪ Goal 7: Reduce usage of nonrenewable energy resources for transportation purposes. ▪ Goal 8: Achieve air quality standards set by the USEPA and the State Air Resources Board. ▪ Goal 9: Provide economical, long-term solutions to transportation problems by encouraging community designs which encourage walking, transit, and bicycling.
<p><i>2030 Merced County General Plan</i> (2013)</p>	<p>Merced County adopted the <i>2030 Merced County General Plan</i> on December 10, 2013, updating the previous version of the <i>Merced County General Plan</i> that was included in Appendix 3.13-A (page 3.13-A-1) of the Merced to Fresno Final EIR/EIS. The <i>2030 Merced County General Plan</i> includes the following goals and policies:</p> <ul style="list-style-type: none"> ▪ Goal ED-1: Support and promote growth and diversification of the County's economy. ▪ Policy ED-1.5: Direct infrastructure investments to infill areas and other areas with the greatest potential for economic growth in an effort to obtain the greatest pay-off in terms of economic development. This will include taking advantage of existing infrastructure such as Interstate 5, State Route 99, UC Merced, Castle Commerce Center and Airport, as well as planned infrastructure such as the California High-Speed Rail. ▪ Goal ED-2: Support the existing agricultural economy while expanding infrastructure and existing/new industries in order to increase employment opportunities and attract new investment. ▪ Policy LU-1.1: Direct urban development to areas within adopted urban boundaries of cities, Urban Communities, and Highway Interchange Centers in order to preserve productive agriculture, limit urban sprawl, and protect natural resources.

Policy Title	Summary
	<ul style="list-style-type: none"> ▪ Goal LU-2: Preserve, promote, and expand the agricultural industry in Merced County. ▪ Goal LU-5.C: Provide adequate, efficient, and high-quality residential development that accommodates the housing needs of all income groups expected to reside in Merced County. ▪ Goal AG-1: Provide the long-term preservation and conservation of land use for productive agriculture, potentially-productive agricultural land, and agricultural-support facilities. ▪ Policy AG-2.4: Encourage property owner participation in programs that preserve farmland, including the Williamson Act, conservation easements, and USDA-funded conservation practices. ▪ Policy AG-2.5: Modify the Agricultural Preserve Rules and Procedures to reduce the Williamson Act minimum required parcel size to 10 acres, consistent with State law. For parcels not operated as part of a larger farming operation, encourage larger parcel size minimums (40 or more acres) and/or evidence of commercial agricultural use for entering new Williamson Act contracts. ▪ Policy AG-2.16: Coordinate with the California High-Speed Rail Authority to locate the high-speed rail along existing major transportation corridors, such as State Routes 99 or 152, to minimize the conversion of productive agricultural land to non-agricultural uses. ▪ Goal HS-8: Guarantee the fair treatment of all visitors, residents, employees, and property owners, regardless of age, race, culture, and income with respect to land use and environmental decisions ▪ Policy HS-8.3: Promote the equitable distribution of new public facilities and services that increase and enhance the entire community's quality of life. ▪ Goal CIR-1: Maintain an efficient roadway system for the movement of people and goods that enhances the physical, economic, and social environment while being safe, efficient, and cost-effective. ▪ Goal CIR-3: Maintain a public transit system that provides an alternative to automobile travel, supports ridesharing, and meets the needs of the entire community. ▪ Goal CIR-5: Maintain and expand a rail transportation system that provides safe, efficient, and reliable movement of freight and passengers within and through Merced County. ▪ Goal PFS-8: Coordinate with school districts, colleges, and universities to provide for the educational and literary needs of Merced County residents. ▪ Goal PFS-9: Encourage the development of quality childcare services and facilities throughout the County. ▪ Goal RCR-1: Preserve, enhance, expand, and manage Merced County's diverse system of regional parks, trails, recreation areas, and natural resources for the enjoyment of present and future residents and park visitors.

Policy Title	Summary
	<ul style="list-style-type: none"> ▪ Goal HE-1: To provide for a broad range of housing types and densities to meet the needs of all residents of the unincorporated area. ▪ Goal HE-2: To encourage the construction and maintenance of affordable housing in Merced County, with an emphasis on meeting the needs of extremely low-, very low-, and low-income households. ▪ Goal HE-4: To provide a range of housing types and services for special needs groups. ▪ Goal HE-5: To preserve existing character and integrity of residential neighborhoods and conserve and improve the existing housing stock. ▪ Goal HE-6: To provide decent housing and a quality living environment for all Merced County residents regardless of age, religion, race, ethnicity, creed, sex, sexual orientation, marital status, ancestry, national origin, disability, economic level, and other arbitrary factors.
<p><i>Merced County General Plan Housing Element (2010)</i></p>	<p>Merced County adopted the <i>Merced County General Plan Housing Element</i> in 2010. The <i>Merced County General Plan Housing Element</i> includes the following goal:</p> <ul style="list-style-type: none"> ▪ Goal HE-5: To preserve existing character and integrity of residential neighborhoods and conserve and improve the existing housing stock.
<p>Madera County</p>	
<p><i>Madera County 2014 Regional Transportation Plan and Sustainable Communities Strategies (2014)</i></p>	<p>Madera County adopted the <i>Madera County 2014 Regional Transportation Plan and Sustainable Communities Strategies</i> in 2014, updating the previous version of the <i>Madera County Regional Transportation Plan</i> that was included in Section 3.2.2.3 (page 3.2-2) of the Merced to Fresno Final EIR/EIS. The <i>Madera County 2014 Regional Transportation Plan and Sustainable Communities Strategies</i> includes the following goals:</p> <ul style="list-style-type: none"> ▪ Goal 1: To promote Intermodal Transportation Systems that are fully accessible, encourage quality growth and development, support the region's Environmental Resource Management Strategies, and are responsive to the needs of current and future travelers. ▪ Goal 2: To promote and develop transportation systems that stimulate, support, and enhance the movement of people and goods to foster economic competitiveness of the Madera Region. ▪ Goal 4: To maintain the efficiency, safety, and security of the region's transportation system. ▪ Goal 7: To identify reliable transportation choices that support a diverse population. ▪ Goal 8: To protect the environment and health of our residents by improving air quality and encouraging active transportation (non-motorized transportation, such as bicycling and walking).

Policy Title	Summary
<p><i>Madera County General Plan Housing Element Update (2015)</i></p>	<p>Madera County adopted the <i>Madera County General Plan Housing Element</i> on November 3, 2015, updating the previous version of the <i>Madera County General Plan Housing Element</i>. Appendix 3.13-A (page 3.13-A-3) of the Merced to Fresno Final EIR/EIS addressed the <i>Madera County General Plan</i>; however, it did not specifically address the <i>Housing Element</i>, which includes the following goals:</p> <ul style="list-style-type: none"> ▪ Goal 2: Encourage and maintain housing affordability in Madera County for all income groups. ▪ Goal 3: Conserve and improve the existing housing stock and provide for a variety of housing types, sizes, price ranges, and densities compatible with the existing character and integrity of residential neighborhoods. ▪ Goal 4: Provide safe, adequate, and affordable housing to all special needs groups. ▪ Goal 5: Provide decent housing and quality living environment for all Madera County residents regardless of age, race, religion, sex, marital status, ancestry, national origin, disability, or economic level. ▪ Goal 7: Provide a well-balanced and diverse economy that provides an adequate number of jobs to support the local population.
<p><i>Madera County General Plan (1995)</i></p>	<p>Madera County adopted the <i>Madera County General Plan</i> in 1995, which is the same version addressed in the Merced to Fresno Final EIR/EIS. The <i>Madera County General Plan</i> includes the following goals:</p> <ul style="list-style-type: none"> ▪ Policy 1.E.4: The County shall endeavor to protect the natural resources upon which the county's basic economy (e.g., agriculture, forestry, recreation, and tourism) is dependent, and shall promote economic expansion based on Madera County's unique recreational opportunities and natural resources. ▪ Goal 2.A: To maintain a comprehensive and coordinated multimodal transportation system that enhances the mobility of people, improves the environment, and is safe, efficient, and cost effective. ▪ Goal 2.D: To promote a safe and efficient mass transit system, including both rail and bus, to reduce congestion, improve the environment, and provide viable non-automotive means of transportation in and through Madera County ▪ Goal 2.H: To maximize the efficient use of transportation facilities so as to: 1) reduce travel demand on the county's roadway system; 2) reduce the amount of investment required in new or expanded facilities; 3) reduce the quantity of emissions of pollutants from automobiles; and 4) increase the energy-efficiency of the transportation system. ▪ Goal 5.A: To designate adequate agricultural land and promote development of agricultural uses to support the continued viability of Madera County's agricultural economy. ▪ Goal 5.A.13: The County shall require development within or adjacent to designated agricultural areas to incorporate

Policy Title	Summary
	design, construction, and maintenance techniques that protect agriculture and minimize conflicts with adjacent agricultural uses.
<i>City of Chowchilla 2040 General Plan (2011)</i>	<p>The City of Chowchilla adopted the <i>2040 General Plan</i> in May 2011. The <i>2040 General Plan</i> supersedes the previous General Plan adopted in 1986. The <i>2040 General Plan</i> includes the following goals:</p> <ul style="list-style-type: none"> ▪ Objective LU2: Develop and maintain a pattern of residential land uses that provides for a variety and balance of densities, and a mixture of different dwelling and household types. ▪ Objective LU3: Provide single family and multifamily residential. Neighborhoods with a variety of cost ranges (affordability) dispersed throughout the City. ▪ Objective CI 11: Achieve a coordinated regional and local transportation system that minimizes traffic congestion and efficiently serves users. ▪ Objective OS 8: Protect agricultural lands and other open spaces used for the managed production of resources from premature urban development by guiding urban development toward vacant or under-used land within the urbanized area and direct new growth toward land adjacent to the urbanized area. ▪ Objective OS 9: Preserve agricultural lands in recognition of their economic, historic and open space benefits and their importance to the character of the City of Chowchilla and to the Central Valley.
<i>City of Chowchilla Plan Housing Element (2012)</i>	<p>The City of Chowchilla adopted the City of Chowchilla Plan Housing Element in March 2012. The Merced to Fresno Final EIR/EIS addressed the <i>City of Chowchilla General Plan</i>; however, it did not specifically address the <i>Housing Element</i>, which includes the following goal:</p> <ul style="list-style-type: none"> ▪ Goal 4. Objective A: Conserve and enhance existing housing stock and neighborhoods, particularly affordable housing in older areas of the City.

Source: Merced County, 2013; Merced County, 2014; Madera County, 2014; Madera County, 2015

HSR = high-speed rail

UC = University of California

USEPA = U.S. Environmental Protection Agency

4 METHODS FOR EVALUATING EFFECTS

The following sections summarize the RSA(s) and the methods used to analyze impacts on housing and business resources.

4.1 Definition of Resource Study Area

The RSAs are the geographic boundaries in which the environmental investigations specific to each resource topic were conducted. The RSA for displacements, defined as the property acquisition of a parcel or structure, comprises the privately held residential, commercial, and industrial properties (i.e., parcels) that fall within the Central Valley Wye footprint.⁶ The displacement RSA includes portions of the communities of Fairmead and unincorporated Merced and Madera Counties. The relocation RSA includes the communities and unincorporated areas where displacements would occur and nearby cities and communities with similar characteristics where residents and businesses displaced by the Central Valley Wye could relocate. The relocation RSA includes the city of Chowchilla and the communities of Fairmead and Madera Acres, and unincorporated Merced and Madera Counties. To accommodate the needs of rural agricultural interests, the relocation RSA for rural-residential and agricultural properties extends to include areas in Merced and Madera Counties within approximately 15 miles of the Central Valley Wye.

4.2 Methods of Effects Analysis

This section presents the methods that were used to identify the direct effects of the Central Valley Wye alternatives on the displacement and relocation of residences, commercial and industrial businesses, agricultural properties and facilities, and community and public facilities. It also presents the methods for evaluating the availability of suitable replacement properties.

Indirect effects associated with displacements and relocations include social and economic effects on communities and the rural agricultural community. For example, the indirect effect of residential displacements on property tax revenues has the potential to affect school district funding. An evaluation of indirect effects as a result of displacements and relocations is presented in the *Merced to Fresno Section: Central Valley Wye Community Impact Assessment* (Authority and FRA 2016b).

This section also provides an overview of the property displacement analysis, which includes several steps. Each includes its own methods of data collection and analysis. The analysis yielded the following:

- An inventory of the parcels within the footprint of the Central Valley Wye alternatives
- An evaluation of the actual land use (residential, commercial/industrial, agricultural, community facility/public services, or existing right-of-way) of each parcel
- An analysis of the relocation-related effects from the potential property displacements

Analysts identified property acquisitions through an intensive review of geographic information system data, such as County Assessors' parcel maps and other public information, presenting the spatial relationship between the Central Valley Wye alternatives, the existing parcel boundaries, and the structures located on affected parcels. Specifically, geographic information system overlays included the area of the Central Valley Wye alternatives' footprints, aerial imagery of current structure locations, and county parcel data providing assessors' parcel numbers, ownership information, parcel size, land use designations, and structure characteristics

⁶ The footprint is the area needed to construct, operate, and maintain all permanent HSR features, freight or passenger or transit railroad grade separations, roadway grade separations and adjoining street or intersection changes, contiguous access to severed parcels, new utility features, existing utility relocations, access to new or relocated utility features, drainage facilities, any other physical changes within the area needed to construct and operate HSR, and HSR property rights or licenses to accommodate HSR construction, operation, and maintenance.

such as address and square footage. Analysts used this information to (1) identify parcels within the Central Valley Wye alternatives' footprints, (2) determine the need for full or partial acquisition of the affected parcel, and (3) count the number and characterize the types of structures displaced.

This information related to parcel acquisitions and the structures affected by the Central Valley Wye alternatives was recorded in a database. Additional information was added to this database to record the number and type of residential units on acquired parcels, and the average density of residents per household in the community; the number and type commercial and industrial businesses on acquired parcels; the number of agricultural facilities that would be displaced on acquired agricultural parcels (adjacent agricultural properties with the same owner were recorded as "larger parcel" sizes); and the number and type of community facilities on acquired parcels. This detailed information enabled the analysts to identify the following:

- The number of units and residents affected and the type of displaced residential structures
- The number and type of commercial and industrial businesses that would be relocated and the affected economic sectors
- The number of agricultural parcels that contain affected facilities, potentially resulting in increased costs or temporary disruption of agricultural production
- The number and type of affected community facilities

Analysts also collected information regarding the availability of suitable replacement properties (residential, commercial/industrial, and agricultural) for sale or for rent in the relocation RSA in August 2015. This assessment of suitable relocation properties reflects market conditions at the time of the analysis. The number of potential suitable replacement housing units is approximate, as real estate market conditions are constantly changing along with overall regional economic conditions.

4.2.1 Parcel Analysis

The right-of-way specialists determined full parcel acquisition to be a potential option if the Central Valley Wye alternatives would displace existing structures on a parcel or require acquisition of a substantial portion of the property that would affect its continued use. In the case of full acquisition, all residences and businesses on the parcel are assumed to be displaced. Many parcels would be partially acquired for the Central Valley Wye, and displacement of the residences and businesses located on the parcel may not be necessary. However, this does not mean there are no potential effects on these structures. The Authority intends to temporarily relocate some residents and businesses from parcels that would be affected or disturbed by construction activities and nuisances, but that would not be permanently physically affected by the presence of the nearby HSR.

For example, residents may be temporarily moved if they are located close to such construction area nuisances such as noise, dust, and traffic during the construction period. In these cases, residential structures would not be permanently acquired or displaced, but their occupants would be temporarily relocated if the construction would cause access difficulties or if living in the residence during construction would be unsafe or extremely unpleasant. Also, businesses located near construction areas may close temporarily to allow for construction lay-down areas in cases where access in and out of the facility would be restricted or where buildings would need to be modified to remain adjacent to the Central Valley Wye. At this stage of the design, identifying the individual circumstances surrounding each of these potential occurrences on partial acquisitions is not possible.

To be conservative in this analysis and to avoid underestimating displacements, the right-of-way specialists counted all residences and businesses on partially acquired parcels as displacements, including those that may ultimately be only temporarily affected. This approach allows for a preliminary understanding of the magnitude of potential property effects. The final full and partial

parcel acquisition decisions would ultimately be determined on a case-by-case basis during the land acquisition and real estate appraisal phase for the Central Valley Wye.

The specific methods used for the analysis conducted on the displacement of residential, commercial and industrial, agricultural, and community facilities are presented in the following subsections.

4.2.1.1 Residential Properties

Right-of-way specialists used aerial photographs, conceptual engineering plans and profiles, and right-of-way data to identify residential properties or portions thereof that would need to be acquired for construction of the Central Valley Wye. Land and structures within the Central Valley Wye alternatives' footprints were assumed to be displaced. Right-of-way specialists compiled information on property acquisitions in the database with details for each affected parcel, including the estimated number of residential units (based on a review of aerial photography), land use, size of parcel, street address, and ownership information.

Then, right-of-way specialists evaluated the potential for each parcel within the Central Valley Wye alternatives' footprints to be acquired as a full or partial acquisition. A full acquisition was assumed if the Central Valley Wye alternative would displace existing residential structures or acquire important residential amenities or access (e.g., the driveway or garage). Once acquisitions were summed, an analyst estimated the number of residents to be relocated from each community, using average household size data from 2014 U.S. Census American Community Survey (ACS) data (Table 5-6 in Section 5.1.3.1, Region). This provided an initial estimate of the residential relocation effects of the Central Valley Wye alternatives. Full and partial acquisition decisions would ultimately be determined by the Authority on a case-by-case basis during the land acquisition and real estate appraisal process for the Central Valley Wye.

An analyst assessed the number, type, and characteristics of suitable replacement housing units available in the communities of the relocated residents through a review of housing properties for sale or for rent in real estate listings (Zillow 2015; Redfin 2015). Available residential properties were identified within the relocation RSA and were compared with the estimated numbers of displaced residences to identify the likely availability of suitable replacement housing.

4.2.1.2 Commercial and Industrial Properties

The parcel analysis methods for commercial and industrial properties were similar to that described for residential properties. Right-of-way specialists reviewed aerial photographs, conceptual engineering plans and profiles, and county parcel data to identify properties with commercial and industrial businesses, or portions thereof that would need to be acquired. The Authority may temporarily relocate some businesses from parcels that would be affected or disturbed by construction activities and nuisances but not permanently physically affected by the presence of the HSR. Some businesses identified as being suitable for temporary relocation may not be able to survive the relocation and would instead close. Other businesses in the area would likely be able to compensate for the supply loss resulting from the closed businesses, thereby reducing overall negative economic effects on the community.

Right-of-way specialists compiled county data on parcel characteristics and tabulated the potential full and partial acquisitions for each parcel along each Central Valley Wye alternative. A full property acquisition was determined if the Central Valley Wye alternatives would physically intrude on existing buildings or remove enough of a portion of the available use of the site (such as parking) so that the business would be unable to operate. The analysis for commercial and industrial business parcels included estimating the number and types of businesses displaced. While these definitions were used to estimate the effect of the Central Valley Wye, such full and partial acquisition decisions would ultimately be determined by the Authority on a case-by-case basis during the land acquisition and real estate appraisal phase of the Central Valley Wye.

Analysts determined the number of suitable replacement properties in the communities where there would be displaced businesses. They identified available commercial and industrial properties for sale or for rent within unincorporated Merced County, unincorporated Madera

County, Chowchilla, Fairmead, Madera Acres and compared them with the estimated numbers of displaced businesses to identify the likely availability of suitable replacement properties. This involved a community search for vacant commercial and industrial properties for sale or for rent in real estate listings (Loopnet 2015; Showcase.com 2015).

This information then was used by analysts to determine availability/vacancy of commercial real estate for Merced and Madera Counties. For purposes of this analysis, all available data were extracted for the two counties, including sales availability for the following types/classes of commercial property: office, warehouse, medical, retail, shopping center, industrial, agricultural, hotel/motel, church, restaurant, gas station, agricultural land, raw land, and automotive. Real estate numbers represent market vacancies in August 2015, when the analysis was conducted.

The number and type of available replacement properties were then tallied for the various types of properties for sale in each county. The data were further refined by focusing only on properties in the communities through which the Central Valley Wye alternatives would pass. The resulting information was used in a gap analysis to compare the availability of commercial property to the need for similar types of properties that would result from displacements.

4.2.1.3 Agricultural Properties

Examination of agricultural properties involved identifying relocation effects associated with the severance of agricultural parcels and the displacement of agricultural facilities (such as processing facilities, warehouses, barns, or silos).

The count of parcels with displaced agricultural facilities provides an indication of potential effects on agriculture in the region. As with commercial and industrial properties, some relocations may only be temporary, with present occupants returning once construction of the HSR system is complete and operation is underway. On an agricultural parcel where an agricultural facility is to be relocated, that firm's business may close during its relocation. These effects are associated with temporary loss of the associated facility functions and with the resulting direct effects on farmers, as well as the indirect effects on the businesses involved in processing and transporting the agricultural products dependent on those facilities. Right-of-way specialists determined the number of displacements of agricultural facilities using aerial photographs and conceptual engineering plans and profiles. Suitable replacement agricultural lands and operations were examined using data from a commercial real estate database (Loopnet 2015). As with the other land use types discussed in Section 4.2.2.1, Residential Properties and 4.2.2.2, Commercial and Industrial Properties, full and partial acquisition decisions would ultimately be determined on a case-by-case basis during the land acquisition and real estate appraisal phase of the Central Valley Wye and, therefore, may change in the future. Section 3.14, Agricultural Farmland, of the Supplemental EIR/EIS provides detailed information on the acreages and types of agricultural lands to be acquired by the Central Valley Wye.

4.2.1.4 Community Facilities

Analysts used Assessor's parcel data and other databases (e.g., U.S. Geological Survey, Geographic Names Information System data) to identify community facilities along the Central Valley Wye alternatives. Preliminary effects on community facilities were assessed through intensive review of aerial photographs and geographic information system layers showing the spatial relationship between the Central Valley Wye alternatives' footprints and existing community facilities.

5 AFFECTED ENVIRONMENT

This section discusses the affected environment related to populations, households, housing characteristics, economic conditions, and community facilities in the region and in the cities and communities of the RSA for displacements and relocations. The region comprises Merced and Madera Counties, and the city and communities of the RSA include Chowchilla, Fairmead, and Madera Acres. The region is predominantly agricultural, and produces key crops and agricultural products such as dairy and dairy products, nuts, and fruit.

The information presented in this section was taken from the *Merced to Fresno Section: Central Valley Wye Community Impact Assessment* (Authority and FRA 2016b), which contains a full description of the sources and methods used to analyze characteristics, status, and trends of the two-county region of Merced and Madera Counties and the city and communities of the RSA. This section provides context for the displacements and relocations which are discussed in Section 6, Effects Analysis, and to identify any special issues or considerations that could arise from them.

5.1 Population Characteristics

Population characteristics presented in this section include total population and ethnicity, income, and household types. Overall, the communities in the RSA can be described as small agricultural communities with substantial Hispanic populations that are comprised of large families with low household incomes. The population in the region and the cities and rural-residential communities of the RSA is relatively small, but is rapidly growing due to the migration of people seeking employment and affordable housing in the Central Valley.

5.1.1 Population and Ethnicity

5.1.1.1 Region

The population in the region increased by approximately 24 percent between 2000 and 2014, and is projected to experience a population increase of approximately 72 percent between 2014 and 2040. As shown in Table 5-1, the region’s projected population increase for the period from 2014–2040 is more than twice the rate of population increase projected for California (23 percent).

Table 5-1 Past, Present, and Projected Populations

Geographic Area	Population by Year			Change in Population 2014–2040 (%)	Annual Average Growth Rate 2014–2040 (%)
	2000 ¹	2014	2040 ²		
State of California	33,871,648	38,066,920	47,690,186	23	0.8
County					
Merced	210,554	261,609	436,188	67	2.0
Madera	123,109	152,452	278,011	82	2.3
Two-County Region	333,663	414,061	714,199	72	2.1
City or Community in the Resource Study Area					
Chowchilla	11,127	18,411	N/A	N/A	N/A
Fairmead	N/A	1,983	N/A	N/A	N/A

Geographic Area	Population by Year			Change in Population 2014–2040 (%)	Annual Average Growth Rate 2014–2040 (%)
	2000 ¹	2014	2040 ²		
Madera Acres	7,741	9,653	N/A	N/A	N/A

Sources: U.S. Census Bureau, 2000a; CDOF, 2013, U.S. Census Bureau ACS 2014a.

N/A = not available

¹ The 2000 U.S. Census does not report data for Fairmead, which became a census designated place in the 2010 U.S. Census.

² The 2013 California Department of Finance population projection data was only available at the state and county level.

The Authority obtained minority group representation in the region from the 2000 and 2014 U.S. census. This information is displayed in Table 5-2 and Table 5-3. The largest racial or ethnic group in the region is Hispanic, which accounted for approximately 45 percent of the population in 2000. The non-Hispanic White population accounted for approximately 43 percent of the population in 2000. Between 2000 and 2014, the relative percentages of these two groups shifted substantially, with the total Hispanic population increasing by almost 10 percent to compose approximately 55 percent of the population, and the non-Hispanic White population declining to about 34 percent. In line with current trends, it is expected that the Hispanic population will continue to grow at a faster rate than other groups in Merced and Madera Counties.

Table 5-2 Minority Group Representation (2000)

Percentage of Population by Minority Group (%)						
Geographic Area	Hispanic of All Races	Non-Hispanic Native American	Non-Hispanic Asian	Non-Hispanic African American	Non-Hispanic Other	Total
County						
Merced	45.3	0.5	6.7	3.6	3.2	59.4
Madera	44.2	1.4	1.2	3.8	2.7	53.4
Two-County Region¹	44.9	0.8	4.7	3.7	3.0	57.1
City or Community in the Resource Study Area						
Chowchilla	28.2	1.8	1.3	9.8	3.9	44.9
Fairmead	N/A	N/A	N/A	N/A	N/A	N/A
Madera Acres	50.9	0.8	1.5	3.4	2.9	59.4

Source: U.S. Census Bureau, 2000b

N/A = not available; the 2000 U.S. Census does not report data for Fairmead, which became a census designated place in the 2010 U.S. Census.

¹ Percent totals were calculated by dividing the number of individuals of each minority group in the two-county region by the total population.

Table 5-3 Minority Group Representation (2014)

Percentage of Population by Minority Group (%)						
Geographic Area	Hispanic of All Races	Non-Hispanic Native American	Non-Hispanic Asian	Non-Hispanic African American	Non-Hispanic Other	Total
County						
Merced	56.3	0.4	7.4	3.3	0.4	67.8
Madera	55.1	1.1	2.0	3.2	0.3	61.7

Percentage of Population by Minority Group (%)						
Geographic Area	Hispanic of All Races	Non-Hispanic Native American	Non-Hispanic Asian	Non-Hispanic African American	Non-Hispanic Other	Total
Two-County Region¹	54.5	0.7	5.1	3.4	0.4	65.6
City or Community in the Resource Study Area						
Chowchilla	39.0	1.4	2.0	11.8	1.0	55.2
Fairmead	59.6	0.3	1.3	3.7	0.3	65.2
Madera Acres	66.4	0.0	1.7	2.3	1.3	70.6

Source: U.S. Census Bureau ACS 2014a

¹ Percent totals were calculated by dividing the number of individuals of each minority group in the two-county region by the total population.

5.1.1.2 City of Chowchilla

Over the 2000–2014 period, Chowchilla experienced a dramatic population increase of 65 percent. With an annual average growth rate of 3.7 percent, the city’s population increased from approximately 11,127 residents in 2000 to 18,411 by 2014. Of the communities within the RSA, Chowchilla had the lowest percentage of minority population in both 2000 (44.9 percent) and 2014 (55.2 percent). However, Chowchilla has the largest African-American population in the RSA, comprising 11.8 percent of the population in 2014. Because racial and ethnicity census data include institutionalized populations, minority group representation in Chowchilla is influenced by the presence of two state prison facilities within the non-contiguous city limits.

5.1.1.3 Community of Fairmead

Fairmead was classified as a census designated place by the U.S. Census Bureau in 2010; therefore, population data for the year 2000 are unavailable. However, in 2014 the population of Fairmead was reported as 1,983 residents (U.S. Census Bureau ACS 2014b). Fairmead’s population had a higher percentage of Hispanics (59.6 percent) than the two-county region in 2014.

5.1.1.4 Community of Madera Acres

Madera Acres had a population of 7,741 residents in 2000. Between 2000 and 2014, the population increased at an annual average growth rate of 1.6 percent, and by 2014, the census recorded 9,653 residents (U.S. Census Bureau 2000a, ACS 2014b). This slower rate of growth compared to Chowchilla or Madera County is a result of the community’s location at the interface of rural and urban lands; the community is hemmed in by large agricultural parcels which restrict its growth. Between 2000 and 2014, the percentage of Hispanics in Madera Acres increased from 50.9 percent to 66.4 percent. Similarly, the percentage of minority individuals in Madera Acres increased from 59.4 percent in 2000 to 70.6 percent in 2014. Madera Acres has a higher percentage of minorities than the surrounding two-county region.

5.1.2 Income

Median annual household income is summarized in Table 5-4. In 2014, median household income in Merced and Madera Counties was approximately \$43,100 and \$45,500, respectively. By comparison, the median household income for the state of California was \$61,500.

Table 5-4 Median Annual Household Income (1999 and 2014)

Geographic Area	Median Household Income		
	1999	2014	Percent Increase (%)
State of California	\$47,500	\$61,500	29
County			
Merced	\$35,500	43,100	21
Madera	\$36,300	45,500	25
Two-County Region¹	\$35,900	44,300	23
City or Community in the Resource Study Area			
Chowchilla	\$30,700	36,900	20
Fairmead	N/A	31,100	N/A
Madera Acres	\$45,400	60,500	33

Sources: U.S. Census Bureau, 2000c; U.S. Census Bureau ACS 2014b

N/A = not available; the 2000 U.S. Census does not report data for Fairmead, which became a census designated place in the 2010 U.S. Census.

¹ Total median household income for the two-county region was calculated based on a weighted average of the household income and number of households in each county.

The city and communities of the region generally had median household incomes below their respective counties over the 1999–2014 period. The exception is the community of Madera Acres, which had the highest household income in the RSA in both 1999 and 2014, and the largest increase in household income between 1999 and 2014 (33 percent). In 2014, the median household income in Madera Acres was approximately \$60,500, which was similar to that of the State of California.

5.1.3 Households

5.1.3.1 Region

According to the 2000 U.S. census, 99,970 households were present within the region in 2000, with an average household size of 3.2 persons. In 2014, the number of households had grown to 119,239, and the average household size had increased to 3.3 persons. Approximately 75 percent of households in the region were family households in 2014; however, the percentage of married-couple households declined between 2000 and 2014, while the percentage of households headed by a single female increased. Table 5-5 and Table 5-6 provide information on households within the region in 2000 and 2014, including the total number of households, average household size, and composition of households.

Table 5-5 Household Characteristics (2000)

Geographic Area	Number of Occupied Households	Average Household Size	Percentage of Total Households (%)			
			Family	Married Couple Family	Female Householder (No Husband Present)	Non-Family
County						
Merced	63,815	3.2	78.0	57.8	14.1	22.0
Madera	36,155	3.2	79.1	60.9	12.2	20.9
Two-County Region	99,970	3.2	78.4	58.9	13.4	21.6

Geographic Area	Number of Occupied Households	Average Household Size	Percentage of Total Households (%)			
			Family	Married Couple Family	Female Householder (No Husband Present)	Non-Family
City or Community in the Resource Study Area						
Chowchilla	2,562	2.9	74.5	55.3	13.2	25.5
Fairmead	N/A	N/A	N/A	N/A	N/A	N/A
Madera Acres	2,122	3.6	89.3	44.8	10.1	10.7

Source: U.S. Census Bureau, 2000d

N/A = not available; the 2000 U.S. Census does not report data for Fairmead, which became a census designated place in the 2010 U.S. Census.

Table 5-6 Household Characteristics (2014)

Geographic Area	Number of Occupied Households	Average Household Size	Percentage of Total Households (%)			
			Family	Married Couple Family	Female Householder (No Husband Present)	Non-Family
County						
Merced	76,516	3.3	71	52.3	18.2	22.9
Madera	42,723	3.3	77.9	56.4	15.5	22.1
Two-County Region	119,239	3.3	74.5	54.4	16.9	22.5
City or Community in the Resource Study Area						
Chowchilla	3,873	3.1	76.9	51.9	15.5	23.1
Fairmead	401	4.0	82.0	57.9	19.2	18.0
Madera Acres	2,416	3.8	85.3	69.4	14.1	14.7

Source: U.S. Census Bureau ACS 2014a.

5.1.3.2 City of Chowchilla

In 2000, 2,562 households were present in Chowchilla, with an average household size of 2.9 people. By 2014, the number of households had increased by approximately 51 percent to a total of 3,873 households, and the average household size increased as well. Chowchilla was the only community in the RSA that had a lower average household size than the region as a whole.

5.1.3.3 Community of Fairmead

Although 2000 household characteristic data for Fairmead are unavailable, in 2014, Fairmead was composed of 401 households. The community’s average household size of 4.0 persons is the largest in the RSA and substantially higher than the region (3.3 persons). Approximately 82 percent of households within the community were family households.

5.1.3.4 Community of Madera Acres

Madera Acres had 2,122 households in 2000, with an average household size of 3.6 persons. Both the number of households and the average household size had increased slightly by 2014, to 2,416 and 3.8, respectively. Madera Acres has both the highest percentage of family

households (85.3 percent) and the highest percentage of married-couple households (69.4 percent).

5.2 Housing

5.2.1 Region

The predominant housing type across the Merced and Madera Counties is single-family homes, which accounted for approximately 77 percent of the region's existing units in 2014. Multifamily units and mobile/manufactured homes account for 17 percent and 5.8 percent, respectively, of the remaining housing stock. Tables 5-7 and 5-8 provide a summary of housing characteristics for 2000 and 2014, respectively. Between 2000 and 2014, the number of housing units within the region increased by more than 23 percent, largely as a result of increases in the number of single-family homes.

Table 5-7 Housing Stock Inventory (2000)

Geographic Area	Housing Units by Housing Type								
	Total	Single-Family (1 Unit)		Multifamily (2 or more Units)		Other (e.g., boat, RV, van)		Mobile Home	
	Number	Number	Percent	Number	Percent	Number	Percent	Number	Percent
County									
Merced	68,373	50,545	73.9	12,594	18.4	155	0.2	5,079	7.4
Madera	40,387	32,195	79.7	4,829	12.0	295	0.7	3,068	7.6
Region	108,760	82,740	76.1	17,423	16.0	450	0.4	8,147	7.5
City or Community in the Resource Study Area									
Chowchilla	2,715	2,178	80.2	501	18.5	7	0.3	29	1.1
Fairmead ¹	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Madera Acres	2,147	2,133	99.3	0	0	0	0	14	0.7

Source: U.S. Census Bureau, 2000e

N/A = not available

RV = recreational vehicle

¹ The 2000 U.S. Census does not report data for Fairmead, which became a census designated place in the 2010 U.S. Census.

Table 5-8 Housing Stock Inventory (2014)

Geographic Area	Housing Units by Housing Type								
	Total	Single-Family (1 Unit)		Multifamily (2 or more Units)		Other		Mobile Home	
	Number	Number	Percent	Number	Percent	Number	Percent	Number	Percent
County									
Merced	83,904	62,231	74.2	16,586	19.8	125	0.1	4,962	5.9
Madera	49,499	40,532	81.9	6,053	12.2	122	0.2	2,792	5.6
Region	133,403	102,763	77.0	22,639	17.0	247	0.2	7,754	5.8
City or Community in Resource Study Area									
Chowchilla	4,337	3,595	82.9	715	16.5	N/A	N/A	26	0.6

Geographic Area	Housing Units by Housing Type								
	Total	Single-Family (1 Unit)		Multifamily (2 or more Units)		Other		Mobile Home	
	Number	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Fairmead	505	352	69.8	25	5.0	N/A	N/A	127	25.2
Madera Acres	2,538	2,528	99.6	10	0.4	N/A	N/A	47	0.0

Source: U.S. Census Bureau ACS 2014c

N/A = not available; ACS data at this level of geography does not provide information for "Other" housing unit type.

Tables 5-9 and 5-10 provide a summary of the housing tenure and vacancy conditions in the region for 2000 and 2014, respectively. The rate of homeownership in the region comprising Merced and Madera Counties decreased from 56.5 percent of all occupied housing units in 2000 to 49.7 percent in 2014. Correspondingly, over the same period, the percentages of both renter-occupied housing units and vacant housing units increased. The percentage of renter-occupied housing units increased from 35.4 percent in 2000 to 39.7 percent in 2014; the percentage of vacant housing units in the region increased from 8.1 percent in 2000 to 10.6 percent in 2014. Similar homeownership and vacancy trends could be seen in the cities and communities along the Central Valley Wye alternatives over the 2000–2014 period, reflecting the effects of the great recession.

Table 5-9 Housing Tenure and Vacancy (2000)

Geographic Area	Housing Units by Occupancy Type						Vacancy Rate (percent)	
	Owner-Occupied		Renter-Occupied		Total Vacant		Home-Owner	Rental
	Number	Percent	Number	Percent	Number	Percent		
County								
Merced	37,483	54.8	26,332	38.5	4,558	6.7	N/A	N/A
Madera	23,934	59.3	12,221	30.3	4,232	10.5	N/A	N/A
Two-County Region	61,417	56.5	38,553	35.4	8,790	8.1	N/A	N/A
City or Community in the Resource Study Area								
Chowchilla	1,436	53.0	1,126	41.5	149	5.5	N/A	N/A
Fairmead	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Madera Acres	1,817	83.0	305	13.9	66	3.0	N/A	N/A

Source: U.S. Census Bureau, 2000f

N/A = not available; the 2000 U.S. Census does not report data for Fairmead, which became a census designated place in the 2010 U.S. Census.

Table 5-10 Housing Tenure and Vacancy (2014)

Geographic Area	Housing Units by Occupancy Type						Vacancy Rate (percent)	
	Owner-Occupied		Renter-Occupied		Total Vacant		Home-Owner	Rental
	Number	Percent	Number	Percent	Number	Percent		
County								
Merced	40,310	48.0	36,206	43.2	7,387	8.8	2.2	6.5

Geographic Area	Housing Units by Occupancy Type						Vacancy Rate (percent)	
	Owner-Occupied		Renter-Occupied		Total Vacant		Home-Owner	Rental
	Number	Percent	Number	Percent	Number	Percent		
Madera	25,930	52.4	16,793	33.9	6,776	13.7	2.4	5.1
Two-County Region	66,240	49.7	52,999	39.7	14,163	10.6	2.3	6.0
City or Community in the Resource Study Area								
Chowchilla	1,879	43.3	1,994	46.0	464	10.7	0.8	6.7
Fairmead	182	36.0	219	43.4	104	20.6	N/A	N/A
Madera Acres	1,962	77.3	454	17.9	122	4.8	1.1	0.0

Source: U.S. Census Bureau ACS 2014c

5.2.2 City of Chowchilla

Of the communities within the RSA, the greatest increase in housing stock during the 2000–2014 period occurred in Chowchilla, where the total number of housing units increased by approximately 60 percent. In 2014, the composition of Chowchilla’s housing stock was similar to that of the region as a whole, with single-family homes making up 82.9 percent of the total housing units. Reflective of its status as the largest and most developed community within the RSA, Chowchilla had the highest percentage of multifamily units (16.5 percent). Approximately 36 percent of Chowchilla’s population is housed in group quarters,⁷ including two state prison facilities. Housing characteristics exclude these group quarters. In 2014, 43.3 percent of Chowchilla’s housing units were owner occupied, 46.0 percent were renter occupied, and 10.7 percent were vacant. Between 2000 and 2014, homeownership rates (owner-occupied housing units) increased by about 30 percent. In addition, Chowchilla was one of two communities within the RSA that had a vacant housing unit percentage (10.7 percent) that was greater than the region as a whole (10.6 percent) in 2014.

5.2.3 Community of Fairmead

The housing stock in Fairmead comprised approximately 69.8 percent single-family units, 5.0 percent multifamily units, and 25.2 percent mobile/manufactured homes in 2014. The prevalence of these homes in Fairmead greatly exceeds that of Merced and Madera Counties and the other communities within the RSA.

In 2014, housing tenure and vacancy rates in Fairmead were similar to those of Chowchilla. Approximately 36.0 percent of housing units were owner occupied, 43.4 percent were renter occupied, and 20.6 percent were vacant. The homeowner and renter vacancy rates in Fairmead in 2014 were not available. However, the community had the highest rental vacancy rate (20.6 percent) of the communities within the RSA.

5.2.4 Community of Madera Acres

The housing stock of Madera Acres is unique in that approximately 99.6 percent of housing units in 2014 were single-family units and the remaining 0.4 percent were multifamily units. This high percentage of single-family housing units represents a slight decline in terms of the percentage of

⁷ Group quarters are places where people live or stay, in a group living arrangement, which is owned or managed by an entity or organization providing housing and services for the residents. Group quarters include such places as college residence halls, residential treatment centers, skilled nursing facilities, group homes, military barracks, correctional facilities, and workers’ dormitories. Data for population in group quarters for City of Chowchilla obtained from 2010-2014 ACS 5-Year Estimates.

total units from 2000, when approximately 99.3 percent of housing units were single-family units and the remainder housing units were mobile/manufactured homes. Increases in the housing stock of Madera Acres between 2000 and 2014 occurred at a rate comparable to the region as a whole.

Homeownership in Madera Acres was substantially higher than the region as a whole, with 77.3 percent owner-occupied housing units in 2014. Between 2000 and 2014, the percentage of vacant housing units remained low at 3.0 percent in 2000 and 4.8 percent in 2014 which were approximately half that of the region as a whole at 8.1 percent in 2000 and 10.6 percent in 2014. Madera Acres had the lowest number of vacant housing units of the communities within the RSA.

5.3 Local Economy

5.3.1 Region

Levels of employment and income in the San Joaquin Valley have historically lagged behind those in other parts of the state as a result of the seasonal nature of the agricultural employment and slower growth in the nonagricultural sectors. Merced and Madera Counties contain some of the most agriculturally productive land in the world, and farming is a primary economic factor in the economy of the two counties. In 2014, these counties ranked 5th and 9th, respectively, in total agricultural production value in California. Cumulatively, the two counties accounted for about \$6.7 billion (13 percent) of the total agricultural revenue generated statewide in 2011 (\$53.5 billion) (CDFA 2015).

Although this region has significant agricultural revenues, the regional economy has been diversifying in recent decades to become more oriented toward the services sector industry. The two state prison facilities are major employers in the government sector. Additional shifts in employment sectors came as a result of the real estate boom in the early to mid-2000s, which generated many jobs in construction, fueled retail sales, and generated increased property sales and tax revenues (Cowan 2005). This increased activity and investment in the real estate industry only made the effects of the market's 2007 crash that much worse, exacerbating the economic situation and leaving the region one of the hardest-hit areas in the nation. The regional implications of the real estate industry's 2007 collapse and associated nationwide great recession include substantial increases in unemployment and foreclosure rates, poverty, and sharp declines in housing prices (Bertaut and Pounder 2009). The region experienced a substantially greater economic downturn as a result of the recession, and it has undergone a much weaker recovery since then compared to the rest of the state.

Table 5-11 summarizes unemployment rates across the region in 2000 and 2014. Over the 2000–2014 period, unemployment rates increased sharply across both counties. In 2014, unemployment rates were 18 percent in Merced County and 9.5 percent in Madera County (CEDD 2013a, U.S. Census Bureau ACS 2014). As of 2014, the unemployment rate in the region as a whole had increased to 11.9 percent, but remains approximately 4 percentage points higher than the 7.5 percent unemployment rate of California as a whole (CEDD 2015).

Table 5-11 Unemployment Rates (2000 and 2014)

Geographic Area	Unemployment Rate (%)	
	2000	2014
County		
Merced	9.6	18.0
Madera	8.7	9.5
Two-County Region¹	9.3	11.9
City or Community in the Resource Study Area		
Chowchilla	9.9	9.9

Geographic Area	Unemployment Rate (%)	
	2000	2014
Fairmead	N/A	27.9
Madera Acres	6.2	5.5

Sources: CEDD, 2013a, 2013b; U.S. Census Bureau ACS 2014d.

N/A = not available

¹ Unemployment rates for the two-county region were calculated based on a weighted average of the unemployment rate and number of individuals in each county.

Table 5-12 presents California Employment Development Department data on employment by industry in the region. The largest Merced County employment sectors were government, agriculture, trade, and manufacturing over the 2000–2014 period; the largest Madera County employment sectors were agriculture, government, and educational and health services. Over this period, both counties experienced a decline in the percentage of the labor force employed in the agricultural sector, while the government and educational and health services sectors experienced the largest growth.

Table 5-12 Employment by Industry (2000 and 2014)

Employment Sector	Merced County				Madera County			
	2000		2014		2000		2014	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Agriculture	11,600	18.0	15,200	19.4	11,900	30.0	12,200	24.8
Mining, Logging, and Construction	2,100	3.3	1,800	2.3	1,500	3.8	1,300	2.6
Manufacturing	10,400	16.2	10,300	13.2	2,900	7.3	3,800	7.7
Trade	8,400	13.1	9,600	12.3	3,600	9.1	4,500	9.2
Transportation, Warehousing, and Utilities	1,700	2.6	2,300	2.9	600	1.5	900	1.8
Information	700	1.1	400	0.5	600	1.5	400	0.8
Financial Activities	1,700	2.6	1,600	2.0	700	1.8	800	1.6
Professional and Business Services	3,900	6.1	3,900	5.0	2,200	5.5	3,000	6.1
Educational and Health Services	5,600	8.7	9,000	11.5	4,800	12.1	7,700	15.7
Leisure and Hospitality	4,500	7.0	5,400	6.9	2,500	6.3	3,300	6.7
Other Services	1,500	2.3	1,300	1.7	800	2.0	1,100	2.2
Government (federal, state, and local)	12,200	19.0	17,400	22.3	7,600	19.1	10,100	20.6
Total	64,300	N/A	78,200	N/A	39,700	N/A	49,100	N/A

Source: CEDD, 2014

N/A = not available

5.3.2 City of Chowchilla

Similar unemployment trends can be seen in Chowchilla, where the unemployment rate in 2014 was 9.9 percent. This unemployment rate is higher than the unemployment rate in Madera County (9.5 percent) and the State of California (11.0 percent) as a whole.

5.3.3 Community of Fairmead

The unemployment rate in 2014 in Fairmead (27.9 percent) was higher than in the region as a whole (11.9 percent) and higher than in the State of California as a whole (11.0 percent).

5.3.4 Community of Madera Acres

Madera Acres had the lowest unemployment rate of the RSA communities. In 2014, the unemployment rate was 5.5 percent, well below the regional unemployment rate of 11.9 percent.

6 EFFECTS ANALYSIS

6.1 Introduction

This section presents the displacement and relocations within each community, city, county, and rural area that would occur as a result of the Central Valley Wye. The adequacy of replacement resources in each community to absorb the displaced residents and businesses is also evaluated. This assessment of available and suitable replacement resources was based on real estate listings available at the time of the evaluation (August 2015), as forecasts for future relocation resources could not be made with a reasonable level of certainty.

6.2 Residential Displacements and Relocations

This section presents the estimated number of residential unit displacements and evaluates the need to permanently relocate residents. It also evaluates the potential relocation capacity (i.e., comparable residential space available) in each affected city/community and county by alternative.

Table 6-1 presents the number of displacements, categorized by type of residential housing unit (single-family residences, multifamily residences, and mobile/manufactured homes), that would occur under each Central Valley Wye alternative. The greatest number of residential displacements would occur under the SR 152 (North) to Road 19 Wye Alternative and the fewest residential displacements would occur under the Avenue 21 to Road 13 Wye Alternative.

Table 6-1 Estimated Number of Displaced Residential Units by Type

Alternative	Single-Family Residences		Multifamily Residences		Mobile/Manufactured Homes		Total
	Number	Percent	Number	Percent	Number	Percent	Number
SR 152 (North) to Road 13 Wye	76	79	0	0	20	21	96
SR 152 (North) to Road 19 Wye	96	81	0	0	23	19	119
Avenue 21 to Road 13 Wye	53	82	0	0	12	18	65
SR 152 (North) to Road 11 Wye	48	77	0	0	14	23	62

Source: ARWS, 2015; ARWS 2016
The numbers of displaced residential units are approximate.

The majority of displaced residential units (between 77 and 82 percent) would be single-family residences, while the remaining displaced residential units (between 18 and 23 percent) would be mobile/manufactured homes. A manufactured home (formerly known as a mobile home) is built in the controlled environment of a manufacturing plant and is transported in one or more sections on a permanent chassis (HUD 2015). Despite its name, most mobile/manufactured homes are kept in a single location permanently; their mobility has decreased considerably as units have gotten larger. Therefore, if there is an insufficient availability of mobile/manufactured homes within the relocation RSA, relocating displaced mobile/manufactured home residents to comparable single-family housing could be necessary. While individual mobile/manufactured-homes would be displaced under each alternative, no mobile/manufactured-home parks or multifamily residential units would be displaced.

The two types of parcels on which residential displacements would occur can generally be described as either agricultural or rural-residential. Between one-half to three-quarters of parcels on which residential displacements would occur are agricultural and are, on average, greater than

50 acres in size. Many of these agricultural parcels have improvements including farm structures and equipment such as sheds, barns, corrals, stables, and silos. The large agricultural parcels on which residential displacements would occur are comparable to nearby properties in unincorporated Merced and Madera Counties and portions of Fairmead. Approximately one-quarter to one-half of the parcels on which residential displacements would occur are designated rural residential. These parcels have an average parcel size less than 5 acres and improvements include sheds or detached garages. This type of rural residential property is characteristic of portions of Fairmead.

Table 6-2 presents the estimated number of displaced residential units by geographic location for each Central Valley Wye alternative. Under each of the four alternatives, displacements would occur in the unincorporated areas of Merced and Madera Counties and the community of Fairmead. No residential units would be displaced in either Chowchilla or the community of Madera Acres. The majority of displaced residential units occur in unincorporated Madera County, while the greatest variation in the number of displacements occurs in Fairmead. Approximately 6 percent of total residential displacements would occur in Fairmead under the Avenue 21 to Road 13 Wye Alternative, which traverses the community's southern boundary, compared to 45 percent of residential displacements under the SR 152 (North) to Road 19 Wye Alternative.

Table 6-2 Estimated Number of Residential Displacements by Alternative

Location	Residential Units Displaced		Estimated Residents to Be Relocated ¹	
	Number	Percent	Number	Percent
SR 152 (North) to Road 13 Wye Alternative				
Unincorporated Merced County	9	9	30	6
Unincorporated Madera County	69	72	226	72
Fairmead	18	19	59	19
Total	96	100	315	100
SR 152 (North) to Road 19 Wye Alternative				
Unincorporated Merced County	10	8	33	8
Unincorporated Madera County	56	47	184	47
Fairmead	53	45	174	45
Total	119	100	391	100
Avenue 21 to Road 13 Wye Alternative				
Unincorporated Merced County	6	9	20	9
Unincorporated Madera County	55	85	180	85
Fairmead	4	6	13	6
Total	65	100	213	100

Location	Residential Units Displaced		Estimated Residents to Be Relocated ¹	
	Number	Percent	Number	Percent
SR 152 (North) to Road 11 Wye Alternative				
Unincorporated Merced County	9	15	30	15
Unincorporated Madera County	38	61	125	61
Fairmead	15	24	49	24
Total	62	100	204	100

Source: ARWS, 2015; ARWS, 2016; U.S. Census Bureau ACS 2014a

¹ The numbers of displaced persons are estimated based on 2010 U.S. Census data averages of 3.32 people per household for Merced County and 3.28 people per household for Madera County.

The numbers of displaced units and persons are approximate.

SR = State Route

While no information is available as to whether the residents that would be displaced by the Central Valley Wye are homeowners or renters, the tenure of displaced residents is expected to be comparable to the counties as a whole. In 2014, approximately 47.3 and 33.9 percent of housing units in Merced County and Madera County, respectively, were renter-occupied (U.S. Census Bureau ACS, 2014a). Applying the percentages of renters within these two counties to the total number of displacements in each county indicates that between 18 and 37 of the total residential units displaced, depending on the alternative, are predicted to be renter-occupied.

Table 6-3 shows the gap between residences displaced and residences available to displaced residents (gap analysis) by alternative. Analysts used real estate listings in August 2015 to identify 186 available residential units for rent or for sale within the relocation RSA. Of these available residences, 164 were single-family residences for sale, 12 were mobile/manufactured homes, and 6 were single-family or multifamily rental units. Additionally, 30 vacant lots zoned for residential or rural-residential uses were identified that could be developed to accommodate displaced residents. Further discussion of availability of replacement housing based on additional characteristics of the acquired property (e.g., parcel size, assessed value, parcel acreage, type of property) is included in Section 7, Relocation Resources and Relocation Plan.

Table 6-3 Gap Analysis of Residential Developments by Alternative

Location	Residential Units Displaced	Residential Units Available	Size of Surplus
SR 152 (North) to Road 13 Wye Alternative			
Unincorporated Merced County	9	41	+32
Unincorporated Madera County	69	29	-40
Chowchilla	0	71	+71
Fairmead	18	12	-6
Madera Acres	0	33	+33
Total	96	186	+90
SR 152 (North) to Road 19 Wye Alternative			
Unincorporated Merced County	10	41	+31
Unincorporated Madera County	56	29	-27

Location	Residential Units Displaced	Residential Units Available	Size of Surplus
Chowchilla	0	71	+71
Fairmead	53	12	-41
Madera Acres	0	33	33
Total	119	186	+64
Avenue 21 to Road 13 Wye Alternative			
Unincorporated Merced County	6	41	+35
Unincorporated Madera County	55	29	-26
Chowchilla	0	71	+71
Fairmead	4	12	+8
Madera Acres	0	33	33
Total	65	186	+121
SR 152 (North) to Road 11 Wye Alternative			
Unincorporated Merced County	9	41	32
Unincorporated Madera County	38	29	10
Chowchilla	0	71	71
Fairmead	15	12	-3
Madera Acres	0	33	33
Total	62	186	122

Sources: Zillow, 2015; Redfin, 2015
SR = State Route

6.2.1 SR 152 (North) to Road 13 Wye Alternative

The SR 152 (North) to Road 13 Wye Alternative would affect approximately 96 total residential units (76 single-family residential units and 20 mobile/manufactured homes) and 315 residents. Most of the displacements would be located in rural unincorporated Madera County (69 units). The remaining displacements would be in Fairmead (18 units) and unincorporated Merced County (9 units).

Almost 52 percent of the parcels (39 parcels) on which residential displacements would occur under the SR 152 (North) to Road 13 Wye Alternative are designated as rural residential and have an average size of 3.4 acres. Approximately 45 percent of parcels (33 parcels) on which residential displacements would occur are agricultural and have an average size of 58 acres. Additionally, 3 parcels on which residential displacements would occur are designated for commercial uses.

As shown in Table 6-3, the overall number of available residential units for sale or for rent (186) exceeds the number of displaced residential units (96) under this alternative, indicating that there are sufficient relocation resources within the relocation RSA. However, at the community-level, displaced residents in Fairmead and unincorporated Madera County may be unable to relocate within the same community, as the available residential units might not be located in close proximity to the housing that they currently occupy. Some residents of these communities may need to relocate to the neighboring cities of Chowchilla or Madera Acres, where there are ample supplies of available residential units.

6.2.2 SR 152 (North) to Road 19 Wye Alternative

The SR 152 (North) to Road 19 Wye Alternative would displace an additional 23 residential units compared to the SR 152 (North) to Road 13 Wye Alternative. An estimated 119 residential units and 391 residents would be displaced under this alternative, including 96 single-family residential units and 23 mobile/manufactured homes. Most of the displacements (56 units) would be in unincorporated Madera County. The remaining displacements would be in Fairmead (53 units) and unincorporated Merced County (10 units).

Approximately 54 percent of parcels (44 parcels) on which residential displacements would occur under this alternative are designated rural residential, with an average parcel size of 4.2 acres. Agricultural parcels (35 parcels) with an average size of 69.5 acres constitute 43 percent of parcels with residential displacements. Additionally, 3 parcels with residential displacements are designated for commercial uses.

The 186 available residential units for sale or for rent exceed the estimated number of displaced residential units under the SR 152 (North) to Road 19 Wye Alternative, indicating that sufficient relocation resources exist within the relocation RSA to relocate those displaced by the Central Valley Wye. However, at the community-level, displaced residents in Fairmead and unincorporated Madera County may be unable to relocate within the same community. Some residents of these communities may need to relocate to the neighboring cities of Chowchilla or Madera Acres, where there are ample supplies of available residential units.

6.2.3 Avenue 21 to Road 13 Wye Alternative

The Avenue 21 to Road 13 Wye Alternative would affect approximately 65 residential units and 213 residents. Most of the displacements would be in unincorporated Madera County (55 units). The remaining displacements would be in unincorporated Merced County (6 units), and Fairmead (4 units).

Approximately 22 percent of parcels (12 parcels) with displaced residences under the Avenue 21 to Road 13 Wye Alternative are rural residential. These parcels have an average size of 1.82 acres. Meanwhile the remaining 78 percent of the parcels with displaced residences (43 parcels) are on agricultural parcels, with an average size of 54.7 acres.

As shown in Table 6-3, the overall number of available residential units for sale or for rent (186) exceeds the number of displaced residential units (65) under this alternative, indicating that there are sufficient relocation resources within the relocation RSA. However, at the community-level, displaced residents in unincorporated Madera County may be unable to relocate within the same community. Some residents of the County may need to relocate to Chowchilla, Fairmead, or Madera Acres, where there are ample supplies of available residential units.

6.2.4 SR 152 (North) to Road 11 Wye Alternative

The SR 152 (North) to Road 11 Wye Alternative would affect approximately 62 total residential units (48 single-family residential units and 14 mobile/manufactured homes) and 204 residents. Most of the displacements would be in rural unincorporated Madera County (38 units). The remaining displacements would be in Fairmead (15 units) and unincorporated Merced County (9 units). Approximately 32 percent of the parcels (15 parcels) on which residential displacements would occur under the SR 152 (North) to Road 13 Wye Alternative are designated as rural residential and have an average size of 4.96 acres. Approximately 62 percent of parcels (29 parcels) on which residential displacements would occur are agricultural and have an average size of 48 acres. Additionally, 3 parcels on which residential displacements would occur are designated for commercial uses.

As shown in Table 6-3, the overall number of available residential units for sale or for rent (186) exceeds the number of displaced residential units (62) under this alternative, indicating that there are sufficient relocation resources within the relocation RSA. However, at the community-level, displaced residents in Fairmead and unincorporated Madera County may be unable to relocate within the same community. Some residents may need to relocate to the neighboring city of

Chowchilla or community of Madera Acres, where there are ample supplies of available residential units.

This analysis uses available units as a general indicator of housing availability and does not propose specific relocations of displaced housing to available properties. Displaced residents would be relocated to replacement housing in accordance with the Uniform Act (SOCIO-IAMF#1), which provides benefits to displaced individuals to assist them financially and with advisory services related to relocating their residence to a comparable residence. Additional information on the Uniform Act is provided in Section 7 of this document.

6.3 Commercial and Industrial Businesses

Initial estimated ranges of displaced commercial and industrial businesses are provided in Table 6-4. For the purpose of this analysis, commercial and industrial businesses include nonagricultural facilities used for retail, offices, manufacturing, distribution, and warehouses.

Table 6-4 Estimated Number of Displaced Commercial and Industrial Units

Alternative	Commercial	Industrial/ Manufacturing	Total Business Units
SR 152 (North) to Road 13 Wye Alternative	4	4	8
SR 152 (North) to Road 19 Wye Alternative	4	4	8
Avenue 21 to Road 13 Wye Alternative	0	1	1
SR 152 (North) to Road 11 Wye Alternative	4	3	7

Source: ARWS, 2015; ARWS, 2016
 SR = State Route

Within the RSA, the number of commercial and industrial displacements ranges from no displacements under the Avenue 21 to Road 13 Wye Alternative to nine displacements under the SR 152 (North) to Road 13 Wye and SR 152 (North) to Road 19 Wye Alternatives. The types of businesses that would be displaced include two manufacturing or processing facilities, two automotive/trucking facilities, three markets, one gas station, and one small office. Although a number of mobile/manufactured homes would be displaced by the Central Valley Wye alternatives (as shown in Table 6-1), none of the commercial displacements would be associated with mobile home park businesses.

A review of suitable, available properties as potential relocation sites for commercial and industrial businesses led to the identification of 18 parcels of land zoned for commercial, retail, or industrial for sale or for rent, and 24 commercial or industrial buildings available for sale or for rent within the relocation RSA (Loopnet 2015; Zillow 2015, Showcase.com 2015). The available properties, concentrated in unincorporated Madera County and the City of Chowchilla, are comparable to the types of business properties affected by the SR 152 (North) to Road 13 Wye and SR 152 (North) to Road 19 Wye Alternatives. These properties include office buildings, commercial properties, industrial facilities and warehouses, and even a parcel zoned commercial that was identified as a potential gas station site. As the number of available properties and businesses within the relocation RSA exceeds the displacements of businesses, sufficient available properties exist for business relocations.

6.3.1 SR 152 (North) to Road 13 Wye Alternative

The SR 152 (North) to Road 13 Wye Alternative would require the acquisition and displacement of eight commercial or industrial businesses, consisting of two small manufacturing or processing facilities, four markets, a gas station, and a small office. Each of these business displacements would occur in unincorporated Madera County, and most are located along SR 152.

6.3.2 SR 152 (North) to Road 19 Wye Alternative

Business displacements under the SR 152 (North) to Road 19 Wye Alternative would be the same as the SR 152 (North) to Road 13 Wye Alternative. The eight commercial or industrial businesses that would be displaced along SR 152 consist of two small manufacturing or processing facilities, four markets, a gas station, and a small office.

6.3.3 Avenue 21 to Road 13 Wye Alternative

One industrial business would be displaced under the Avenue 21 to Road 13 Wye Alternative. Displacements under this alternative would be limited to mostly residential and agricultural properties.

6.3.4 SR 152 (North) to Road 11 Wye Alternative

The SR 152 (North) to Road 11 Wye Alternative would require the acquisition and displacement of three commercial businesses (all markets). Each of these business displacements would occur in unincorporated Madera County, and most are located along SR 152. Agricultural Parcels and Facilities

Agricultural lands account for the largest percentage of acreage to be acquired for the Central Valley Wye alternatives. This section summarizes the number of severed agricultural parcels and displaced agricultural facilities as a result of the Central Valley Wye alternatives. Residential displacements on agricultural parcels are accounted for in Section 6.2, Residential Displacements and Relocations.

As shown in Table 6-5, an estimated 107–137 agricultural parcels would be bisected by the Central Valley Wye alternatives and acquired by the Authority because the remnant parcels are deemed too small for farming to remain feasible. Although remnant parcels would be resold and returned to agricultural use where feasible, parcel severance is expected to result in a long-term reduction in agricultural productivity because not all remnant parcels can be expected to be returned to agricultural use.

The Central Valley Wye alternatives would displace an estimated 16–29 agricultural facilities (sheds, barns, corrals, stables, silos, and dairy facilities). The temporary business interruption from the displacement of agricultural structures on these parcels could result in temporary increases in business costs and lost revenues.

Additional documentation related to the Central Valley Wye’s effect on agricultural resources is provided in Section 3.14 of the Supplemental EIR/EIS. The *Merced to Fresno Section: Central Valley Wye Community Impact Assessment* (Authority and FRA 2016b) presents an analysis of the economic effect of agricultural acquisitions.

Table 6-5 Estimated Effects on Agricultural Resources by Alternative

Alternative	Severed Agricultural Parcels	Displaced Agricultural Facilities
SR 152 (North) to Road 13 Wye Alternative	123	21
SR 152 (North) to Road 19 Wye Alternative	125	17
Avenue 21 to Road 13 Wye Alternative	137	29
SR 152 (North) to Road 11 Wye Alternative	107	16

Source: ARWS, 2015
SR = State Route

Suitable agricultural land is available in the region for agricultural operations that are required to relocate. Most agricultural disruption would not be caused by relocation but rather by the logical reallocation of agricultural property bought and sold by neighboring operations. An examination of vacant and for-sale agricultural lands and operations reveals a sufficient supply available for those operations that may be required to relocate (Loopnet 2015). In August 2015, there were 50 agricultural properties of 5 acres or larger for sale or lease within the relocation RSA. These operations include vacant agricultural land, rural-residential agricultural land, as well as land and facilities for pasture/ranch, field crops, vineyards, and dairy.

6.3.5 SR 152 (North) to Road 13 Wye Alternative

The SR 152 (North) to Road 13 Wye Alternative would bisect approximately 123 agricultural parcels and would displace agricultural facilities on 21 agricultural parcels. Most of these agricultural effects would occur in unincorporated Madera County. The displaced agricultural facilities and equipment generally include sheds, barns, corrals, stables, silos, and dairy facilities.

6.3.6 SR 152 (North) to Road 19 Wye Alternative

The SR 152 (North) to Road 19 Wye Alternative would bisect 125 agricultural parcels and displace agricultural facilities on 17 agricultural parcels. The location and type of facilities affected would be similar to the SR 152 (North) to Road 13 Wye Alternative.

6.3.7 Avenue 21 to Road 13 Wye Alternative

The Avenue 21 to Road 13 Wye Alternative would bisect 137 agricultural parcels and displace 29 agricultural facilities. The location and type of facilities affected would be similar to the SR 152 (North) to Road 13 Wye Alternative.

6.3.8 SR 152 (North) to Road 11 Wye Alternative

The SR 152 (North) to Road 11 Wye Alternative would bisect 107 agricultural parcels and displace agricultural facilities on 16 agricultural parcels. The location and type of facilities affected would be similar to the SR 152 (North) to Road 13 Wye Alternative.

6.4 Community and Public Facilities

Community and public facilities, the services and institutions that local populations rely on for their health and welfare and as a means to interact with other members of the community, are limited within the RSA, and are generally concentrated in Fairmead. The Central Valley Wye alternatives would avoid most community and public facilities. Based on a visual interpretation and parcel-by-parcel analysis, the SR 152 (North) to Road 13 Wye Alternative, SR 152 (North) to Road 19 Wye Alternative and SR 152 (North) to Road 11 Wye Alternative would result in no acquisitions and displacements of community facilities. The Avenue 21 to Road 13 Wye Alternative would result in the partial acquisition of one parcel on which a community facility is located.

6.4.1 SR 152 (North) to Road 13 Wye Alternative

The SR 152 (North) to Road 13 Wye Alternative would not require the acquisition of parcels containing community or public facilities. Therefore, construction of this alternative would not result in the displacement or relocation of community or public facilities.

6.4.2 SR 152 (North) to Road 19 Wye Alternative

The SR 152 (North) to Road 19 Wye Alternative would not require the acquisition of parcels containing community or public facilities. Therefore, construction of this alternative would not result in the displacement or relocation of community or public facilities.

6.4.3 Avenue 21 to Road 13 Wye Alternative

The Avenue 21 to Road 13 Wye Alternative's footprint encroaches on the property of Alview Elementary School in unincorporated Madera County, resulting in a partial acquisition of the parcel. The alternative would not directly affect the school's facilities and would not require the relocation or reconfiguration of the school. The only physical impact would be a permanent utility

easement in the northwest corner of the grass area behind the school. Construction of this alternative would not result in the displacement or relocation of community or public facilities.

6.4.4 SR 152 (North) to Road 11 Wye Alternative

The SR 152 (North) to Road 13 Wye Alternative would not require the acquisition of parcels containing community or public facilities. Therefore, construction of this alternative would not result in the displacement or relocation of community or public facilities.

DRAFT

7 RELOCATION RESOURCES AND RELOCATION PLAN

This section describes the relocation resources that would be provided as part of the development of the Central Valley Wye. Federal and state laws (the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, also known as the Uniform Act, and California Government Code, Chapter 16, Section 7260, et seq.) require that relocation assistance be provided to any person, business, farm, or nonprofit operation displaced because of the acquisition of real property by a public entity for public use. Compliance with the Uniform Act is required of any public agency where federal funds are to be used in the acquisition or construction of a proposed project. The Uniform Act's primary objective is to assist all project displacees so that they do not suffer disproportionate injury as a result of projects constructed for the benefit of the public. In addition to these two laws, the Authority has policies related to Title VI compliance that serve to address the impacts of relocation.

Additionally, this section presents an overview of the relocation plan that the Authority would develop during the preparation of the Final Relocation Impact Report and the Supplemental EIR/EIS. This overview contains the elements included in the relocation plan and important recommendations for specific considerations to address potential problems or issues identified in the relocation analysis process.

7.1 The Uniform Act and the California Relocation Assistance Act

The Uniform Act and the California Relocation Assistance Act require that relocation assistance be provided to persons displaced as a result of land acquisition for public projects. To comply with the requirements of these federal and state laws, the Authority adopted the following relocation policies:

- Renters will not be required to relocate until comparable replacement housing has been made available to them.
- The relocation program will be realistic and adequate to provide orderly, timely, and efficient relocation of displaced persons.
- The Authority will also develop a relocation plan that details how the various forms of relocation assistance will be provided (discussed in Section 7.7, Relocation Plan Elements and Recommendations).

Refer to Appendix A for more information regarding the Authority's relocation assistance programs. These programs address the rights and benefits of individuals displaced from residences and mobile homes, as well as businesses, farms, and nonprofit organizations.

7.2 California High-Speed Rail Authority Title VI Plan

In March 2012, the Authority adopted a policy and plan to confirm that the California HSR System complies with Title VI. The policy states:

- The Authority is committed to ensuring that no person in the state of California is excluded from participation in, nor denied the benefits of, its programs, activities, and services on the basis of race, color, national origin, age, sex, or disability as afforded by Title VI of the Civil Rights Act of 1964 and Related Statutes.
- The Authority, as a federal grant recipient, is required by the FRA to conform to Title VI of the Civil Rights Act of 1964 and related statutes. The Authority's sub-recipients and contractors are required to prevent discrimination and confirm non-discrimination in all of their programs, activities, and services.
- As permitted and authorized by Title VI, the Authority will administer a Title VI Program in accordance with the spirit and intent of the non-discrimination laws and regulations.

The Title VI Plan includes a commitment to inclusive public involvement of all persons affected by the HSR project (Authority 2012b).

7.3 California High-Speed Rail Authority Limited English Proficiency Plan and Policy

In May 2012, the Authority adopted a policy and plan to make certain that the California HSR Program complies with the requirements of U.S. Presidential Executive Order 13166 concerning limited English proficiency (LEP) individuals. The policy states:

- It is the policy of the Authority to communicate effectively and provide meaningful access to LEP individuals to all the Authority's programs, services, and activities. The Authority will provide free language assistance services to LEP individuals encountered or whenever an LEP individual requests language assistance services.
- The Authority will treat LEP individuals with dignity and respect. Language assistance will be provided through a variety of methods, including staff interpreters, translation and interpreter service contracts, and formal arrangements with local organizations providing interpretation or translation services or telephonic interpreter services.

The LEP Policy and Plan supplements the Title VI Plan (Limited English Proficiency Plan [Authority 2012c]).

7.4 Residential Relocations

The initial evaluation of replacement properties indicates that, for all Central Valley Wye alternatives, there are sufficient numbers of available replacement properties (including properties for sale, for rent, or foreclosures) in most areas where displacements would occur. However, future availability may vary, depending on population growth, planned development, and market trends.

Projections show that, between 2010 and 2040, populations in Merced and Madera Counties would increase by 180,395 and 127,146—increases of approximately 71 percent and 84 percent, respectively. The primary reasons for this growth are migration—both international migration of people seeking employment and the migration of people from urban coastal areas seeking affordable housing within commuting range of major metropolitan areas—and the natural rate of population increase (an excess of births over deaths). To accommodate this population growth, an additional 54,665 and 38,529 housing units would be necessary in Merced and Madera Counties, respectively.⁸

Planned development projects in Merced and Madera Counties would increase the number of residential units available in the regions. In unincorporated Merced County, approximately 5,682 new residential units are planned to be developed in reasonably foreseeable development projects and plans. The cities and communities in the vicinity of the Central Valley Wye—Chowchilla and Madera—have approximately 7,213 new residential units planned. Overall, approximately 56,809 residential units are in the planning approvals process or are identified in the housing elements in the two counties. Large developments that are planned to drive the increase in the number of residential units include the Villages of Laguna San Luis, Fox Hills, and University Community plans in Merced County and the Gateway Village and State Center Community College specific plans in Madera County. These developments are expected to account for nearly three-fourths of the future residential development in the region (Madera County 2014; Merced County 2010). Due to the economy, the pace of the construction has slowed for much of the development, but the plans are in place to accommodate growth as it occurs.

In addition to the capacity for new development in Merced and Madera Counties, high foreclosure and vacancy rates contribute to the availability of adequate relocation resources within the housing stock. Merced County, in particular, was one of the hardest hit counties in California by

⁸ This calculation is based on estimated averages of 3.3 persons per residential unit for Merced and Madera Counties, as provided by the 2010 U.S. census.

the foreclosure crisis (Merced County 2010). Between 2008 and 2010, approximately 1 out of every 8 households (12.4 percent) in Merced County underwent foreclosure, while 1 out of every 12 households (8.4 percent) in Madera County underwent foreclosure. These high foreclosure rates are also reflected in the counties' vacancy rates. In 2010, the vacancy rates of both counties were higher than the state of California; between the two counties, 6,390 housing units were vacant and "for sale" or "for rent" (U.S. Census Bureau 2010e).

Real estate listings in August 2015 indicated a sufficient number of replacement properties within the relocation RSA. While predicting future availability of relocation resources is challenging, the capacity for new development, plus vacancies within the existing housing stock, suggest that adequate housing would be available in Merced and Madera Counties. As a result, there would be sufficient properties to accommodate both the projected population growth and the residents displaced by the Central Valley Wye.

7.4.1 Residential Property Resources

Overall, a sufficient number of comparable replacement residences are available in the relocation RSA. As a result, finding replacement housing for those displaced by the Central Valley Wye would not present unusual problems, in most cases. However, at the community level, there could be insufficient replacement residences to relocate all displaced residents within their current community. In these cases, displaced residents could relocate to other, nearby communities that provide a greater number of housing options.

Table 6-3 provides a summary of residential relocations that could result from construction of the Central Valley Wye alternatives and the available replacement properties. For each Central Valley Wye alternative, the majority of residential displacements would occur in unincorporated Madera County. Depending on the alternative selected, Fairmead and unincorporated Madera County may not have sufficient replacement residences to relocate all the displaced residents within the same community. However, there are sufficient vacancies in nearby unincorporated Merced County, Chowchilla, and Madera Acres to accommodate the total number of residential displacements. As of August 2015, there was a surplus of between 65 and 122 available residential units in the relocation RSA. This surplus does not include the vacant properties zoned for residential or rural-residential uses that could be developed to accommodate displaced residents; as of August 2015, analysts had identified an additional 30 vacant parcels within the relocation RSA.

The analyst's examination of a second data source, the 2010 U.S. census data on vacancy rates in the affected areas of Fairmead and unincorporated Madera County, confirms the findings that residential vacancies would be sufficient to accommodate relocated residents. In Fairmead, 10.9 percent of residential units were vacant. In Madera County, 11.8 percent of units were vacant. These percentages equate to 44 vacant units in Fairmead and 5,823 vacant units in Madera County. In all cases, the number of available units far exceeds the number of residential displacements expected from the Central Valley Wye. Although U.S. census data do not indicate how many of these vacant units are available for sale or rent, they do indicate that the vacancy rate for residential properties is currently high in the relocation RSA.

A summary of characteristics of the available residential housing, as well as vacant lots zoned for residential or rural-residential uses, is provided in Table 7-1. A comparison of the cost of potential replacement housing units to the displaced properties is a good measure of the suitability of replacement housing because it is a function of important attributes, such as size, quality, and neighborhood amenities. While the value of the displaced properties is not available, the cost of potential replacement housing within Chowchilla, Fairmead, and Madera Acres is comparable to housing in these communities as a whole. Property values within the rural portions of the relocation RSA vary greatly depending on the size of the parcel, the number of houses on the property, the quality of the land for agricultural production, and improvements (e.g., wells).

Table 7-1 Summary Characteristics of Available Residential Properties and Vacant Lots

Community	Housing Type ^{1,2}	Total # Available	Average Price	Average Residence Size (Sq Ft)	Average Lot Size (Acres)	Average # Bed/Bath	Average Year Built
For Sale							
Unincorporated Merced County	SFR (MH)	35 (6)	\$505,500	1,900	13	4/2	1960
	Vacant Lot	4	\$284,800	N/A	11	N/A	N/A
Unincorporated Madera County	SFR (MH)	28 (1)	\$767,500	2,286	18.5	4/2.5	1972
	Vacant Lot	15	\$2,140,000	N/A	67	N/A	N/A
Chowchilla	SFR (MH)	64 (1)	\$217,000	2,060	0.5	3.5/2.5	1984
	Vacant Lot	9	\$51,800	N/A	0.28	N/A	N/A
Fairmead	SFR (MH)	7 (5)	\$247,000	1,560	4.5	3/2	1982
Madera Acres	SFR	30	\$202,000	1,803	0.8	3.5/2	1984
	Vacant Lot	2	\$152,000	N/A	1.5	N/A	N/A
For Rent							
Unincorporated Madera County	SFR	1	\$1,995/mo	3,000	N/A	4/3	N/A
Chowchilla	SFR	3	\$1,070/mo	1,970	N/A	4/3	N/A
	MFR	3	\$675/mo	1,000	N/A	3/1	N/A
Madera Acres	SFR	3	\$1,190/mo	1,200	N/A	3/2	N/A

Sources: Zillow, 2015; Redfin, 2015

SFR = Single-Family Residential

MFR = Multifamily Residential

MH = Manufactured Home

N/A = Not available

mo = month

¹ Characteristics for manufactured homes are not provided separately from single-family residences because most of the available manufactured homes are located on large lots that also have single-family residences.

² Vacant lots zoned for residential or rural-residential uses were included in this analysis.

Although Central Valley Wye would displace housing units and require residents to relocate, an adequate amount of housing appears to be available in the relocation RSA. Sufficient housing may not be available for all displaced residents of Fairmead and unincorporated Madera County to relocate within the same community, but there are sufficient surpluses of replacement housing in the neighboring cities of Chowchilla and Madera Acres to accommodate all residents that the Central Valley Wye would displace.

As indicated in Table 7-1, there is a lot of variety in the sizes and prices of replacement housing units available within the RSA, and there are a number of vacant properties zoned for residential or agricultural uses for sale that could serve as replacement property. Even so, relocations of those on agricultural lands or those in rural residential subdivisions such as Fairmead, where residents enjoy a unique blend of amenities (spacious lots, city services, country setting, yet close to town), can be difficult and may take time.

Special consideration may be required in the relocation of displaced mobile/manufactured homes and renters. Between 12 and 27 mobile/manufactured homes would be displaced, depending on the selected alternative. In comparison, only 13 of the available replacement properties included mobile/manufactured homes. Additionally, while it was estimated that a minimum of 12 displaced

residential units would be renter-occupied, only 10 residential rental properties were identified within the relocation RSA, indicating that there may be insufficient replacement rental properties to accommodate displaced renters in a timely manner. In these instances, special consideration will be included in the project relocation plan to make certain that these residents obtain comparable housing and are able to remain in the vicinity, including the provision of housing of last resort, if necessary.

7.4.2 Other Residential Resources

In addition to actual residential properties that are available to receive people who relocate, other types of residential relocation resources are available.

- Relocation assistance and counseling for those who would need to relocate
- Direct financial assistance for those who would need to relocate
- Sufficient government funding to carry out all relocation processes and forms of assistance

7.4.2.1 Relocation Assistance and Counseling

The Authority will implement SOCIO-IAMF#2, which would entitle persons displaced by the Central Valley Wye to relocation assistance and counseling provided in accordance with the Uniform Act to confirm adequate relocation and a decent, safe, and sanitary home for displaced residents. All benefits and services would be provided equitably without regard to race, color, religion, age, national origins, and disability as specified under Title VI of the Civil Rights Act of 1964. The Authority would strictly adhere to all rights and services provided under Public Law 91-646, the Uniform Act, to meet the needs of the handicapped, elderly, and other special groups (e.g., non-English-speaking people) to confirm that their relocation needs are met. Programs implemented to meet these needs include:

- Interpretation services
- Bilingual brochures regarding relocation services
- Determination of people's needs and preferences through individual interviews
- Transportation services for those who do not own personal transportation or who cannot drive
- Information on other state and federal assistance programs
- Counseling to minimize hardships

As noted, a number of federal and state laws and policies require the provision of certain forms of assistance to individuals and families in residential structures that would be displaced by projects. The eligibility for these assistance programs and policies is determined through a series of steps, including an Initiation of Negotiation and Notice of Intent to Inquire. These early notification steps lead to further screening and eventual certification and classification as to the degrees and types of relocation assistance for which each affected person qualifies. Different forms of assistance are available to homeowners versus renters. The duration of occupancy prior to notification is considered in determining the level of support provided. In addition, landlords receive assistance, depending on the type of structure and property they own.

The Authority's Relocation Assistance Program is developed to help displaced individuals move with as little inconvenience as possible. Specifically, displaced people can receive information on the availability of housing and prices, transportation to inspect possible housing, translation services, and help with paperwork (e.g., completing rental applications or understanding title documents) and various other aspects of relocation. Dislocation allowances are also available to cover various costs, such as transferring utility services and temporary storage.

7.4.2.2 Direct Financial Assistance

More direct financial assistance is available in the form of relocation housing payments, which include reimbursement for demonstrated direct moving expenses as well as a variety of replacement housing costs. These include covering the price differential between existing rent payments and those for a new rental unit. Similarly, homeowners receive mortgage differential payments to cover the difference between current payments and those for a replacement property that they may purchase. Down payment assistance is also available for current renters

who purchase replacement properties as a part of their relocation. Finally, owners of fully acquired parcels of land and residences will be paid fair market value for their land or residences.

In many cases, the displaced persons have an option between fixed “standard” assistance payments or reimbursement for actual incurred costs. For example, a displaced renter may choose between reimbursement for actual moving expenses or a fixed and direct lump-sum payment based on the size of the residence being acquired and certain assumptions about standardized contents. All of these programs and forms of assistance have established maximums that limit the assistance provided. However, because these limits are not indexed to inflation or adjusted for differences in the costs of living in various locations, there is a provision for “last-resort housing” that allows the caps to be exceeded if the need to do so can be demonstrated. Last-resort housing assistance can be used to address any differences between the supply of and the demand for a particular type of housing in any given location.

7.4.2.3 Sufficient Government Funding for Relocation

The third type of relocation resource consists of sufficient funding to buy parcels of land or other real property, make replacement house payments, reimburse moving costs, and provide all other forms of assistance requiring financial resources. The Authority provides these resources through the sale of bonds from the State of California, from the federal government’s American Recovery and Reinvestment Act, and from other sources.

7.5 Commercial and Industrial Businesses

This section compares the commercial and industrial business displacements that would occur under the Central Valley Wye alternatives to the available supply of commercial and industrial properties within the relocation RSA. Additionally, this section presents information about assistance programs and other resources that would be available to displaced businesses.

7.5.1 Commercial and Industrial Property Resources

Suitable replacement sites are on the market, and sufficient sites are available to accommodate the zero to nine business displacements in unincorporated Madera County that could result from building the Central Valley Wye.

Analysts conducted an assessment to determine the suitability of available properties as relocation sites for the businesses that could be displaced by the Central Valley Wye. A search of available properties within Chowchilla, Madera Acres, and unincorporated Merced and Madera Counties led to the identification of 18 parcels of land zoned for commercial, retail, or industrial for sale or for rent, and 24 commercial or industrial buildings available for sale or for rent (Loopnet 2015, Zillow 2015, Showcase.com 2015). The available properties, concentrated in unincorporated Madera County and the City of Chowchilla, are comparable to the types of business properties affected by the Central Valley Wye. These properties included office buildings, commercial properties, industrial facilities and warehouses, and even a parcel zoned commercial that was identified as a potential gas station site. As the number of available properties and businesses within the relocation RSA exceeds the displacements of businesses, sufficient available properties exist for business relocations.

Special business relocation issues could occur if displaced businesses have special site conditions and specific logistical needs. These characteristics could affect the permanency of operations due to an inability to re-establish at a new location, loss of clientele, or lack of suitable alternate locations.

7.5.2 Other Business Relocation Resources

Businesses that would be relocated by the Central Valley Wye would be entitled to relocation assistance and counseling in accordance with SOCIO-IAMF#2. All benefits and services would be provided equitably without regard to race, color, religion, age, national origins, and disability as specified under Title VI of the Civil Rights Act of 1964. The Authority’s Relocation Assistance Program was developed to help displaced business owners relocate with as little inconvenience as possible. The Authority would strictly adhere to all rights and services provided under Public

Law 91-646, the Uniform Act, to meet the needs of the handicapped, elderly, and other special groups (e.g., non-English-speaking people) to confirm that their relocation needs are met.

7.5.2.1 Sufficient Available Properties and Facilities for Relocation

With regard to available space, as with residential relocations, the analyst's gap analysis showed that there are adequate spaces and properties for the displaced businesses in the relocation RSA. In most cases, the specific types of facilities required for a particular type of business (e.g., office, retail, warehouse) were available close to the displaced business. In some cases (e.g., auto repair or manufacturing or processing facilities), while there is more-than-sufficient space and parcels available for business relocations, some modification or improvements to properties will need to be made to make them suitable "turn-key" business locations.

7.5.2.2 Sufficient Government Funding for Relocation

The bond and federal support resources previously described provide sufficient funding for the Authority to provide the needed assistance to businesses that would relocate. This category includes the funds to purchase or acquire the necessary properties from their current owners.

7.5.2.3 Programs and Policies for Business Relocations

For business relocations, financial support requirements differ from those for residential relocations. Similar informational assistance and advisory programs are available, which include bilingual brochures on relocation services, interpreters, determination of people's needs and preferences through individual interviews, transportation services for those who do not own personal transportation or who cannot drive, information on other state and federal assistance programs, and counseling to minimize hardships. However, the Uniform Act does not require that relocated businesses be made whole, and relocated businesses therefore receive fewer relocation benefits than do displaced residents. Payments are limited to moving and relocation expenses, although nonresidential displacees may qualify for a re-establishment payment to mitigate some of the expenses associated with establishing their businesses at a new location.

Moving expenses qualifying for financial assistance include transportation of personal property, disconnecting and dismantling of machinery and equipment, utility connection or transfer, temporary storage, moving and storage insurance, transfer fees for licenses or permits, costs to sell property or belongings that cannot be moved, salvage value for those items that cannot be sold or moved, and the costs of searches for suitable replacement properties. Business owners have the option to self-move or to hire movers. Small businesses, in particular, may choose either in-lieu fixed payment or reimbursement for actual costs.

Re-establishment payments for qualifying expenses may be made available to displaced business owners. These benefits are capped at \$10,000, and they must be actual, reasonable, and necessary. They include, but are not limited to, repairs or modifications to the new property to make it suitable, construction and installation costs of signage, lot and structure repaving or redecorating, expenses to advertise the new location, increased operating costs from rent or insurance premium changes (for up to 2 years), and increased personal or real-property taxes. Finally, compensation for loss of goodwill is provided. Goodwill is defined as the benefit that accrues from the skill, reliability, or location of a business. If these factors can be shown to be reduced as a consequence of the relocation, the business owner will be compensated for the loss. Generally, this is part of the acquisition expense, but some of it may occur as a relocation expense.

7.6 Agricultural Parcels and Facilities

This section compares the displacements of agricultural farmlands and facilities that would occur under the Central Valley Wye alternatives to the available supply of agricultural farmlands in the region for agricultural operations that may be required to relocate. Additionally, this section presents information about assistance programs and other resources that would be available to displaced businesses.

7.6.1 Agricultural Resources

Most agricultural disruption would not be caused by relocation but rather by the logical reallocation of agricultural property bought and sold by neighboring operations. For agricultural operations that are required to relocate, suitable agricultural land is expected to be available in the region. An examination of vacant and for-sale agricultural lands and operations in August 2015 identified 50 agricultural properties of 5 acres or larger for sale or lease within the relocation RSA. These operations include vacant agricultural land, rural-residential agricultural land, as well as land and facilities for pasture/ranch, field crops, vineyards, and dairy (Loopnet 2015).

7.6.2 Other Agricultural Relocation Resources

Agricultural operations that would be relocated by the Central Valley Wye would be entitled to relocation assistance and counseling, in accordance with SOCIO-IAMF#2. All benefits and services would be provided equitably without regard to race, color, religion, age, national origins, and disability as specified under Title VI of the Civil Rights Act of 1964.

7.6.2.1 Sufficient Government Funding for Relocation

The bond and federal support resources previously described provide sufficient funding for the Authority to provide the needed assistance to agricultural operations that would relocate. This category includes the funds to purchase or acquire the necessary properties from their current owners.

7.6.2.2 Programs and Policies for Agricultural Relocations

Agricultural operations and nonprofit organizations are treated somewhat differently from the other types of private sector, for-profit businesses. Not all of the forms of assistance apply, and the payments are calculated and based on these differences. For example, fixed payments for farm relocation are limited to the operations at the displacement property, and farms are not required to demonstrate a loss of substantial patronage, as other businesses are required to do. However, the general forms and types of relocation resources still apply; those aspects of an agricultural business that correspond to or have an analog in a nonagricultural business would be treated similarly. Farms, crops, and cropland cannot be relocated in the same way that a store or restaurant could be, but neither are they as subject to complete displacement as those businesses are. Generally speaking, portions of an agricultural parcel would be acquired as needed, and the Authority would compensate the owner, as required, for that land. In the remaining cases, the relocation of an agricultural facility or the temporary interruption of those operations would be assisted as described for other nonagricultural businesses.

7.7 Relocation Plan Elements and Recommendations

The Authority has incorporated into the Central Valley Wye SOCIO-IAMF#3, Relocation Mitigation Plan, the specific elements of which will be developed as part of the Final Relocation Impact Report and the Final Supplemental EIR/EIS. The components of the relocation plan will include the following:

- Assumptions
- Relocation Plan Elements
- Special Relocation Considerations and Steps to Address Them
 - Lead Time
 - Interpreter Services
 - Field Office
 - Last-Resort Housing

7.7.1 Assumptions

The relocation plan will be based on certain assumptions that must approximate those used in this Central Valley Wye DRIR and the other technical reports prepared in support of the Supplemental EIR/EIS. These assumptions include the premise that the Central Valley Wye alternatives will not differ substantially from those presented in the current description and that any major variations from those would trigger a new analysis. Moreover, the relocation plan must include all significant recommendations and considerations discussed herein, and confirm that all forms of support, guidance, funding, and other forms of assistance will be provided promptly and as required by the relevant federal, state, and local laws and policies.

7.7.2 Relocation Plan Elements

The relocation plan should contain the following elements.

- Full discussions and explanations of existing and expected relocation assistance programs, including all those discussed in Sections 7.2.2, Other Residential Resources, and 7.3.2, Other Business Relocation Resources
- Itemization of these programs by the type of relocation (e.g., residential, commercial, or industrial)
- Listings of which programs are appropriate for each type of relocation
- Discussions of the special relocation considerations noted throughout this Central Valley Wye DRIR and summarized in Section 7.7.3, Special Relocation Considerations and Steps to Address Them
- Evaluation of options for addressing those special considerations.

7.7.3 Special Relocation Considerations and Steps to Address Them

The Authority identified several special cases and situations during the research for this Central Valley Wye DRIR and the *Merced to Fresno Section: Central Valley Wye Community Impact Assessment* (Authority and FRA 2016b). These situations, which could become problems if the Authority does not carefully plan for and address them, require special consideration in the relocation plan. Once the Authority has selected a preferred Central Valley Wye alternative, it will conduct interviews with residential and business displacees to further define the need for special consideration or services during the relocation process.

7.7.3.1 Special Relocation Considerations

Sensitive Populations

Sensitive populations within the RSA include disabled people, elderly people, linguistically isolated populations, and environmental justice populations consisting of minority or low-income persons. These populations are discussed in detail in the *Merced to Fresno Section: Central Valley Wye Community Impact Assessment* (Authority and FRA 2016b). Additional outreach and technical assistance may be needed to fully address their needs.

Replacement Housing

The relocation analysis identified gaps between the number and type of displaced residential parcels and available resources for residential relocations in the community of Fairmead and unincorporated Madera County, depending on the alternative selected. Additionally, the analysis indicated that there may be insufficient replacement rental properties within the RSA to accommodate displaced renters in a timely manner. Special effort should be made to provide additional time, funds, and technical support for the residents in these locations and those currently residing in renter-occupied units who need to be relocated.

Rural Homes on Agricultural Land

Similar residential relocation challenges are present in certain rural areas where the relocation of displaced residential structures may require extra planning. Families living on rural agricultural properties may want or need to remain on the same parcel or on a nearby one, and may require additional time or assistance to relocate or rebuild their homes or farms in a new location.

Key Agricultural Land and Facilities

Construction of the Central Valley Wye would require the acquisition and permanent conversion of highly productive agricultural lands to nonagricultural uses and would result in the displacement of agricultural facilities, including confined animal agricultural operations. The importance of agriculture and confined animal agriculture to the region's economy needs to be considered during the relocation phase of the Central Valley Wye. As part of SOCIO-IAMF#2, Compliance with Uniform Relocation Assistance and Real Property Acquisition Policies Act, the Authority right-of-way agents will work with the affected property owner during the appraisal process to address issues of concern. Additionally, the Authority has incorporated into the Central Valley Wye AG-IAMF#2, Permit Assistance, to make certain that affected owners of confined animal agriculture facilities would receive assistance during the process of obtaining new or amended permits or other regulatory compliance necessary to the continued operation or relocation of the facility. This IAMF will streamline the process of obtaining new or modified permits, reducing the time and cost of permitting for affected landowners, and will encourage facility owners to continue to operate rather than close facilities.

Rural Community Residential Displacements

Because the majority of displacements in unincorporated counties are single-family residential homes on working agricultural lands, it may be difficult to find comparable replacements, and relocating housing to nearby land may take time. This may be especially difficult for rural residential subdivisions, such as Fairmead, where residents enjoy a unique blend of amenities (spacious lots, city services, country setting yet close to town). There may be very few vacant, affordable, and comparable rural residential homesteads to be used as relocation resources. If so, it may be necessary to consider constructing housing of last resort, or even duplicating the disrupted residential areas elsewhere in the vicinity.

Mobile/Manufactured Housing

The Central Valley Wye alternatives would not displace mobile-home park businesses or established communities of mobile/manufactured homes. However, depending on the alternative selected, between 12 and 27 manufactured homes would be displaced along the alignment and require relocation. Many manufactured homes affected by the Central Valley Wye alternatives are installed permanently and are similar to surrounding single-family homes. Therefore, if there is insufficient availability of manufactured homes in the relocation RSA, it would be sufficient to relocate displaced persons to comparable single-family housing.

7.7.3.2 Remediation for Special Considerations

Each of the special relocation situations discussed in Section 7.7.3.1, Special Relocation Considerations, may require some form of assistance beyond the basic levels that must be provided to all displacees. These situations could be addressed by implementing one or more of the following recommendations.

Lead Time

Many individuals in the special cases mentioned in Section 7.7.3.1, Special Relocation Considerations, would benefit from additional lead time beyond the 90 days that is the customary minimum. For example, finding suitable low-income housing, suitable rental units, or relocating a rural residence may take longer because of various supply constraints and access limitations. Similarly, the sensitive populations listed in Section 7.7.3.1 would benefit from additional time to gather information and make use of the supplementary forms of assistance available to them.

Modifying available commercial parcels so that they are suitable for the specific needs of displaced businesses would also take more time.

Dairy and livestock operations in the area depend on the services of a unique rendering facility. Relocating that facility will require adequate lead time to avoid economic effects on those operations.

Interpretive Services

Researchers noted several distinct linguistically isolated populations; most prominent among them are the numerous communities where Spanish is the only language fluently spoken or read by the adults who reside there. Efforts should be made to provide interpretive services to these communities, and these services should be delivered near the affected communities to maximize their effectiveness. These services should include written instructions in Spanish on forms and other materials to be provided on-site and via the internet. Stationary or mobile information and assistance booths should be staffed with translators or multilingual staff. Telephone information and assistance lines should provide recorded and live assistance in as many languages as needed.

Housing of Last Resort

Where available rental housing in certain categories or price-points is unavailable to meet demand, the Authority should attempt to provide financial assistance beyond the prescribed statutory limits for relocation assistance, as provided for under the housing-of-last-resort portions of the Uniform Act. This should be implemented, as needed, to confirm that all residents of displaced residential properties who desire to remain in or near their current homes can do so. This option will not be necessary if people choose to relocate to another neighborhood or city rather than remain in the community where they currently reside.

8 REFERENCES

ARWS	Associated Right of Way Services, Inc.
Authority	California High-Speed Rail Authority
CDFA	California Department of Food and Agriculture
CDOF	California Department of Finance
CEDD	California Employment Development Department
FRA	Federal Railroad Administration
Gov. Code	California Government Code
HUD	U.S. Department of Housing and Urban Development
MCTC	Madera County Transportation Commission
PL	Public Law
USEO	U.S. Presidential Executive Order
U.S.C.	United States Code
U.S. Census Bureau ACS	U.S. Census Bureau American Community Survey

- Associated Right of Way Services, Inc. (ARWS). 2015. Relocation Impacts Analysis Memorandum. November 18, 2015.
- . 2016. Relocation Impacts Analysis Memorandum. September 16, 2015.
- Bertaut, Carol, and Laurie Pounder. 2009. "The Financial Crisis and U.S. Cross-Border Financial Flows." *Federal Reserve Bulletin*. November.
- California Department of Finance (CDOF). 2013. *Report P-1: Summary Population Projections by Race/Ethnicity and by Major Age Groups*. January 2013. Sacramento, CA.
- California Department of Food and Agriculture (CDFA). 2012. *California Agricultural Statistics Review 2012-2013*. Sacramento, CA.
www.cdfa.ca.gov/Statistics/PDFs/2013/FinalDraft2012-2013.pdf (accessed April 8, 2013).
- California Employment Development Department (CEDD). 2013a. Labor Force and Unemployment Data for Counties, Historical Data.
www.labormarketinfo.edd.ca.gov/?pageid=1006 (accessed September 23, 2013).
- . 2013b. Labor Force and Unemployment Data for Sub-County Areas, Historical Data.
www.labormarketinfo.edd.ca.gov/?pageid=1006 (accessed September 23, 2013).
- . 2014. Employment by Industry Data – Historical Annual Average Data for Counties.
www.labormarketinfo.edd.ca.gov/LMID/Employment_by_Industry_Data.html (accessed March 31, 2014).
- . 2015. Unemployment Rate and Labor Force Data Tables Data for Counties, Historical Annual Average Data. www.labormarketinfo.edd.ca.gov/data/unemployment-and-labor-force.html#Table (accessed July 23, 2015).
- California High-Speed Rail Authority (Authority). 2010. *Bay Area to Central Valley High-Speed Train (HST) Revised Final Program Environmental Impact Report*. Volume 1. August 2010. Sacramento, CA.
- . 2012a. *Bay Area to Central Valley High-Speed Train (HST) Partially Revised Final Program Environmental Impact Report*. April 2012. Sacramento, CA.

- . 2012b. *Title VI Program Plan*. www.hsr.ca.gov/docs/programs/title_VI/CHSRA%20Title%20VI%20Program%20Final%2006-21-12.pdf (accessed August 28, 2015).
- . 2012c. *Limited English Proficiency Plan*. www.hsr.ca.gov/docs/programs/title_VI/CHSRA%20LEP%20Plan%20Final.pdf (accessed August 28, 2015).
- . 2014. *2014 Business Plan: Connecting California*. April 2014. Page 11.
- California High Speed Rail Authority and Federal Railroad Administration (Authority and FRA). 2005. *Statewide Final Program Environmental Impact Report/Environmental Impact Statement (EIR/EIS) for the Proposed California High-Speed Train System*. August 2005.
- . 2008. *San Francisco Bay Area to Central Valley HST Final Program Environmental Impact Report/Environmental Impact Statement*. Sacramento, CA, and Washington, DC. May 2008, Revised 2010.
- . 2016a. *California High-Speed Rail Project Supplemental Environmental Impact Report/Supplemental Environmental Impact Statement for the Merced to Fresno Section: Central Valley Wye*.
- . 2016b. *Merced to Fresno Section: Central Valley Wye Community Impact Assessment*.
- City of Chowchilla. 2012. *City of Chowchilla 2040 General Plan Housing Element 2009 – 2014*. Adopted March 2012. <http://www.ci.chowchilla.ca.us/dept.%20forms/Com%20Dev/General%20Plan/Housing%20Element-GP%202-22-2012.pdf>
- Cowan, Tadlock, 2005. *California's San Joaquin Valley: A Region in Transition*. Congressional Research Service, the Library of Congress. December 12.
- Loopnet. 2015. www.loopnet.com (accessed August 2015).
- Madera County. 1995. The Madera County General Plan Policy Document, October.
- . 2012. *Fairmead Colony Area Plan Draft Alternative D*. www.madera-county.com/index.php/county-forms/category/52-fairmead-colony-area-plan.
- . 2014. *County of Madera 2016-2024 Housing Element Update*. Public Review Draft. November 20, 2014.
- Madera County Planning Department. 2012. *Fairmead Colony Area Plan, Alternative D*. March 2012.
- Madera County Transportation Commission (MCTC). 2014. *Final 2014 Regional Transportation Plan and Sustainable Communities Strategy (RTP & SCS)*. Adopted July 11, 2014.
- Merced County. 2010. Merced County General Plan: Housing Element. Adopted June 22, 2010. www.co.merced.ca.us/DocumentCenter/Home/View/3475.
- . 2013. 2030 Merced County General Plan. Prepared by Merced County. December.
- Redfin. 2015. Home Real Estate Database Search. www.realtor.com (accessed August 2015).
- Showcase.com. 2015. Commercial Real Estate Database Search. Commercial Properties by City/Market. www.showcase.com/ (accessed August 2015).
- U.S. Census Bureau. 2000a. (SF-1) DP-1. Profile of General Demographic Characteristics. 2000.
- . 2000b. (SF-1) P004. Hispanic or Latino, and Not Hispanic or Latino By Race. 2000.
- . 2000c. (SF-3) P053. Median Household Income in 1999 (Dollars). 2000.
- . 2000d. (SF-1) QT-P10. Households and Families. 2000.
- . 2000e. (SF-3) P042. Profile of Selected Housing Characteristics. 2000.
- . 2000f. (SF-3) QT-H1. General Housing Characteristics. 2000.

- U.S. Census Bureau American Community Survey (U.S. Census Bureau ACS). 2010–2014a. DP05. Demographic and Housing Estimates. 2010–2014.
- . 2010–2014b. B19013. Median Household Income in Past 12 Months (In 2014 Inflation-Adjusted Dollars). 2010–2014.
- . 2010–2014c. B25024. Units in Structure. 2010–2014.
- . 2010–2014d. S2301. Employment Status 2010–2014.
- U.S. Department of Housing and Urban Development (HUD). 2015. HUD—Manufactured Housing and Standards. Available at http://portal.hud.gov/hudportal/HUD?src=/program_offices/housing/ramh/mhs/faq. Accessed June 16, 2015.
- Zillow. 2015. Home Real Estate Database Search. www.zillow.com (accessed August 2015)

9 PREPARER QUALIFICATIONS

The following individuals have made significant contributions to development of this technical report.

Craig Richey	BS, English, CSU San Bernardino
14 years of experience	
Anne Winslow	MS, Earth Systems, Stanford University
4.5 years of experience	BS, Earth Systems, Stanford University

DRAFT

APPENDIX A: RELOCATION ASSISTANCE DOCUMENTS

DRAFT