3 Affected Environment, Environmental Consequences, and Mitigation Measures

3.16 Aesthetics and Visual Resources

3.16.1 Introduction

Section 3.16, Aesthetics and Visual Resources, of this *Merced to Fresno Section: Central Valley Wye Draft Supplemental Environmental Impact Report (EIR)/Environmental Impact Statement (EIS)* (Draft Supplemental EIR/EIS) updates the *Merced to Fresno Section California High-Speed Train Final Project EIR/EIS* (Merced to Fresno Final EIR/EIS) (California High-Speed Rail Authority [Authority] and Federal Railroad Authority [FRA] 2012) with new and revised information relevant to aesthetics and visual resources, analyzes the potential impacts of the No Project Alternative and the Central Valley Wye alternatives, and describes impact avoidance and minimization features (IAMF) that would avoid, minimize, or reduce these impacts. Where applicable, mitigation measures are proposed to further reduce, compensate for, or offset impacts of the Central Valley Wye alternatives. This section also describes the affected environment in the resource study area (RSA).

The analysis herein is consistent with the analysis conducted in the Merced to Fresno Final EIR/EIS. The methodology for both analyses follows the Federal Highway Administration (FHWA) *Visual Impact Assessment for Highway Projects* (FHWA 1988) and the state guidelines provided in the California Department of Transportation (Caltrans) *California Scenic Highway Program* (Caltrans 2009). Where existing conditions information has changed or new information has become available since the Merced to Fresno Final EIR/EIS was prepared in 2012, the Central Valley Wye alternatives analysis uses the updated versions of these sources or datasets. Relevant portions of the Merced to Fresno Final EIR/EIS that remain unchanged are summarized and referenced in this section but are not repeated in their entirety. The analyses differ in the following way:

- Landscape units (see Section 3.16.5.3, Landscape Units and Key Viewpoints) have been revised from those used in the Merced to Fresno Final EIR/EIS to provide finer detail across the RSA and to incorporate the additional RSA west to Carlucci Road.

The *Merced to Fresno Section: Central Valley Wye Aesthetics and Visual Quality Technical Report* (Authority and FRA 2016) provides additional technical details on aesthetics and visual resources.[1] This technical report is available on the Authority's website: http://hsr.ca.gov/Programs/Environmental_Planning/supplemental_merced_fresno.html Additional details on aesthetics and visual resources are provided in the following appendices in Volume II of this Draft Supplemental EIR/EIS:

- Appendix 2-C, Applicable Design Standards, provides the list of relevant design standards for the Central Valley Wye alternatives.
- Appendix 3.16-A, Aesthetics and Visual Quality Plans and Laws Consistency Analysis, provides a discussion of inconsistencies or conflicts that may exist between the Central Valley Wye alternatives and regional or local plans or laws that pertain to aesthetics or visual resources.

[1] The Aesthetics and Visual Quality Technical Report was finalized in 2016; however, the content of this Draft Supplemental EIR/EIS has continued to evolve to incorporate the most current data and other sources of information relevant to the environmental analyses, some of which were not available at the time that the technical report was prepared. As a result, some of the information presented in the Draft Supplemental EIR/EIS is more current than the information presented in the technical report. To provide clarity on any information and data differences between the Draft Supplemental EIR/EIS and the technical report and the location of the most current information, a Central Valley Wye Technical Report Memorandum of Updates has been produced and included in Appendix 3.1-D, Central Valley Wye Technical Report Memorandum of Updates.

- Appendix 3.16-B, Aesthetics and Visual Quality Key Viewpoints, provides an aerial map locating each key viewpoint analyzed in the *Merced to Fresno Section: Central Valley Wye Aesthetics and Visual Quality Technical Report* (Authority and FRA 2016 and images depicting the existing view and a photo simulation of the same view with the high-speed rail project.

Seven other resource sections in this Draft Supplemental EIR/EIS provide additional information on the impacts of constructing the Central Valley Wye alternatives that are related to aesthetics and visual resources. These sections and the potential impacts related to aesthetic and visual resources are as follows:

- **Section 3.2, Transportation**—Impacts of constructing the Central Valley Wye alternatives on the regional transportation system including HSR crossing transportation rights-of-way, sharing transportation corridors, realigned roadways, and grade separations.
- **Section 3.4, Noise and Vibration**—Impacts of constructing the Central Valley Wye alternatives, including the installation of sound walls to reduce noise from passing trains.
- **Section 3.12, Socioeconomics and Communities**—Impacts of constructing the Central Valley Wye alternatives on community character and cohesion.
- **Section 3.13, Land Use and Development**—Impacts of constructing the Central Valley Wye alternatives on land use patterns and development.
- **Section 3.14, Agricultural Farmland**—Impacts of constructing the Central Valley Wye alternatives on agricultural farmland including impediments to views of agricultural land.
- **Section 3.15, Parks, Recreation, and Open Space**—Impacts of constructing the Central Valley Wye alternatives on natural areas, parks, open space, and recreationists including impediments to views.
- **Section 3.17, Cultural Resources**—Impacts of constructing the Central Valley Wye alternatives on resources with cultural or historic significance.

Definition of Resources

The following are definitions for aesthetics and visual resources analyzed in this Draft Supplemental EIR/EIS. These definitions are the same as those used in the Merced to Fresno Final EIR/EIS (Authority and FRA 2012) with context-sensitive solutions added as part of this Draft Supplemental EIR/EIS.

- **Visual Resources**—A visual resource is a site, object, or landscape feature that contributes to the visual character of the surrounding area or is important because of its visual characteristics or scenic qualities.
- **Viewer Groups**—Viewer groups include people such as roadway/highway/trail users (travelers), agricultural workers, park and trail users (recreationists), and residents.
- **Viewer Response**—Viewer response ratings are based on the relative combined levels of viewer sensitivity and exposure that prevail in a particular location.
- **Landscape Units**—Landscape units are used to divide long linear projects into logical geographic entities for which impacts from a proposed project can be assessed. They typically have broadly similar visual characteristics.
- **Key Viewpoints (KVP)**—KVPs provide representative examples of existing views of the landscape as seen by viewer groups within each landscape unit and are used to illustrate how a proposed project would change those views.
- **Visual Character**—Visual, or landscape, character is an impartial description of the landscape's visual features and is defined by the relationships between the existing visible natural and built landscape features.

- **Visual Quality**—Visual quality is an assessment of the composition of the visual character in terms of vividness, intactness, and unity.
- **Visual Effects**—Visual effects are determined by combining the level of visual change with the viewer response.
- **Context-Sensitive Solutions**—A context-sensitive solution process provides a collaborative, interdisciplinary approach in which all stakeholders identify a transportation facility that fits its setting. The approach leads to preserving and enhancing scenic, aesthetic, historic, community, and environmental resources while improving or maintaining safety, mobility, and infrastructure conditions (FHWA 1988).

3.16.2 Laws, Regulations, and Orders

This section identifies laws, regulations, and orders that are relevant to the analysis of aesthetics and visual resources in this Draft Supplemental EIR/EIS. Also provided are summaries of new or updated laws, regulations, and orders that have occurred since publication of the Merced to Fresno Final EIR/EIS.

3.16.2.1 Federal

The following laws, regulations, orders, and plans are the same as those described in Section 3.16.2.1, Federal Regulations, of the Merced to Fresno Final EIR/EIS (Authority and FRA 2012: pages 3.16-1 through 3.16-2):

- Section 4(f) of the Department of Transportation Act (49 United States Code (U.S.C.) § 303)
- National Historic Preservation Act (16 U.S.C. § 470 et seq.)
- FRA Procedures for Considering Environmental Impacts (64 Fed. Reg. 28545)

3.16.2.2 State

The State Scenic Highways (California Streets and Highways Code §§ 260–263) is the same as described in Section 3.16.2.2, State Regulations, of the Merced to Fresno Final EIR/EIS (Authority and FRA 2012: page 3.16-2). There are no new or updated state laws, regulations, or orders.

3.16.2.3 Regional and Local

The following regional and local laws, regulations, orders, and plans are the same as those described in Section 3.16.2.3, Local and Regional Plans, Policies, and Regulations, of the Merced to Fresno Final EIR/EIS (Authority and FRA 2012: pages 3.16-2 through 3.16-4):

- Local Design Guidelines
- *Madera County General Plan* (Madera County 1995)
- *Fresno County General Plan* (Fresno County 2003)
- *Merced Vision 2030 General Plan* (City of Merced 2012)[2]
- *City of Chowchilla 2040 General Plan* (City of Chowchilla 2011)

General Plan Policies and Ordinances

Table 3.16-1 lists county and city general plans, policies, and objectives relevant to the Central Valley Wye alternatives that are new, additional, or that have been updated since publication of the Merced to Fresno Final EIR/EIS. Refer to Section 3.16.2.3 of the Merced to Fresno Final EIR/EIS for more information.

[2] While the City of Merced Open Space Element was updated as of December 2, 2016, the relevant goals and policies disclosed in the Merced to Fresno Final EIR/EIS remain unchanged.

Table 3.16-1 Regional and Local Plans and Policies

Plan Title	Policy / Summary
Merced County	
2030 Merced County General Plan (2013)	Merced County adopted the *2030 Merced County General Plan* on December 10, 2013, updating the previous version of the general plan that was referenced in Section 3.16.2.3 (page 3.16-2) of the Merced to Fresno Final EIR/EIS. The updated general plan includes the following Natural Resources (NR) and Public Facilities and Services (P FS) policies that are applicable to aesthetic and visual resources: ▪ Policy NR-4.1: Promote the preservation of agricultural land, ranch land, and other open space areas as a means of protecting the County's scenic resources. ▪ Policy NR-4.2: Coordinate with Caltrans, during the review of proposed structures and activities located adjacent to state-designated scenic highways, to ensure that scenic vistas and local scenic values are not significantly degraded. ▪ Policy NR-4.4: Consider the surrounding landscape, topography, and existing scenic values when determining the location and construction of new roads. ▪ Policy NR-4.5: Develop and implement a lighting ordinance to require good lighting practices, such as the use of specific light fixtures that reduce light pollution, minimize light impacts, and preserve views of the night sky. The ordinance shall contain standards to avoid light trespass, particularly from developed uses, to sensitive wildlife corridors and refuges. ▪ Policy P FS-5.7: Coordinate with local gas and electric utility companies in the design, location, and appropriate expansion of gas and electric systems, while minimizing impacts to agriculture and minimizing noise, electromagnetic, visual, and other impacts on residents.
Stanislaus County	
Stanislaus County General Plan (2016)	Stanislaus County adopted the *Stanislaus County General Plan* on August 23, 2016. The general plan includes the following policy: ▪ Policy 2 Land designated Agriculture shall be restricted to uses that are compatible with agricultural practices, including natural resources management, open space, outdoor recreation and enjoyment of scenic beauty.

Source: Merced County, 2013; Stanislaus County, 2016
Caltrans = California Department of Transportation

3.16.3 Compatibility with Plans and Laws

As indicated in Section 3.1.3.3, Compatibility with Plans and Laws, the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) regulations[3] require a discussion of inconsistencies or conflicts between a proposed undertaking and federal, state, regional, or local plans and laws. As such, this Draft Supplemental EIR/EIS describes the inconsistency of the Central Valley Wye alternatives with federal, state, regional, and local plans and laws to provide planning context.

There are a number of federal and state laws and implementing regulations, listed in Section 3.16.2.1, Federal, and Section 3.16.2.2, State, that direct the analysis of aesthetic and visual impacts for transportation projects, including analysis related to historic resources and state scenic highways and are applicable to this Draft Supplemental EIR/EIS. Appendix 3.16-A lists each federal and state law and plan that was reviewed and documents any inconsistencies

[3] NEPA regulations refer to the regulations issued by the Council on Environmental Quality located at 40 CFR Part 1500.

between the Central Valley Wye alternatives and applicable plans and laws. A summary of the federal and state requirements considered in this analysis follows:

- Federal direction on analysis of aesthetic and visual impacts for transportation projects. Applicable acts and laws include Section 4(f) of the Department of Transportation Act, the FRA Procedures for Considering Environmental Impacts, and the National Historic Preservation Act.
- State highways designated as scenic in the California Streets and Highways Code.

The Authority, as the lead state agency proposing to construct and operate the HSR system, is required to comply with all federal and state laws and regulations and to secure all applicable federal and state permits prior to initiating construction on the selected alternative. Similarly, FRA, as federal lead agency, is required to comply with all federal laws and regulations. Therefore, there would be no inconsistencies between the Central Valley Wye alternatives and these federal and state laws and regulations.

The Authority is a state agency and therefore is not required to comply with local land use and zoning regulations; however, it has endeavored to design and construct the HSR project so that it is compatible with land use and zoning regulations. For example, the Central Valley Wye alternatives would incorporate IAMFs to ensure design guidelines are established to create a minimum aesthetic quality for a long-lasting infrastructure and minimize impacts on aesthetic and visual resources. A total of seven plans and 29 policies and elements were reviewed. The Central Valley Wye alternatives are consistent with nine policies and inconsistent with five policies. Further details and reconciliations are discussed in Appendix 3.16-A. The Central Valley Wye alternatives would be inconsistent with certain provisions of the following regional and local policies and plans:

- **City of Chowchilla 2040 General Plan** (City of Chowchilla 2011)—Circulation Element, Policy LU 6.3, and Policy OS 7.2. Implementation of any of the four Central Valley Wye alternatives would affect Robertson Boulevard (SR 233), a roadway designated as scenic and as a gateway by the City of Chowchilla's 2040 General Plan Update. The Central Valley Wye alternatives include measures to soften the appearance of infrastructure that would reduce visual impacts on Robertson Boulevard, but would be inconsistent with policies LU 6.3 and OS 7.2 because they would degrade the aesthetic and visual resources of Robertson Boulevard by altering the historic tree row.
- **Madera County General Plan** (Madera County 1995)—Policy 1.I.3. Implementation of any of the four Central Valley Wye alternatives would affect Robertson Boulevard (SR 233), a roadway designated as scenic by the Madera County General Plan Update. The Central Valley Wye alternatives include measures to soften the appearance of infrastructure viewed from Robertson Boulevard (SR 233), but would be inconsistent with Policy 1.I.3 because they would degrade the aesthetic and visual resources of Robertson Boulevard by altering the historic tree row.
- **2030 Merced County General Plan** (Merced County 2013)—Policy NR-4.1. All four Central Valley Wye alternatives would cross through agricultural and open space lands. Blocking some of the existing views to and from these lands with HSR infrastructure would be unavoidable and inconsistent with Policy NR-4.1.

Further details and reconciliations are discussed in Appendix 3.16-A. As a state agency, the Authority is not required to obtain local grading permits for earthmoving activities, and the Authority does not propose to seek local permits voluntarily. Therefore, the inconsistency would not be reconciled. Although the Central Valley Wye alternatives would be inconsistent with these specific provisions, they would be consistent with the natural resources, open space, fire safety, health, and housing objectives of these ordinances and plan policies. For example, the Central Valley Wye alternatives would include IAMFs that would ensure design guidelines are established to create a minimum aesthetic quality for a long-lasting infrastructure, apply context-sensitive solutions, and provide a design review process, all of which would minimize impacts on aesthetic and visual resources.

3.16.4 Methods for Evaluating Impacts

The evaluation of impacts on aesthetic and visual quality is a requirement of both NEPA and CEQA. The following sections summarize the RSA and the methods used to analyze impacts on aesthetic and visual resources. The analysis considers the potential aesthetic and visual impacts from sound walls (Section 3.4); adjacent development (Section 3.13); parks and recreation areas (Section 3.15); and historic buildings and sites (Section 3.17).

3.16.4.1 Definition of Resource Study Area

The RSA for impacts on aesthetic and visual quality is the Central Valley Wye alternatives viewshed (i.e., the area that potentially could have views of Central Valley Wye alternatives, and the area potentially viewed from the Central Valley Wye alternatives). The Central Valley Wye alternatives are on mostly flat terrain predominantly comprising agricultural and rural residential areas. Viewing distances toward the corridor vary throughout the RSA. In areas of open space, grazing lands, waterways, and agricultural areas planted with low-lying crops, the corridor is visible over wide areas because of the general scarcity of buildings and tall vegetation that could block views. In the largely agricultural landscape, crop changes can limit views, especially when landowners replace low-lying field crops with orchards, as has been observed while the Central Valley Wye alternatives have been under study. Seasonal variation in vegetation would also alter the viewshed when tall-growing field crops are harvested, or trees lose their leaves. For the at-grade portions of the alternative alignments with no buildings, landscape, or vegetation that limit a view, the potential visibility of the Central Valley Wye alternatives would be limited because the features would have a low level of prominence (e.g., railbed, contact poles and wires, trains). Beyond foreground viewing distances of 0.25 mile, or even less, the at-grade portions of the Central Valley Wye alternatives would have a limited visual presence. In segments where the alignment would be elevated on berms greater than 10 feet or on aerial structures, the potential visibility of features would increase correspondingly. Accounting for the anticipated scale of the features in different segments of the aesthetics and visual RSA, the zone of potential substantial impact is not expected to extend beyond a foreground distance of 0.5 mile from the Central Valley Wye alternatives or features. For analysis, the RSA has been divided into landscape units that capture areas of similar visual resources and viewer groups. Landscape units are described in detail in Section 3.16.5, Affected Environment.

3.16.4.2 Impact Avoidance and Minimization Features

As noted in Section 2.2.3.7, Impact Avoidance and Minimization Features, the Central Valley Wye alternatives would incorporate standardized IAMFs to avoid and minimize impacts. The Authority would incorporate IAMFs during project design and construction and, as such, the analysis of impacts of the Central Valley Wye alternatives in this section factors in all applicable IAMFs. Appendix 2-B, California High-Speed Rail: Impact Avoidance and Minimization Features, provides a detailed description of IAMFs that are included as part of the Central Valley Wye alternatives' design. IAMFs applicable to aesthetic and visual resources include:

- AVR-IAMF#1, Design Standards
- AVR-IAMF#2, Context-Sensitive Solutions
- AVR-IAMF#3, Design Review Process

3.16.4.3 Methods for NEPA and CEQA Impact Analysis

This section describes the sources and methods the Authority and FRA used to analyze potential impacts from implementing the Central Valley Wye alternatives on aesthetic and visual resources. These methods apply to both NEPA and CEQA unless otherwise indicated. Refer to Section 3.1.3.4, Methods for Evaluating Impacts, for a description of the general framework for evaluating impacts under NEPA and CEQA. As described in Section 3.16.1, Introduction, and in the following discussions, the Authority and FRA have applied the same methods and many of the same data sources from the Merced to Fresno Final EIR/EIS to this Draft Supplemental EIR/EIS. Refer to the *Merced to Fresno Section: Central Valley Wye Aesthetics and Visual Quality*

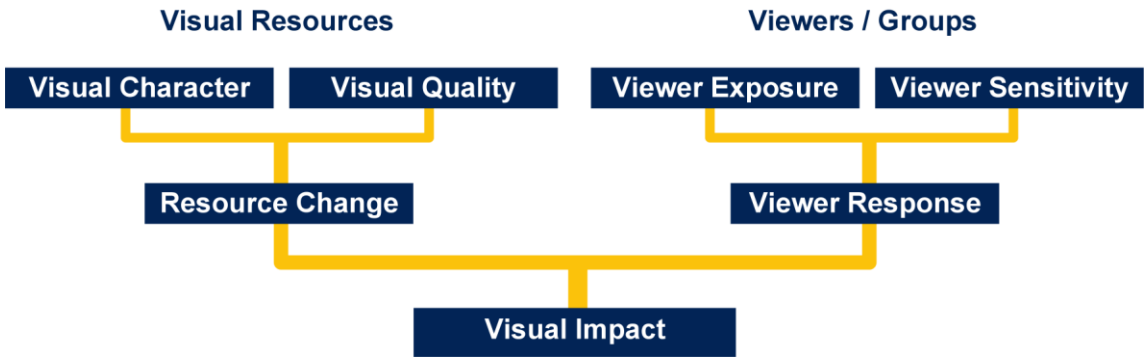
Technical Report for more information regarding the methods and data sources used in this analysis (Authority and FRA 2016).

Field Study

An analyst visited the RSA on several occasions, during different seasons over 5 years, to tour and photograph the aesthetic and visual quality. The field study of existing visual resources included landforms, vegetation, land uses, buildings, transportation facilities, overhead utility structures and lighting, open space, viewpoints and views to visual resources, water bodies, historic structures, developed areas, and apparent upkeep and maintenance of property. The analyst also reviewed engineering drawings of the Central Valley Wye alternatives' infrastructure components and aerial images of the RSA.

Assessment

The impact assessment incorporates the FHWA *Visual Impact Assessment for Highway Projects* (FHWA 1988), particularly as applied under guidelines of the Caltrans *California Scenic Highway Program*, Chapter 27, Visual and Aesthetics Review (Caltrans 2009). In Section 3.16.5.1, Existing Visual Resources, the visual character and visual quality of the RSA and the types of viewers and their exposure and sensitivity are described. In Section 3.16.6, Environmental Consequences, the visual impact is assessed, in accordance with the FHWA *Visual Impact Assessment for Highway Projects*, in terms of the method's two primary measures: viewer response and resource change. As presented in FHWA's *Visual Impact Assessment for Highway Projects*, Figure 3.16-1 shows the conceptual model for this method.



Source: Adapted from FHWA, 1988

Figure 3.16-1 1988 Federal Highway Administration Visual Assessment Model

The FHWA 1988 *Visual Impact Assessment for Highway Projects* (FHWA 1988) includes the following components:

- Define the RSA (viewshed).
- Identify and describe visual resources within the RSA (visual character).
- Identify landscape units (areas with similar visual characteristics).
- Identify KVPs within landscape units for visual assessment.
- Assess the vividness, intactness, and unity of the existing visual character (visual quality).
- Determine who has views of the project (viewer groups), identify their exposure and sensitivity to views.
- Depict the visual appearance with the project.
- Analyze changes in visual resources/quality and viewer responses.
- Assess the project's direct and indirect visual impacts.

The following discussion describes each component of this assessment method performed by the analyst. The first component, defining the RSA, is addressed in Section 3.16.4.1, Definition of Resource Study Area.

Visual character is an impartial description of the defining features, landscape pattern and distinctive qualities of the landscape and is defined by the relationships between the existing visible natural and built landscape features and the overall pattern (in terms of dominance, scale, diversity, and continuity). Visual character-defining resources and features include landforms, vegetation, land uses, buildings, transportation facilities, overhead utility structures and lighting, open space, viewpoints and views to visual resources, water bodies, historic structures, and skylines. Examples of types of visual character found and photographed by the analyst during field study trips along the Central Valley Wye alternatives include farms, grazing land, irrigated row crop agriculture, orchards, industrial buildings, single-family residential homes, undeveloped vacant lots, and parks.

With an understanding of the visual character in the RSA, the analyst defined five landscape units to capture visual environments of similar character (see Table 3.16-2). KVPs were established in locations where the visual character is representative of the landscape unit and experienced by viewer groups in the RSA.

Visual quality represents a qualitative assessment of the composition of the landscape character-defining features. Visual quality is evaluated in terms of three factors (vividness, intactness, and unity), which are defined as follows:

- **Vividness** is the degree of memorability or distinctiveness of landscape components as they combine in distinctive visual patterns.
- **Intactness** is the visual integrity of the natural and human-built landscape and its freedom from encroaching elements. It can be present in well-kept urban and rural landscapes, as well as in natural settings. High intactness means that the landscape is free of unattractive features and out-of-place features and elements do not break up the landscape. Low intactness means that visual elements in a view are unattractive or detract from the view's quality.
- **Unity** is the visual coherence and compositional harmony of the landscape considered as a whole. High unity frequently attests to the careful design of individual components and their relationship in the built landscape or an undisturbed natural landscape (FHWA 1988).

In this Draft Supplemental EIR/EIS, visual quality is rated on a five-point scale of low, moderately low, moderate, moderately high, and high, and the overall rating is derived from the average rating of the three visual quality factors (i.e., vividness, intactness, and unity) taken in combination.

Viewer groups within the RSA include roadway/highway/future HSR passengers (travelers), agricultural workers, park and trail users (recreationists), and residents. The FHWA method recognizes viewer activity and awareness, local values, and cultural significance as key factors in predicting viewer sensitivity. Sensitivity to visual change varies among viewer groups. Analysts reviewed updated laws and planning documents and participated in community outreach events to develop an understanding of viewer groups and viewer sensitivity.

Viewer response is the anticipated reaction from viewers based on their perception of the change. The response viewer groups may have to a project's change to the visual setting is based on two factors: (1) viewer sensitivity to visual change, and (2) viewer exposure to those visual changes.

Viewer response ratings reflect the professional judgment of the analyst based on the levels of viewer sensitivity and exposure for the viewer groups that prevail in a particular location. A five-point scale of low, moderately low, moderate, moderately high, and high is used to rate viewer response and its components, which are sensitivity and exposure. For example:

- Low viewer response may exist when there are few viewers who experience a defined view or when potential views of the project are screened or filtered by intervening terrain,

structures or landscaping (low viewer exposure). Low viewer response may also occur with viewers who are not particularly concerned about the quality of views because of their activity type (low viewer sensitivity), such as commuters on the freeway.

- Moderate viewer response may occur when there are many viewers who experience a defined view but where the views of a project are distant enough that the project does not dominate the view (moderate viewer exposure), or for viewers whose activity is not focused on visual quality and whose expectations are moderate, such as office workers or shoppers (moderate viewer sensitivity).
- High viewer response occurs where a project is highly prominent, open to view, and seen by relatively high numbers of viewers (high viewer exposure) and where viewer concern and expectations of visual quality are high, as in a rural park where scenery is a primary focus, or in a residential neighborhood (high viewer sensitivity).

The analyst produced photo-simulations of each KVP, as it would appear for each Central Valley Wye alternative using the engineering drawings. The photo-simulations were then rated for their visual quality using the same methodology as was applied to the existing images. The change in visual quality was then combined with the viewer response ratings to determine the direct and indirect visual impacts.

Note that the electrical interconnection and network upgrade (EINU) components were assessed in the same manner as the rail corridor for each KVP. The analyst considered potentially affected views and relied on the descriptions of the landscape units and viewer groups that are consistent with those associated with the EINU to assess the intensity of potential impacts or changes from baseline conditions to determine potential significance.

3.16.4.4 Determining Significance under CEQA

CEQA requires that an EIR identify the significant environmental impacts of a project (CEQA Guidelines § 15126). One of the primary differences between NEPA and CEQA is that CEQA requires a significance determination for each impact using a threshold-based analysis (see Section 3.1.3.4, Methods for Evaluating Impacts, for further information). By contrast, under NEPA, significance is used to determine whether an EIS will be required; NEPA requires that an EIS is prepared when the proposed federal action (project) as a whole has the potential to "significantly affect the quality of the human environment." Accordingly, Section 3.16.9, CEQA Significance Conclusions, summarizes the significance of the environmental impacts on aesthetics and visual resources for each Central Valley Wye alternative. The Authority uses the following thresholds to determine if a significant impact on aesthetic and visual resources would occur as a result of the Central Valley Wye alternatives. A significant impact is one that would:

- Have a substantial adverse effect on a scenic vista.
- Substantially damage scenic resources, including trees, rock outcroppings, and historic buildings within a designated state scenic highway corridor.
- Substantially degrade the existing visual character or quality of the site and its surroundings.
- Create a new source of substantial light or glare that would adversely affect day or nighttime area views.

A significant impact would also occur if the project were to (1) introduce elements that would conflict with the visual character of an historic district, federally or state-listed or eligible historic property or (2) substantially affect a feature or area identified as an important visual resource in a local plan, policy, or regulation. In applying these criteria, the term "substantial" is defined as a decrease of two or more levels of visual quality in a landscape viewed by viewers with moderate to high viewer response, or as a decrease of one level in a landscape viewed by viewers with high viewer response.

3.16.5 Affected Environment

This section describes the affected environment in the aesthetic and visual resources RSA. This section also discusses changes to aesthetic and visual resources in the San Joaquin Valley since publication of the Merced to Fresno Final EIR/EIS. This information provides the context for the environmental analysis and evaluation of impacts.

3.16.5.1 Existing Visual Resources

For this discussion, visual resources include locally designated scenic routes, views toward or within natural areas, typical views from residential areas, and long views across the landscape that are evocative of the natural environment of the greater San Joaquin Valley. These visual resources have been identified in planning and policy documents, in cultural resource reports, or in evaluations of scenic quality and apparent public popularity during fieldwork conducted related to aesthetics and visual resources. As described in Section 3.16.4.3, Methods for NEPA and CEQA Impact Analysis, the RSA is divided into landscape units, and KVPs have been identified to capture specific examples of visual resources for analysis. In general, the following visual resources are common to each of the Central Valley Wye alternatives:

- **Rural San Joaquin Valley**—Panoramic views toward the Sierra Nevada range are among the aesthetic and visual resources present throughout the Central Valley. Other natural aesthetic amenities in the area include rivers and vast areas comprising a mix of orchards and open field crops. These characteristics predominate in the San Joaquin River and Rural Agricultural Landscape Units but are also found throughout the RSA. KVPs 1, 2, 3, 4, 7, 8, and 14 provide representative views of this landscape.
- **San Joaquin River, Chowchilla River, Ash Slough, and Berenda Slough**—The Central Valley Wye alternatives would cross rivers, sloughs, and varied streams. The riparian forest canopy of these waterways is a highly distinctive natural element of the San Joaquin Valley landscape. Waterway crossings occur in the San Joaquin River, Freeway and Expressway, and Rural Agricultural landscape units. KVPs 3 and 8 feature waterway crossings.
- **Robertson Boulevard (SR 233)**—Robertson Boulevard is the main street of Chowchilla. Palm trees, planted in the early 20th century, extend along the boulevard from the east edge of downtown to well south of Avenue 21. The palm-lined roadway serves as a gateway to the city and is one of the major symbols of Chowchilla. Chowchilla has designated West Robertson Boulevard from SR 99 to SR 152 as a scenic corridor. The State Historical Resources Commission designated West Robertson Boulevard as a Point of Historical Reference (City of Chowchilla 2011). The corridor is further discussed in Section 3.16.4.1 under Robertson Boulevard Landscape Unit and Key Viewpoints where KVP 13: SR 233 / Robertson Boulevard, presents a view along Robertson Boulevard toward the SR 152 interchange.

3.16.5.2 Viewer Groups and Existing Viewer Sensitivity

In the aesthetic and visual quality RSA, the majority of viewers are travelers on either SR 99 or SR 152. While their numbers are high, their sensitivity is generally low to moderate because most travelers are visually engaged in operating their vehicles at high speeds along highways, concentrating on traffic and road conditions. Passengers in vehicles may be observing the passing scenery, or engaged in activities, like reading, which limit their sensitivity to the surrounding environment. Where enhanced scenery captures travelers' attention, their sensitivity increases to moderate or higher.

Away from the major highways, the viewers are primarily agricultural workers, who include people engaged in all aspects of agricultural production. As a group, they are found everywhere across the aesthetic and visual quality RSA, but because of the seasonal cycles of agriculture, their activities take place in different locations at different times. Workers who tend to canals and irrigation systems move throughout the aesthetic and visual quality RSA. Others work transporting materials, harvests, or crews throughout the aesthetic and visual quality RSA. Workers tending to orchards or fields shift their locations with the seasons and cycles of the

crops. Likewise, managers and inspectors can be found moving across the aesthetic and visual quality RSA. Agricultural workers generally have a moderate visual sensitivity.

The viewers with the greatest sensitivity are residents observing changes in the visual environment around their homes. These viewers have the highest viewer response to changes in the visual and aesthetic environment.

Where views of resources listed in, or determined eligible for, the National Register of Historic Places (NRHP) exist in a landscape unit, the resource is noted and descriptions of the viewer groups and their response are provided. It is also noted if no existing or eligible historic properties exist in a landscape unit.

3.16.5.3 Landscape Units and Key Viewpoints

The RSA is divided into five landscape units, each containing a specific visual character. The landscape unit discussions are organized geographically, beginning in the west at Carlucci Road and running east through the Central Valley Wye alternatives and on toward Madera Acres, then from near the SR 99/Ranch Road interchange south to the Central Valley Wye alternatives.

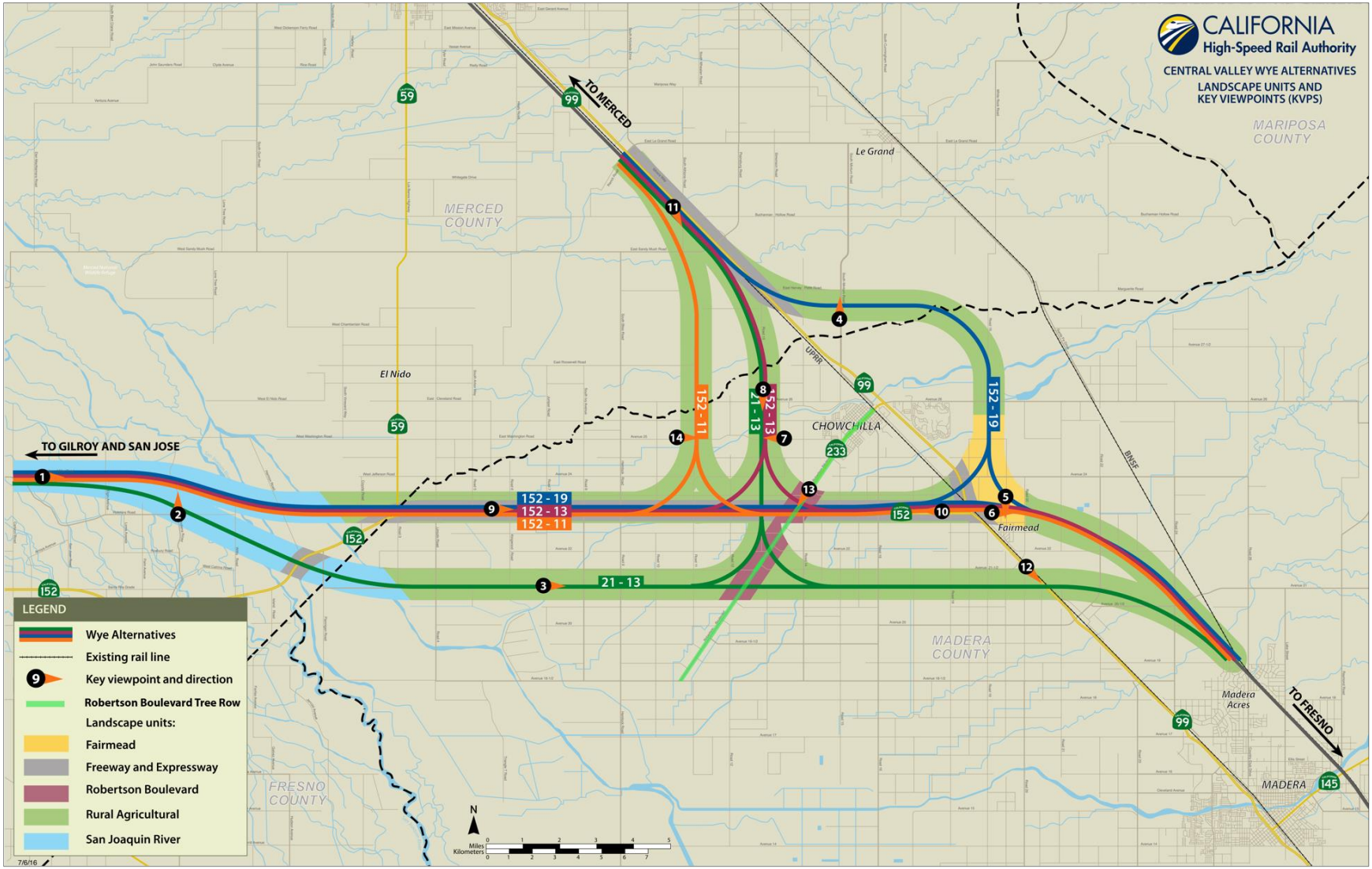
KVPs capture specific views that provide examples of visual character. None of the Central Valley Wye alternatives would pass through all KVPs, and KVPs are discussed by landscape unit, so KVPs are not presented in numerical order. Table 3.16-2 provides an overview of the landscape units and KVPs that make up each Central Valley Wye alternative. An X indicates that a landscape unit or KVP is encountered by the corresponding Central Valley Wye alternative. Figure 3.16-2 presents a geographic overview of each landscape unit and KVP.

Table 3.16-2 Landscape Units and Key Viewpoints for each Central Valley Wye Alternative

Landscape Units and Key Viewpoints	Alternative			
	SR 152 (North) to Road 13 Wye	SR 152 (North) to Road 19 Wye	Avenue 21 to Road 13 Wye	SR 152 (North) to Road 11 Wye
San Joaquin River Landscape Unit	X	X	X	X
KVP 1: Henry Miller Road	X	X	X	X
KVP 2: Indiana Road			X	
Rural Agricultural Landscape Unit	X	X	X	X
KVP 3: Avenue 21 near Road 7			X	
KVP 4: Minturn Road		X		
KVP 7: Avenue 25 near Road 13	X		X	
KVP 8: Road 13 near Ash Slough	X		X	
KVP 14: Avenue 25 near Road 11				X
Freeway and Expressway Landscape Unit	X	X	X	X
KVP 9: SR 152 near Kingwood Road/Road 6	X	X		X

Landscape Units and Key Viewpoints	Alternative			
	SR 152 (North) to Road 13 Wye	SR 152 (North) to Road 19 Wye	Avenue 21 to Road 13 Wye	SR 152 (North) to Road 11 Wye
KVP 10: SR 152 near Road 17-1/2	X	X		X
KVP 11: SR 99 south of Ranch Road	X	X	X	
KVP 12: SR 99 near Avenue 21			X	X
Robertson Boulevard Landscape Unit	X	X	X	X
KVP 13: SR 233 / Robertson Boulevard	X	X		X
Fairmead Landscape Unit	X	X		X
KVP 5: Road 19-1/2 near Avenue 24	X	X		X
KVP 6: Avenue 23 Near Road 19-1/2	X	X		X

Source: Authority and FRA, 2016
X indicates alternative passes through noted landscape unit or KVP.
KVP = key viewpoint
SR = State Route



Source: Architecture 21, 2016; ESRI, 2013; CAL FIRE, 2004; ESRI/National Geographic, 2015

DRAFT – DECEMBER 13, 2017

Figure 3.16-2 Central Valley Wye Alternatives – Landscape Units and Key Viewpoints

The landscape units identified in the Merced to Fresno Final EIR/EIS have been adjusted and expanded to correspond to the Central Valley Wye alternatives for this analysis. New nomenclature has been adopted for each landscape unit. Table 3.16-3 lists the Central Valley Wye alternatives landscape unit and then the former corresponding landscape unit(s). Figure 3.16-3[4] shows the landscape units defined for analysis in the Merced to Fresno Final EIR/EIS.

Table 3.16-3 Landscape Unit Names – Central Valley Wye Alternatives vs. 2012 Merced to Fresno Final EIR/EIS

Central Valley Wye Alternatives	2012 Merced to Fresno Final EIR/EIS
San Joaquin River	N/A – Outside RSA
Rural Agricultural	West of SR 99, East of SR 99
Freeway and Expressway	Merced – Chowchilla, Chowchilla, Chowchilla – Madera, West of SR 99, Merced – Le Grand
Robertson Boulevard	West of SR 99
Fairmead	East of SR 99

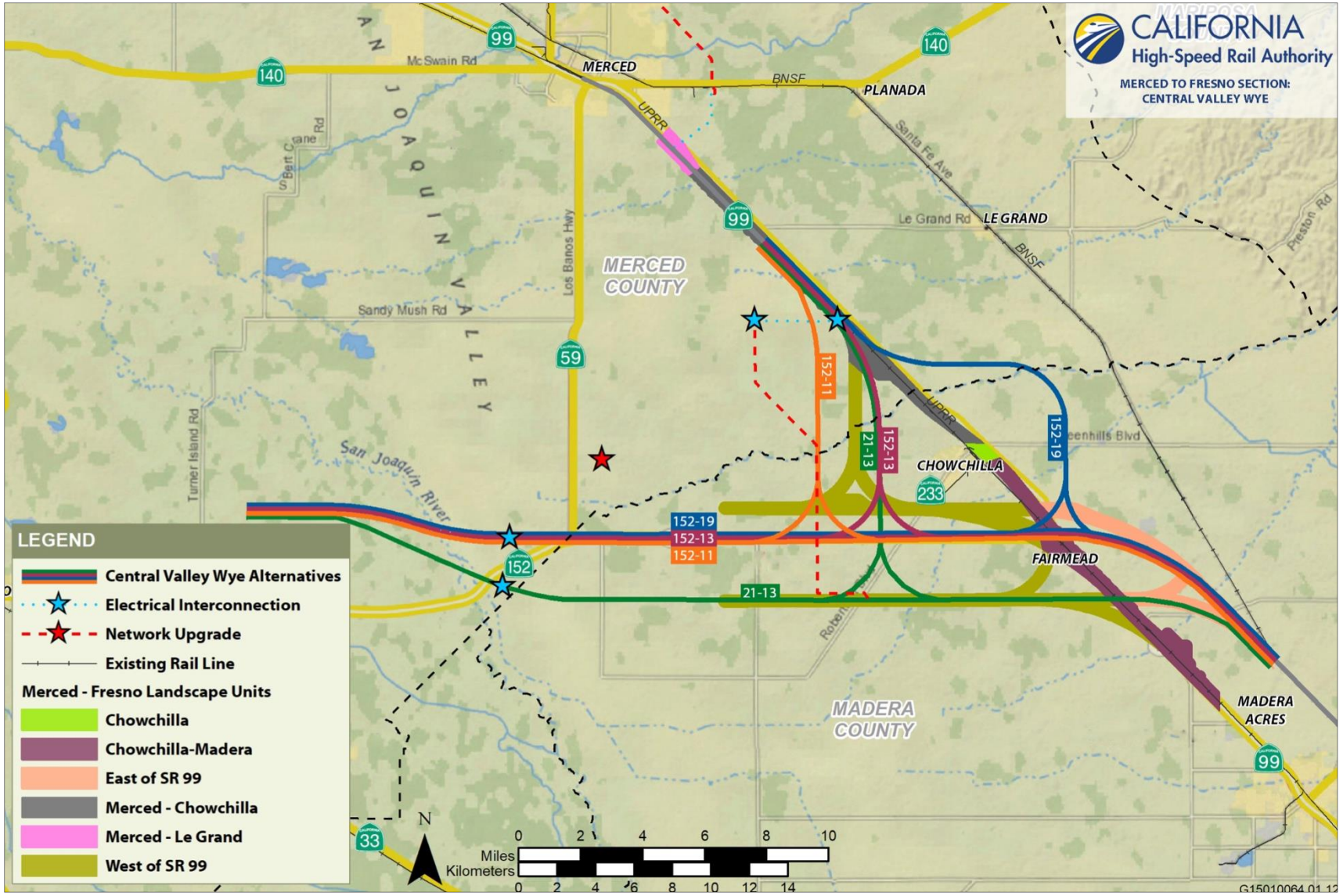
Source: Architecture 21, 2016
RSA = Resource Study Area
SR = State Route

Four EINU components fall within Central Valley Wye landscape units as follows:

- **Rural Agricultural Landscape Unit**: The Site 7 – Le Grand Junction/Sandy Mush Road, Wilson-Dairyland (idle) 115 kV Power Line is adjacent to the west of a portion of the SR 152 (North) to Road 11 Wye Alternative, and also cross the SR 152 (North) to Road 13 Wye, SR 152 (North) to Road 19 Wye, and SR 152 (North) to Road 11 Wye alternatives. In addition, the southern portion is adjacent to the Avenue 21 to Road 13 Wye Alternative. Site 7 – Le Grand Junction/Sandy Mush Road, Dutchman 115 kV Tie-Line located west of SR 99 would cross the SR 152 (North) to Road 11 Wye Alternative in an east-west direction. These components fall within the Rural Agricultural Landscape Unit for the Central Valley Wye alternatives.
- **Freeway and Expressway Landscape Unit:** Site 7—Wilson and the southernmost 2.3 miles of the existing Site 7—Le Grand Junction/Sandy Mush Road, Warnerville–Wilson 230 kV Transmission Line are located in or adjacent to the City of Merced and SR 99. As depicted in Table 3.16-3, these areas correspond with the Freeway and Expressway Landscape Unit described for the Central Valley Wye alternatives.
- **Robertson Boulevard Landscape Unit:** The southernmost portion of the Site 7 – Le Grand Junction/Sandy Mush Road, Wilson-Dairyland (idle) 115 kV Power Line is adjacent to the Avenue 21 to Road 13 Wye Alternative in an east-west direction, and falls within the Robertson Tree Boulevard Landscape Unit for the Central Valley Wye alternatives.

All remaining EINU components outside of the established Central Valley Wye landscape units have either previously been evaluated within the Merced to Fresno Final EIR/EIS or are located in rural agricultural areas that are similar to the descriptions of the landscape, key views, and viewer groups for the Central Valley Wye alternatives Rural Agricultural Landscape Units.

[4]The electrical interconnection facilities shown on this figure, with the exception of the Site 7 – Le Grand Junction/Sandy Mush Road, Dutchman Switching Station and 115 kV Tie-Line, were previously analyzed in the Merced to Fresno Final EIR/EIS and are shown only for informational purposes.



Source: Architecture 21, 2016; ESRI, 2013; CAL FIRE, 2004; ESRI/National Geographic, 2015

DRAFT – JUNE 28, 2017

Figure 3.16-3 2012 Merced to Fresno Landscape Units

SR 152 (North) to Road 13 Wye Alternative

San Joaquin River Landscape Unit, Viewer Groups and Key Viewpoints

The SR 152 (North) to Road 13 Wye Alternative begins west of the San Joaquin River, near the intersection of Henry Miller Road and Carlucci Road. The San Joaquin River Landscape Unit is very sparsely developed, except for agricultural uses. The few homes and agricultural buildings stand out more from the landscape, as blocks, because of the sparse development pattern. An occasional silo, large barn, or hedgerow is visible for a great distance across the plain. Crops tend to be low to the ground, especially west of the San Joaquin River. Orchards, where present, enclose the landscape, but reinforce the Cartesian grid with their regular rows.

The lack of variation in elevation or views to distant landmarks leads to a low vividness. Intactness is high because little beyond agriculture occurs in the area. Power poles, barns, or other built features, where present, read as part of the agricultural view. Unity is moderate, with slight variations caused by seasonal changes in crop cover and maintenance of fields. For example, a freshly plowed field with orderly furrows is neater than the same field after cotton harvesting, with loose bolls lining the roads and fields left with browned stalks. Overall, visual quality is moderate. Because of the limited number of structures in the area, and even fewer residential buildings and after-hours human activity, nighttime lighting is very limited.

Land use patterns west of the San Joaquin River follow a more organic pattern rather than a grid. This differentiates the area from the vast majority of similar agricultural areas in the San Joaquin Valley. The San Joaquin River and other smaller waterways snake through the landscape, while the Eastside Bypass channel cuts in a straight line at an angle to the Cartesian grid. Nearly all land use is agricultural. The potential exists for increasing recreational uses along the San Joaquin River as its restoration proceeds; currently, however, no recreational facilities are planned in this landscape unit.

There are no historic properties in this landscape unit. Refer to Section 3.17 and Chapter 4, Section 4(f) and Section 6(f) Evaluations, for further details.

The primary viewer group is agricultural workers, including those working in the fields and orchards, tending canals and irrigation infrastructure, or driving through the area transporting equipment or products, traveling to jobsites, or crop-dusting. The agricultural workplace is out in the landscape, but workers focus on the tasks of, driving, selecting crops, assembling irrigation equipment, or other work. Therefore, their sensitivity to the surrounding landscape is moderate. Their exposure is low, as most workers do not remain in one location consistently and their activities are spread across the landscape unit. Overall, this viewer group would have a moderately low viewer response to changes in visual character.

At KVP 1, Henry Miller Road stretches to the horizon (Figure 3.16-4). Cotton fields line the road. Little distinguishes this view from anywhere in the area; therefore, vividness is moderately low. Intactness is high because nothing other than the few trees in the distance encroaches on this agricultural view. Unity is high because the fields are well tended and the roadway runs straight with uniform pavement. Overall, visual quality is moderately high. Lighting would be confined to traffic on the road, which would be minimal. Most viewers at KVP 1 are agricultural workers, either working in the fields or driving to or from work. These viewers have a moderately low viewer response.

Source: Architecture 21 (original photography), 2016

Figure 3.16-4 KVP 1: Henry Miller Road between Carlucci and Elgin Roads (eastward view)

Rural Agricultural Landscape Unit, Viewer Groups, and Key Viewpoints

The Rural Agricultural Landscape Unit is primarily agricultural with scattered individual residences and agricultural buildings. While agricultural uses vary, from low-lying row crops to view-confining orchards, the mix of agricultural development is characterized as a single landscape unit. It comprises agricultural fields, orchards, pastures, and related rural land uses, with considerable continuity of visual character. Figure 3.16-2 shows the occurrences and limits of this landscape unit.

The Rural Agricultural Landscape Unit makes up the great majority of the RSA. This landscape unit is characterized by uninterrupted views of the nearly level San Joaquin Valley, often extending to background distances and a diversity of agriculture-related activities and production facilities. The most apparent expression of the agricultural landscape is a coarse pattern of vineyards, orchards, cultivated fields, and grazing lands, separated by roads, highways, power lines, irrigation canals, or ditches organized in a highly regular, north-south/east-west grid pattern. Within this expansive, open setting of fields are areas containing agri-industrial uses such as feed lots, storage silos, large processing and warehouse facilities, equipment storage areas, and associated infrastructure of wells, pumping facilities, fuel storage, fencing, power transmission lines, towers, and poles. Lighting is absent in the fields and orchards, occurring only at homes and farm buildings, and from traveling vehicles.

Differences among field, orchard, vineyard, and crop types offer some seasonal interest and visual variety. However, the level topography, vast scale, and repetitiousness of agricultural uses tend to contribute to a lack of variety, resulting in moderately low vividness. Views of vivid features, such as mountains or natural riparian corridors, are few and of limited prominence. In areas where orchards are the predominant use, views are limited by the dense, geometric plantings of the trees, blocking long views. Visual unity and intactness are moderately high, presenting a continuity of pattern and character, topography, and land use; but views are also regularly interrupted by the vertical and visually utilitarian features of modern industrial agricultural production. The contrasting form and character of these utilitarian features usually detract from the prevailing landscape unity. Overall, visual quality of the landscape unit is moderate.

The Chowchilla Canal is a historic property[5] in the Rural Agricultural Landscape Unit. Built in 1872, the canal is in western Madera County and carries water northward from the San Joaquin

[5] This property is determined to be eligible and a historic property under Section 106 of the National Historic Preservation Act of 1966 and Section 4(f) of the Department of Transportation Act of 1966. For more information, see Section 3.17 and Chapter 4 of this Draft Supplemental EIR/EIS.

River at Mendota to its terminus near the Chowchilla River. Originally constructed as an earthen canal, large segments of the Chowchilla Canal were later lined with concrete. Nevertheless, it largely maintains its historic alignment and continues to convey its significance as one of the first large-scale canals constructed in the region. The canal is crossed many times by roadways, including Avenue 21 near Road 5-1/2.

The primary viewer group is agricultural workers, either working in the fields and orchards or driving through the area. Focused on work but familiar with the landscape, their sensitivity is moderate. Their exposure is low, as most workers do not remain in one location consistently and their activities are spread across the landscape unit. Overall, this viewer group has a moderately low viewer response to changes in visual character.

KVP 7: Avenue 25 near Road 13 shows a typical view, west of Chowchilla, along Avenue 25 (Figure 3.16-5). The majority of the Rural Agricultural Landscape Unit's components are present. To the right is a mature orchard. Avenue 25 bisects the view, with orderly utility poles lining each side of the roadway, progressing towards the horizon. Low crops grow to the left side of the road. In the distance, a home and large barns are visible. Despite all these components, the view's vividness is low because nothing serves as a landmark to distinguish this view. Intactness is high, with little interrupting the scene. With neat fields and orchards lining a roadway in good condition and power poles that are orderly, evenly spaced and of equal height, unity is high, resulting in moderately high visual quality. The primary viewers are travelers and agricultural workers driving through the area who have a moderately low viewer sensitivity. Viewer exposure would be low because of the small number of vehicles observed using the road during fieldwork. This results in a moderately low viewer response.

Source: Architecture 21, 2016

Figure 3.16-5 KVP 7: Avenue 25 near Road 13 (westward view)

KVP 8: Road 13 near Ash Slough looks south along Road 13 as it approaches Ash Slough (Figure 3.16-6). Like many other locations in the rural agricultural landscape, the roadway and utility poles converge to a single point on the horizon. The paired row of cypresses and the rise in the roadway to cross Ash Slough provide landmarks discernible to regular travelers on the road, but overall the vividness is moderately low. Intactness is moderately high, with a single tree to the left of the roadway intruding on the otherwise orderly geometric forms of the vanishing roadway and utility poles, low-block forms of the orchards, and the regular march of the cypresses out of the view to the left. These well-tended forms result in a high unity. Overall, visual quality is moderately high. The primary viewers are travelers and agricultural workers who are anticipated to have a moderately low viewer response to changes in visual character.

Source: Architecture 21, 2016

Figure 3.16-6 KVP 8: Road 13 near Ash Slough (southward view)

Freeway and Expressway Landscape Unit, Viewer Groups, and Key Viewpoints

While the primary highways in the RSA, SR 99 and SR 152, pass through the San Joaquin River and Rural Agricultural Landscape Units, the number of travelers on the highways and resulting Central Valley Wye alternatives viewers warrant a separate landscape unit. Average daily traffic (i.e., the number of vehicles passing a specific location in both directions) on SR 152 is 16,000 west of SR 233, with one or more persons in each vehicle, which is comparable to Chowchilla's population of 18,720 people (U.S. Census Bureau 2010). SR 99 approaches an average daily traffic of 50,000 vehicles south of SR 152 (Authority and FRA 2016).

Neither SR 99 nor SR 152 is designated as a scenic highway. Vividness in the Freeway and Expressway Landscape Unit tends to be moderately low because of the absence of significant geographical features and the straight alignments of the highways. Places are marked by signs, interchanges, and few other visual cues. Orchards that are adjacent to the highway limit long views along the highway, emphasizing the lineal view down the highway. Lower crops open views from the highway, but the level topography, vast scale, and repetitiousness of agricultural uses tend to contribute to a lack of variety. Deviations to the agricultural landscape occur at the riparian crossings, which are usually identified by the trees lining the banks. Visual unity and intactness are moderately high, presenting a continuity of pattern and character, topography, and land use, resulting in moderately high landscape unity. The landscape unit's visual quality is moderately high. The primary source of light is the traffic on the roadway.

The Chowchilla Canal is an eligible historic property in the Freeway and Expressway Landscape Unit. Built in 1872, the canal is in western Madera County and carries water northward from the San Joaquin River at Mendota to its terminus near the Chowchilla River. Originally constructed as an earthen canal, large segments of the Chowchilla Canal were later lined with concrete. Nevertheless, it largely maintains its historic alignment and continues to convey its significance as one of the first large-scale canals constructed in the region. The canal is crossed many times by roadways, including SR 152 west of Road 5 the SR 152 alternatives and west of Kingwood Road for the Avenue 21 alternative.

Viewers in the Freeway and Expressway Landscape Unit are travelers on highways, either drivers or passengers. Their visual sensitivity is low to moderately low; drivers are focused on the highway, with few distractions from the passing agricultural views. Exposure to views is also low, as traffic generally moves fast through the area. Overall, viewers in the traveler viewer group are anticipated to have a low viewer response to changes in visual character.

KVP 9: SR 152 near Kingwood Road/Road 6 shows a typical view along SR 152 (Figure 3.16-7). SR 152 is the primary west-east highway across the middle of San Joaquin Valley. The roadway is a four-lane expressway with constant traffic. The landscape along SR 152 is similar to that along the many rural roads that traverse the RSA, with the addition of some roadway commercial uses at intersections. The heavier traffic and longer-distance travelers on SR 152 are less sensitive to the aesthetic and visual environment than the primarily local travelers on other roads in the area. This is because drivers traveling for long stretches at highway speeds are focused on the roadway and many drivers are passing through the area, such as commercial drivers or commuters. Vividness is low at KVP 9 because in this area SR 152 runs for miles in a straight line; nothing visually distinguishes this location from any of the other intersections along the expressway. The view is highly intact. Adjoining agricultural crops outline the view. The highway view is long and clear to the vanishing point. Unity is moderately high, with a mixed color and texture of pavements causing some visual discordance. Overall, visual quality is moderately high and the viewer response of the travelers on the highway is low.

Source: Architecture 21, 2016

Figure 3.16-7 KVP 9: SR 152 near Kingwood Road/Road 6 (eastward view)

KVP 10: SR 152 near Road 17-1/2 is the intersection of SR 152 and Road 17-1/2 (Figure 3.16-8), south of Chowchilla. Here, open fields present an expansive view to the north side of the highway with orchards limiting the view to the south. As with KVP 9, vividness is low because of a lack of landmark features. Intactness is moderately high, with only the power poles diverting around the intersection breaking the parallel lines of the view down the highway. Unity is high and is only compromised by the two pavement types. The overall visual quality is moderately high, but the viewer response from travelers on the highway is low.

Source: Architecture 21, 2016

Figure 3.16-8 KVP 10: SR 152 near Road 17-1/2 (westward view)

SR 99 is the primary north-south corridor in the eastern San Joaquin Valley. In views from SR 99, the Sierra Nevada range is often visible to the east when skies are clear. The existing Union Pacific Railroad (UPRR) tracks and SR 99 are part of an existing, wider transportation corridor through the San Joaquin Valley. UPRR is immediately adjacent to SR 99 for much of its length, except in urban areas, where the highway has been relocated over the past 60 years to bypass the centers of valley cities. Traffic is heavier on SR 99 than on SR 152, leading travelers on SR 99 to be more immersed in viewing traffic than surrounding landscapes.

KVP 11: SR 99 south of Ranch Road looks west from SR 99 south of Ranch Road (Figure 3.16-9). This viewpoint presents a similar view to KVP 6: Avenue 23 near Road 19-1/2 discussed in the Merced to Fresno Final EIR/EIS. Since the publication of the Merced to Fresno Final EIR/EIS, Caltrans has upgraded 5 miles of SR 99 from a four-lane expressway to a six-lane freeway from just north of Chowchilla to Buchanan Hollow Road, including a new interchange at Plainsburg Road. This upgrade relocated the freeway east of its previous alignment by up to approximately 0.25 mile. KVP 11 provides a view from the southbound shoulder of the new (2016) freeway alignment.

Source: Google Streetview, 2016b

Figure 3.16-9 KVP 11: SR 99 south of Ranch Road (southward view)

At KVP 11, viewers see the adjacent frontage road and UPRR before views of open agricultural fields. This view is typical of the landscape unit, and the presence of views toward these features results in a moderately low degree of vividness. Intactness is moderately high, with the road and railway in the mid-ground and the long views to the horizon in the background. Unity is moderately high, with the agriculture appearing neat and orderly. Overall, visual quality is moderate. There would be a relatively large number of viewers from this viewpoint, but viewer sensitivity and exposure would be low because views would be from vehicles traveling at highway speeds, resulting in an anticipated low viewer response to changes in visual character.

Robertson Boulevard Landscape Unit and Key Viewpoints

The Robertson Boulevard Landscape Unit encompasses Robertson Boulevard and its flanking historic landscape of ornamental palm trees. From SR 152 north, the road becomes SR 233 and serves as the primary western entrance to the city of Chowchilla. South of SR 152 Robertson Boulevard is a county road, lined with the same procession of palms. Residences are located along both sides of the roadway, with density increasing from south to north approaching the center of Chowchilla. The palm-lined roadway is highly vivid. The trees are mature and stretch mostly uninterrupted for the length of Robertson Boulevard, becoming sparse near its southern end, making overall intactness moderately high. The regular pattern of shorter palms interspersed with taller ones leads to a high degree of visual unity, resulting in an overall high visual quality for the landscape unit.

South of SR 152, Robertson Boulevard is a county road lined with the continued procession of palms, but the flanking land uses transition rapidly from residential north of the expressway to agricultural as it proceeds away from Chowchilla. The observed traffic volumes in the portion of the landscape unit south of SR 152 are much lower than north of SR 152. The density of buildings lining the road decreases, becoming more characteristic of the Rural Agricultural Landscape Unit. The palm-lined roadway remains highly vivid south of SR 152. The trees are mature and stretch mostly uninterrupted. Intactness is moderately high. The regular pattern of shorter palms interspersed with taller ones leads to a high degree of visual unity, resulting in an overall high visual quality for the landscape unit. Lighting in this landscape unit is limited to a few streetlights at the SR 152 interchange and sources emanating from the scattered homes and buildings.

One site eligible for listing in the NRHP appears in the Robertson Boulevard Landscape Unit—the Robertson Boulevard Tree Row. The Robertson Boulevard Tree Row was determined eligible for listing in the NRHP as part of the Merced to Fresno Section and is eligible for listing under Criterion A for its association with the initial establishment of Chowchilla (the trees were planted to beautify Chowchilla's main street and draw settlers into the community), and under Criterion C as an exceptional example of an early 20th century designed landscape along a roadway. The Robertson Boulevard Tree Row is significant at the local level, with a period of significance of 1912–1913.

Travelers along the road are the main viewer group. Because of the prominence of their view of the palm trees lining the straight roadway, they have a high visual sensitivity. Their exposure to the view is moderately high as they drive along the boulevard. Residents make up a secondary viewer group, more so north of SR 152 where homes are closer together in a linear neighborhood. As residents, they possess a moderately high viewer sensitivity. They do not experience the long view down the boulevard from their homes. Their views to the boulevard are either perpendicular or at an obtuse angle. Many homes have views to the boulevard obscured by mature landscaping, making their exposure moderate, resulting in an overall moderately high viewer response.

In KVP 13, the palm trees are clearly visible near the SR 152 interchange (Figure 3.16-10). The palm trees stop well short of the interchange, but do continue to line Robertson Boulevard south of the interchange. This gap in the tree row along Robertson Boulevard is approximately 1,700 feet in length and is the result of removal of palm trees to accommodate construction of the SR 152 interchange. The view is vivid, with the historic palm trees clearly identifying the roadway as Robertson Boulevard and the rise of the roadway pinpointing the location of the SR 152 overcrossing. Intactness is moderately high. The different species of trees and the streetlight at the interchange clash with the repeated form and spacing of the palm trees. Unity is high, with the palm trees in good health and the roadway running between neat orchards. These factors combine into a high visual quality at this KVP. This stretch of Robertson Boulevard serves as the gateway for the city of Chowchilla. Travelers experience the scenic roadway with a high visual sensitivity. Exposure is moderately high, as travelers pass the repeated procession of palms for a number of minutes as they drive on the boulevard. Therefore, viewer response is moderately high.

Source: Architecture 21, 2016

Figure 3.16-10 KVP 13: SR 233 / Robertson Boulevard near SR 152 (southward view)

Fairmead Landscape Unit, Viewer Groups, and Key Viewpoints

Lying to the east of SR 99, between Chowchilla and Madera Acres, the small community of Fairmead comprises a few hundred homes, a school, and a church. Two state correctional facilities are northeast of Fairmead. The lights of the correctional facilities provide a high level of illumination in their immediate vicinity. Figure 3.16-11 shows the typical density of the residential areas in Fairmead.


Source: Architecture 21, 2016

Figure 3.16-11 Typical Fairmead Residential Views

The residential areas are primarily small aggregations of homes lining the north-south/east-west road grid. Between homes, the remaining acreage is generally open, used for livestock or agricultural purposes, and is part of the pervasive valley agricultural image. Visual quality varies from one home site or settlement to another. The visual quality of some settlements may be rated high because of the presence of trees, architectural style, or site landscaping, which contribute to vividness through attractive tree canopies or distinctive architectural forms (weathered barns, water towers, period architecture), or generally high visual unity or intactness (for example, classic old farms with tightly organized, tall tree canopies that appear as highly unified vertical islands). Other sites or congregations of homes may rate low because of structure deterioration, presence of abandoned farm equipment, landform disturbances, or visual clutter and other expressions of low visual unity and intactness. The visual quality of this landscape is strongly influenced by the surrounding agricultural landscape, and is considered moderate overall.

No existing or eligible historic properties exist in the Fairmead Landscape Unit. Few light sources in this landscape unit exist, with the exception of fixtures mounted on area buildings.

Residents are considered to have high viewer sensitivity because their views are of extended duration, and residents have a high level of concern for the quality of their day-to-day living environment. Viewer exposure varies primarily by distance, though visual filtering by vegetation and structures would affect some viewers. Exposure to views from residences in the Fairmead area is potentially high because of the limited landscaping in most areas, as seen in Figure 3.16-11. Exposure is considered high for viewers within the foreground distance zone (less than 0.25 mile) because there is generally little to screen or filter views; the relevant distance to Central Valley Wye alternatives features would vary according to the design in that segment. Overall, residents who live near the Central Valley Wye alternatives are anticipated to have a high viewer response to changes in visual character. These near-foreground viewpoints comprise the set of locations of this type that are of potential concern, with high viewer sensitivity and high viewer exposure.

KVP 5: Road 19-1/2 near Avenue 24 provides a view of a residential area in northern Fairmead (Figure 3.16-12). Vividness is moderately low because no buildings or landscapes provide visual landmarks. Intactness is moderate. Fences line the roadway, some are set back out of view from the road and some are in poor repair, and utility poles and mailboxes appear at regular intervals. Unity is moderate, with consistent built components. Therefore, visual quality is moderate. At this KVP, residential viewers have a high viewer response.

Source: Architecture 21, 2016

Figure 3.16-12 KVP 5: Road 19-1/2 near Avenue 24, Fairmead, (southward view)

KVP 6 is just to the south and west of KVP 5 (Figure 3.16-13). The low-density development typical of the community of Fairmead is evident. Homes are spread apart, separated by grazing lands and agriculture. Vividness is moderately low because no buildings or landscapes provide visual landmarks. Intactness is moderate. Fences and informal landscaping line the roadway. Homes are set back out of view from Avenue 23, or are visible across fields. Unity is moderate, with consistent built components, but with some of those components, such as landscaping, inconsistently maintained. Because this is a residential area, viewer sensitivity and exposure are both high. Overall, visual quality is moderate. Few light sources in this landscape unit exist, with the exception of fixtures mounted on area buildings. Residential viewers are anticipated to have a high viewer response to changes in visual character.

Source: Architecture 21, 2016

Figure 3.16-13 KVP 6: Avenue 23 near Road 19-1/2, Fairmead (eastward view)

SR 152 (North) to Road 19 Wye Alternative

San Joaquin River Landscape Unit, Viewer Groups, and Key Viewpoints

The SR 152 (North) to Road 19 Wye Alternative would pass through the same area of the San Joaquin River Landscape Unit as described for the SR 152 (North) to Road 13 Wye Alternative.

Rural Agricultural Landscape Unit, Viewer Groups, and Key Viewpoints

For this alternative, the Rural Agricultural Landscape Unit is primarily agricultural with scattered individual residences and agricultural buildings. While agricultural uses vary, from low-lying row crops to view-confining orchards, the mix of agricultural development is characterized as a single landscape unit. It comprises agricultural fields, orchards, pastures, and related rural land uses, with considerable continuity of visual character. The SR 152 (North) to Road 19 Wye Alternative passes through a similar mix of agricultural uses north and east of Chowchilla to those the SR 152 (North) to Road 13 Wye Alternative encounters west of Chowchilla. The variation between the two alternatives comes with the mix of uses, but each includes low-lying crops and orchards, providing common visual resources. Overall, visual quality of the landscape unit is moderate.

No existing or eligible historic properties exist in the Rural Agricultural Landscape Unit. However, three properties qualify for protection under Section 4(f) as publicly owned and available park and recreation facilities in the area of the proposed network upgrades associated with the SR 152 (North) to Road 19 Wye Alternative that are located within rural agricultural locations (Washington Elementary School and El Capitan High School play areas, and Richard Bernasconi Neighborhood Park). The Site 7—Le Grand Junction/Sandy Mush Road, Warnerville–Wilson 230 kV Transmission Line would continue to traverse near the Washington Elementary School, El Capitan High School, and Richard Bernasconi Neighborhood Park, all of which contain publicly available park and recreation facilities. The primary viewer group for the park facilities is the park users (or recreationists). Recreationists have moderate to high sensitivity and exposure given their focus on, and time spent within, a given recreation facility.

The primary viewer group for Rural Agricultural Landscape Unit is agricultural workers, either working in the fields and orchards or driving through the area. Focused on work but familiar with the landscape, their sensitivity is moderate. Their exposure is low, as most workers do not remain in one location on a consistent basis and their activities are spread thinly throughout the landscape unit. Overall, this viewer group is anticipated to have a moderately low viewer response to changes in visual character.

KVP 4: Minturn Road (Figure 3.16-14) shows Minturn Road as it passes the Minturn Nut Company, northeast of Chowchilla. Vividness is moderately high, because the facility is a landmark along the road connecting SR 99 to the town of Le Grand. Intactness is moderate, with the parking area and security fencing out of place in an otherwise agricultural setting. The redwood trees that screen the factory from the highway are a large and nonnative species in the San Joaquin Valley. Unity is high, because all prominent features in the view—the roadway, utility poles, agriculture, and factory—are well maintained and orderly. These factors combine for a moderately high visual quality. Viewers at this location would be travelers on Minturn Road and workers at the industrial plant. Visual exposure would be low for travelers as they pass quickly through the view. Their sensitivity would be moderately low on the busy road. Workers at the plant, a smaller group of viewers, would have moderate exposure, experiencing the view as part of their daily drive to work activities at the plant. Their sensitivity would be moderate. The overall result for KVP 4 is that viewers would be anticipated to have a moderately low viewer response to changes in visual character.

Source: Architecture 21, 2016

Figure 3.16-14 KVP 4: Minturn Road near Porters Road (northward view)

Freeway and Expressway Landscape Unit, Viewer Groups, and Key Viewpoints

The SR 152 (North) to Road 19 Wye Alternative would pass through the same area of the Freeway and Expressway Landscape Unit as described for the SR 152 (North) to Road 13 Wye Alternative.

Robertson Boulevard Landscape Unit, Viewer Groups, and Key Viewpoints

The SR 152 (North) to Road 19 Wye Alternative would pass through the same area of the Robertson Boulevard Landscape Unit as described for the SR 152 (North) to Road 13 Wye Alternative. Specific to this alternative, the Site 7—Le Grand Junction/Sandy Mush Road, Wilson–Dairyland (idle) 115 kV Power Line would be reconductored under the SR 152 (North) to Road 19 Wye Alternative and continue to span Robertson Boulevard Tree Row.

Fairmead Landscape Unit, Viewer Groups, and Key Viewpoints

The SR 152 (North) to Road 19 Wye Alternative would pass through the same area of the Fairmead Landscape Unit as described for the SR 152 (North) to Road 13 Wye Alternative.

Avenue 21 to Road 13 Wye Alternative

San Joaquin River Landscape Unit, Viewer Groups, and Key Viewpoints

The Avenue 21 to Road 13 Wye Alternative begins west of the San Joaquin River, near the intersection of Henry Miller Road and Carlucci Road. The San Joaquin River Landscape Unit is very sparsely developed, except for agricultural uses. The lack of variation in elevation or views to distant landmarks leads to a low vividness. Intactness is high because agriculture is the main use in the area. Power poles, barns, or other built features, where present, read as part of the agricultural view. Unity is moderate, with slight variations because of seasonal changes in crop cover and maintenance of fields. For example, a freshly plowed field with orderly furrows is neater than the same field after cotton harvesting, with loose bolls lining the roads and fields left with browned stalks. Overall, visual quality is moderate. No existing or eligible historic properties exist in the San Joaquin Landscape Unit. Lighting is limited to traffic on the road, which would be minimal.

The primary viewer group is agricultural workers, either working in the fields or driving through the area. Focused on work but familiar with the landscape, their sensitivity is moderate. Their exposure is low, as most workers do not remain in one location consistently and their activities are spread across the landscape unit. Overall, this viewer group would have a moderately low viewer response to changes in visual character.

At KVP 1, Henry Miller Road stretches to the horizon (Figure 3.16-15). Cotton fields line the road. Little distinguishes this view from anywhere in the area; hence, vividness is moderately low. Intactness is high, as nothing other than the few trees in the distance encroaches on this agricultural view. Unity is high, as the fields are well tended and the roadway runs straight with a uniform pavement. Overall, visual quality is moderately high. In this location, the viewer response of agricultural workers is moderately low.

Source: Architecture 21, 2016

Figure 3.16-15 KVP 1: Henry Miller Road between Carlucci and Elgin Roads (eastward view)

At KVP 2, Indiana Road runs along a canal in the lowlands west of the San Joaquin River (Figure 3.16-16). Vividness is moderate, with the route following the curving canal distinguishing this road from the majority of other roads in the area that run straight along grid lines. Intactness and unity are high, with neat fields and a water-filled canal presenting a scene of productive agriculture. Overall, visual quality is moderately high. To the east, the San Joaquin River, along with smaller waterways, snakes through the landscape, while the Eastside Bypass channel cuts in a straight line at an angle to the Cartesian grid. Nearly all land use in KVP 2 is agricultural. Because there are very few structures in this landscape, nighttime light sources are nearly nonexistent. Viewers in this area are agricultural workers with a moderately low viewer response to changes in visual character.

Source: Architecture 21, 2016

Figure 3.16-16 KVP 2: Indiana Road, north of Hutchins Road (northward view)

Rural Agricultural Landscape Unit, Viewer Groups, and Key Viewpoints

The Rural Agricultural Landscape Unit is primarily agricultural with scattered individual residences and agricultural buildings. While agricultural uses vary, from low-lying row crops to view-confining orchards, the mix of agricultural development is characterized as a single landscape unit. It comprises agricultural fields, orchards, pastures, and related rural land uses, with considerable continuity of visual character. Differences among field, orchard, vineyard, and crop types offer some seasonal interest and visual variety. However, the level topography, vast scale, and repetitiousness of agricultural uses tend to contribute to a lack of variety, resulting in moderately low vividness. Views of vivid features, such as mountains or natural riparian corridors, are few and of limited prominence. In areas where orchards are the predominant use, views are limited by the dense, geometric plantings of the trees, blocking long views. Visual unity and intactness are moderately high, presenting a continuity of pattern and character, topography, and land use; but views are also regularly interrupted by the vertical and visually utilitarian features of modern industrial agricultural production. The contrasting form and character of these utilitarian features usually detract from the prevailing landscape unity. Overall, visual quality of the landscape unit is moderate.

The Chowchilla Canal is an eligible historic property in the Rural Agricultural Landscape Unit. Built in 1872, the canal is in western Madera County and carries water northward from the San Joaquin River at Mendota to its terminus near the Chowchilla River. Originally constructed as an earthen canal, large segments of the Chowchilla Canal were later lined with concrete. Nevertheless, it largely maintains its historic alignment and continues to convey its significance as one of the first large-scale canals constructed in the region. The canal is crossed many times by roadways. The Avenue 21 to Road 13 Wye Alternative would include network upgrades that would continue to span eligible historic properties (the Delta-Mendota canal and California Aqueduct), which are the same as described for the SR 152 (North) to Road 13 Wye Alternative.

The primary viewer group is agricultural workers, either working in the fields and orchards or driving through the area. Focused on work but familiar with the landscape, their sensitivity is moderate. Their exposure is low, as most workers do not remain in one location consistently and their activities are spread across the landscape unit. Overall, this viewer group would have a moderately low viewer response to changes in visual character.

KVP 3: Avenue 21 near Road 7 is typical of roadways in the Rural Agricultural Landscape Unit (Figure 3.16-17). Vividness is moderate, with the waterway crossing and tall trees in the distance providing landmarks distinguishing this location from others along Avenue 21. Intactness is moderately high; the utility poles and bridge crossing the waterway intrude on the straight lines of the remaining infrastructure. Unity is moderate because the road surface is in poor condition and weeds are intruding onto the roadway. These factors combine for a moderate visual quality. As with other locations in the Rural Agricultural Landscape Unit, viewers are mostly agricultural workers with a moderately low viewer response to changes in visual character.

Source: Architecture 21, 2016

Figure 3.16-17 KVP 3: Avenue 21 near Road 7 (eastward view)

Freeway and Expressway Landscape Unit, Viewer Groups, and Key Viewpoints

SR 99 is the primary north-south corridor in the eastern San Joaquin Valley. In views from SR 99 when skies are clear, the Sierra Nevada range is often visible to the east. The existing UPRR tracks and SR 99 are part of an existing, wider transportation corridor through the San Joaquin Valley. The UPRR is immediately adjacent to SR 99 for much of its length, except in urban areas, where the highway has been relocated over the past 60 years to bypass the centers of valley cities. Neither SR 99 nor SR 152 is designated as a scenic highway. Vividness in the Freeway and Expressway Landscape Unit tends to be moderately low because of the absence of significant geographical features and the straight alignments of the highways. Places are marked by signs, interchanges, and few other visual cues. Orchards that are adjacent to the highway limit long views along the highway, emphasizing the lineal view down the highway. Lower crops open views from the highway, but the level topography, vast scale, and repetitiousness of agricultural uses contributes to a lack of variety. Deviations to the agricultural landscape occur at the riparian crossings, which are usually identified by the trees lining the banks. Visual unity and intactness are moderately high, presenting a continuity of pattern and character, topography, and land use, resulting in moderately high landscape unity. The landscape unit's visual quality is moderately high. The primary source of light is the traffic on the roadway. No existing or eligible historic properties exist in the Freeway and Expressway Landscape Unit for the Avenue 21 to Road 13 Wye Alternative.

Traffic is heavier on SR 99 than on SR 152, leading travelers on SR 99 to be more immersed in viewing traffic than surrounding landscapes. Viewers in the Freeway and Expressway Landscape Unit are travelers on highways, either drivers or passengers. Their visual sensitivity is low to moderately low; drivers are focused on the highway, with few distractions from the passing agricultural views. Exposure to views is also low, as traffic generally moves fast through the area. Overall, viewers in the traveler viewer group are anticipated to have a low viewer response to changes in visual character.

Figure 3.16-18 shows KVP 12: SR 99 near Avenue 21, looking south along SR 99, near Avenue 21. The UPRR runs on the east side of the freeway. Near Avenue 21, the view is expansive and open, but vividness is low. Nothing on the wide horizon offers a visual cue to the viewer's location along the long highway. Intactness is high, with the neat parallel lanes of the freeway amplified by the median guardrail and flanking outer embankments. As a result, unity is high. Overall, visual quality is moderately high. There would be a relatively large number of viewers from this viewpoint, but viewer sensitivity and exposure would be low because views would be from vehicles traveling at highway speeds, resulting in a low viewer response to changes in visual character.

Source: Architecture 21, 2016

Figure 3.16-18 KVP 12: SR 99 near Avenue 21 (frontage road looking southward)

Robertson Boulevard Landscape Unit, Viewer Group, and Key Viewpoints

The Robertson Boulevard Landscape Unit encompasses Robertson Boulevard and its flanking historic landscape of ornamental palm trees. From SR 152 north, the road becomes SR 233 and serves as the primary western entrance to the city of Chowchilla. South of SR 152, Robertson Boulevard is less traveled, but lined with the same procession of palms. There are fewer residences south of SR 152.

The palm-lined roadway is highly vivid. The trees are mature and stretch mostly uninterrupted for the length of Robertson Boulevard, becoming sparse near its southern end. Intactness is moderately high. The regular pattern of shorter palms interspersed with taller ones leads to a high degree of visual unity, resulting in an overall high visual quality for the landscape unit.

South of SR 152, where the Avenue 21 to Road 13 Wye Alternative crosses the landscape unit, Robertson Boulevard is a county road lined with the continued procession of palms, but the flanking land uses transition rapidly from residential north of the expressway to agricultural as it proceeds away from Chowchilla. The observed traffic volumes are much lower than north of SR 152. This reduces viewer exposure for travelers to moderately low. The density of buildings lining the road decreases as well, becoming more characteristic of the Rural Agricultural Landscape Unit, with most viewers being moderately sensitive agricultural workers. This results in a moderate viewer response. Residents make up a secondary viewer group, with a moderately high viewer response because of their moderate visual exposure to the neighborhood along the roadway and high sensitivity to views around their homes.

The palm-lined roadway remains highly vivid in this location. The trees are mature and stretch mostly uninterrupted. Intactness is moderately high. The regular pattern of shorter palms interspersed with taller ones leads to a high degree of visual unity, resulting in an overall high visual quality for the landscape unit. Lighting in this landscape unit is limited to sources emanating from the scattered homes and buildings.

One site eligible for listing in the NRHP appears in the Robertson Boulevard Landscape Unit—the Robertson Boulevard Tree Row. The Robertson Boulevard Tree Row is eligible for the NRHP under Criterion A for its association with the initial establishment of Chowchilla (the trees were planted to beautify Chowchilla's main street and draw settlers into the community), and under Criterion C as an exceptional example of an early 20th century designed landscape along a roadway. The Robertson Boulevard Tree Row is significant at the local level, with a period of significance of 1912–1913.

SR 152 (North) to Road 11 Wye Alternative

San Joaquin River Landscape Unit, Viewer Groups, and Key Viewpoints

The SR 152 (North) to Road 11 Wye Alternative would pass through the same area of the San Joaquin River Landscape Unit as described for the SR 152 (North) to Road 13 Wye Alternative.

Rural Agricultural Landscape Unit, Viewer Groups, and Key Viewpoints

The Rural Agricultural Landscape Unit is primarily agricultural with scattered individual residences and agricultural buildings. While agricultural uses vary, from low-lying row crops to view-confining orchards, the mix of agricultural development is characterized as a single landscape unit. It comprises agricultural fields, orchards, pastures, and related rural land uses, with considerable continuity of visual character. The SR 152 (North) to Road 11 Wye Alternative passes through a similar mix of agricultural uses to those that the SR 152 (North) to Road 13 Wye Alternative encounters. The variation between the two alternatives comes with the mix of uses, but each includes low-lying crops and orchards, providing common visual resources. Overall, visual quality of the landscape unit is moderate. No existing or eligible historic properties exist in the Rural Agricultural Landscape Unit.

The primary viewer group is agricultural workers, either working in the fields and orchards or driving through the area. Focused on work but familiar with the landscape, their sensitivity is moderate. Their exposure is low, as most workers do not remain in one location consistently and

their activities are spread across the landscape unit. Overall, this viewer group would have a moderately low viewer response to changes in visual character.

KVP 14: Avenue 25 near Road 11 looks east along Avenue 25 as it approaches Road 11 (Figure 3.16-19). The view down Avenue 25 runs to the horizon. A mature orchard borders the south side of the road as far as can be seen from the viewpoint. Well-tended fields of low grasses and row crops provide an open view on the north side of Avenue 25. The outline of the Sierra Nevada range is faintly visible in the far distance above a long row of green trees at the far side of the lower crops. Utility poles run parallel and perpendicular to the view, the intersecting poles indicate an intersecting road, but there are no other landmarks visible, resulting in a moderately low vividness. Intactness is high. There are no forms or features visible to detract from or intrude upon the rural agricultural view. The jumble of utility poles at the intersection disturbs an otherwise orderly composition of roadway, orchards, and fields, so unity is moderately high. Overall, visual quality is moderately high. Because the road is lightly traveled, viewer exposure is low. The primary viewers are travelers and agricultural workers, with moderate viewer sensitivity.

Source: Google Streetview, 2016a

Figure 3.16-19 KVP 14: Avenue 25 near Road 11 (eastward view)

Freeway and Expressway Landscape Unit, Viewer Groups, and Key Viewpoints

The SR 152 (North) to Road 11 Wye Alternative would pass through the same area of the Freeway and Expressway Landscape Unit as described for the SR 152 (North) to Road 19 Wye Alternative.

Robertson Boulevard Landscape Unit, Viewer Groups, and Key Viewpoints

The SR 152 (North) to Road 11 Wye Alternative would pass through the same area of the Robertson Boulevard Landscape Unit as described for the SR 152 (North) to Road 19 Wye Alternative.

Fairmead Landscape Unit, Viewer Groups, and Key Viewpoints

The SR 152 (North) to Road 11 Wye Alternative would pass through the same area of the Fairmead Landscape Unit as described for the SR 152 (North) to Road 13 Wye Alternative.

3.16.6 Environmental Consequences

3.16.6.1 Overview

This section evaluates how the No Project Alternative and the Central Valley Wye alternatives could affect aesthetic and visual resources. The impacts of the Central Valley Wye alternatives are described and organized in Section 3.16.6.3, Central Valley Wye alternatives, as follows:

Construction Impacts

- Impact AVR#1: Degraded Visual Quality for Residential Viewers during Construction
- Impact AVR#2: Decreased Visual Quality in the San Joaquin River Landscape Unit
- Impact AVR#3: Decreased Visual Quality in the Rural Agricultural Landscape Unit
- Impact AVR#4: Decreased Visual Quality in the Robertson Boulevard Landscape Unit
- Impact AVR#5: Decreased Visual Quality in the Fairmead Landscape Unit
- Impact AVR#6: Visual Quality Changes in the Freeway and Expressway Landscape Unit

Operations Impacts

- None

3.16.6.2 No Project Alternative

The population in the San Joaquin Valley is expected to grow through 2040 (see Section 2.2.2.2, Planned Land Use). Development in the San Joaquin Valley to accommodate the population increase would continue under the No Project Alternative and result in associated direct and indirect impacts on aesthetic and visual resources. The direct and indirect aesthetic and visual impacts include the continued pattern of converting agricultural lands to commercial and residential development, especially along SR 99 and SR 152 near Chowchilla, which would affect visual resources through the reduction of views of open space and agricultural uses. Highway commercial development, such as found at the SR 233/SR 99 interchange, is planned south of Chowchilla along SR 152. Additional planned unit developments, such as the Greenhills neighborhood east of SR 99 in Chowchilla, would be built on land currently used for agriculture. The visual character of the RSA would become increasingly suburban.

Planned projects that are anticipated to be constructed by 2040 include industrial parks, expanded agricultural facilities such as dairies, shopping centers, large residential developments, development of multi-use trails, and planned transportation projects defined in the various regional transportation plans for both Merced and Madera Counties. This growth would add new residential and commercial developments and associated infrastructure to the viewed landscape. A full list of anticipated future development projects is provided in Appendix 3.19-A, Cumulative Plans and Non-Transportation Projects List, and Appendix 3.19-B, Cumulative Transportation Projects Lists.

As described in the Introduction and Land Use sections of the *City of Chowchilla 2040 General Plan* (pages I-1 through L-69) (City of Chowchilla 2011), the residential and commercial growth expected in and around the city of Chowchilla is anticipated to affect aesthetic and visual resources through the introduction of new features to the environment, permanently changing the aesthetics and visual resources of the region surrounding the Central Valley Wye alternatives. Because a large portion of planned development in the San Joaquin Valley is expected to occur on land that is now in agricultural use (San Joaquin Valley Regional Planning Agencies 2009), a continued loss of the rural visual landscape in the region would occur under the No Project Alternative. These projects would also increase sources of evening light and glare that could degrade nighttime views. It is assumed that these developments would be suburban in character and, given existing design guidelines, would likely have at least moderate visual quality. Such developments tend to offer relatively high degrees of internal unity and intactness. In some locations, views toward open spaces, agricultural fields, and the Sierra Nevada range may be reduced or blocked entirely by new structures associated with the new developments.

Planned projects under the No Project Alternative would also include restoration of the San Joaquin River and trails along Ash and Berenda Sloughs. These have the potential to attract recreationists to new locations outside of established parks and recreation areas where they would have a higher viewer response to aesthetic and visual resources. Additional widening and expansion of SR 99 is expected to continue. Widening transportation corridors does not necessarily degrade a corridor's visual quality, but the indirect effects of opening adjacent lands to freeway-oriented commercial development to the extent permitted by local agencies, and increasing the number of billboard-type signage, could include the incremental degradation of expansive views toward the existing agricultural landscape. The development and transportation projects that would occur under the No Project Alternative likely would include various forms of visual measures, such as landscaping, to minimize visual impacts. Cities and counties in the region would evaluate the aesthetic impacts of projects in the course of environmental review and require that projects incorporate visual measures to mitigate for impacts.

3.16.6.3 Central Valley Wye Alternatives

Construction of the Central Valley Wye alternatives could result in temporary and permanent impacts on aesthetics and visual quality. The types of impacts include temporary visual intrusions associated with construction activity, permanent impacts on viewers where HSR infrastructure blocks views, and disruption to scenic locations such as the Robertson Boulevard Tree Row.

Detailed discussion of the impacts on aesthetics and visual quality follows. Where the impacts are common to all alternatives, the impacts are grouped by impact type. Where the impacts vary by Central Valley Wye alternative, the impacts are discussed by alternative.

Construction Impacts

Implementation of the Central Valley Wye alternatives would involve, for example, demolition of existing structures; clearing and grubbing; handling, storing, hauling, excavating, and placing fill; possible pile driving; and construction of aerial structures, bridges, road modifications, utility upgrades and relocations, HSR electrical systems, and railbeds. Construction activities are described in Chapter 2, Alternatives.[6]

Impact AVR#1: Degraded Visual Quality for Residential Viewers during Construction

All Central Valley Wye alternatives would pass within 0.25 mile of residential viewers, as residences are found in various locations along each alternative. Construction activities for any of the four Central Valley Wye alternatives would create visual nuisances at locations where highly visually responsive residential views are present. The same construction methods would be employed for all four Central Valley Wye alternatives; therefore, the visual effect at any given location would be approximately the same as every other location at the same distance from the construction activity. Therefore, a greater visual impact would occur where an alternative would expose a greater number of residential receptors.[7] The SR 152 (North) to Road 13 would pass the greatest concentrations of residences, as it crosses Robertson Boulevard twice north of SR 152 and passes near Fairmead. The SR 152 (North) to Road 19 and SR 152 (North) to Road 11 Wye Alternatives would pass concentrations of residences as they cross Robertson Boulevard and near Fairmead. The Avenue 21 to Road 13 Wye Alternative would avoid concentrations of residential views, resulting in fewer instances of impacts on residential viewers. The southernmost 2.3 miles of the existing Site 7—Le Grand Junction/Sandy Mush Road, Warnerville–Wilson 230 kV Transmission Line, associated with the SR 152 (North) to Road 19

[6] The network upgrades involve reconductoring/rebuilding of existing power/transmission lines, which could result in the same number of conductors installed on slightly taller structures (11–32 percent increase in height) consistent in mass and form as the existing structures. The majority of the network upgrades are located in rural agricultural areas with viewers' impacts being limited to groups with low/moderate viewer sensitivity. The incremental change would be minor and not result in significant impacts. Consistent with the HSR methodology, potential impacts discussed further are in the context of residential and recreational viewer groups.

[7] Residential receptors that are located within the project footprint of one of the Central Valley Wye alternatives are assumed to be displaced and therefore would not be exposed to visual effects from construction.

Wye Alternative, also would traverse concentrations of residences within the city of Merced. All other EINU components would be located in areas with few residences.

During the construction period, approximately 1 to 3 years in duration, construction equipment storage, earthmoving, construction of structures, concrete plant operations, and associated nighttime lighting would alter the existing visual quality of the affected area for adjacent viewers. Construction activities along the HSR alignment would cause dust and material stockpiles that could create an untidy appearance, collectively degrading the visual unity and intactness of the surroundings. Nighttime construction lighting could result in glare and light spillover, affecting nighttime views of residences. Where these temporary construction activities occur in residential areas where highly visually responsive residential viewers are present and along scenic highways where moderately highly responsive travelers are present, the activities would degrade the existing visual quality.

Residential viewers would be affected by all of the Central Valley Wye alternatives where construction activities occur within 0.25 mile of their viewpoint. This impact would result in degraded visual quality, as it would introduce features, such as large construction equipment, that would contrast with the established character of a view and would alter the existing visual character and -quality of a residential area. As described in Section 3.16.5.3, Landscape Units and Key Viewpoints, the SR 152 (North) to Road 13 Wye Alternative would affect the most residential viewers. The SR 152 (North) to Road 19 and SR 152 (North) to Road 11 Wye Alternatives would each affect a similar number of residential viewers, while the Avenue 21 to Road 13 Wye Alternative would affect the fewest residential viewers.

CEQA Conclusion

This impact under CEQA would be significant for all Central Valley Wye alternatives because construction activities and equipment would substantially degrade the existing visual character or quality of the site and its surroundings with all of the Central Valley Wye alternatives. Construction equipment, stockpiles, and activities would contrast with the established character of views in residential areas and would alter the existing visual character of residential areas. Where highly responsive residential viewers are present, the impact under CEQA would be significant. The SR 152 (North) to Road 13 Wye Alternative would affect the most residential viewers. Although all Central Valley Wye alternatives would result in a significant impact, the SR 152 (North) to Road 19 Wye and SR 152 (North) to Road 11 Wye Alternatives would each affect a similar number of residential viewers, while the Avenue 21 to Road 13 Wye Alternative would affect the fewest residential viewers. The Authority would implement AVR-MM#1, Minimize Visual Disruption from Construction Activities, which would minimize visual disruption from construction activities by limiting preconstruction clearance of vegetation and buildings, preserve vegetation that may help screen views, restore and revegetate land cleared once construction is complete, and locate construction staging sites away from residential viewers whenever feasible, and to screen staging areas from sensitive receptors. AVR-MM#2, Minimize Light Disturbance during Construction, would minimize disturbance from construction lighting by requiring contractors to shield and direct it downward to limit spillover from the construction site. These measures would limit the temporary degradation of visual quality, reducing the impact to less than significant.

Impact AVR#2: Decreased Visual Quality in the San Joaquin River Landscape Unit

All Central Valley Wye alternatives would pass through the lowlands on the western edge of the RSA where they would cross the San Joaquin River. Approaching the river crossing and Eastside Bypass, a high berm and aerial structure would carry the HSR across the landscape. Because of the height and length of the fill, long-distance views would be lost, and a large-scale structure and high fill would be introduced into a flat and agricultural view, dominating views toward the HSR. This would result in a drop in overall visual quality from moderate to low.

The primary viewer group is agricultural workers, including those working in the fields and orchards, tending canals and irrigation infrastructure, or driving through the area transporting equipment or products, traveling to jobsites, or crop-dusting. The agricultural workplace is out in the landscape, but workers focus on the tasks of driving, selecting crops, assembling irrigation equipment, or other work. Therefore, their sensitivity to the surrounding landscape is moderate.

Their exposure is low, as most workers do not remain in one location consistently and their activities are spread across the landscape unit. Overall, this viewer group would have a moderately low viewer response to changes in visual character.

The visual quality in the San Joaquin River Landscape Unit would decrease as a result of the presence of HSR infrastructure. The landscape unit is sparsely populated, with few viewers. The Avenue 21 to Road 13 Wye Alternative would pass closer to clusters of agricultural buildings than the other alternatives, so it would have the greatest impact on visual resources. The SR 152 (North) to Road 13, SR 152 (North) to Road 19 Wye, and SR 152 (North) to Road 11 Wye Alternatives follow the same alignment in this landscape unit, so their impacts would be the same, and would affect fewer viewer groups than the Avenue 21 to Road 13 Wye Alternative.

CEQA Conclusion

The impact under CEQA would be less than significant because introduction of HSR infrastructure would not substantially degrade existing visual quality. Although visual quality would decrease, viewers with moderately low viewer response would not respond to the degradation of the existing visual character or quality of the site and its surroundings. Therefore, CEQA does not require any mitigation.

Impact AVR#3: Decreased Visual Quality in the Rural Agricultural Landscape Unit

The Central Valley Wye alternatives would pass through the Rural Agricultural Landscape Unit where HSR infrastructure would introduce new infrastructure features in a predominantly agricultural landscape. HSR structures (viaducts, security fencing) would be viewed as out of place against fields of crops or looming above orchards. The HSR infrastructure would contrast against the natural colors and textures of plants, fields, and trees, resulting in a drop in overall visual quality from moderate to moderately low.

The primary viewer group is agricultural workers, either working in the fields and orchards or driving through the area. Focused on work but familiar with the landscape, their sensitivity is moderate. Their exposure is low, as most workers do not remain in one location consistently and their activities are spread across the landscape unit. Overall, this viewer group would have a moderately low viewer response to changes in visual character.

Under all of the Central Valley Wye alternatives, the Site 6—El Nido, El Nido Substation would be expanded, and the Los Banos–Oro Loma–Canal 70 kV Power Line and Oro Loma–Panoche Junction 115 kV Power Line would be reconductored. El Nido Substation would be expanded by approximately 3 acres adjacent to the existing substation. The new equipment would be consistent with the mass and form of the existing substation and the visual change would be minor. Both power lines would be reconductored with more efficient conductors, which would not be visually perceptible. Reconductoring of the Los Banos–Oro Loma–Canal 70 kV Power Line would also include replacement of the 60- to 90-foot-tall wood poles with a combination of 75- to 100-foot-tall wood or light-duty steel poles. The new wood or steel poles would be 11–25 percent taller, and the new wood and/or steel poles would be of similar mass and form of the existing wood poles.

Under the SR 152 (North) to Road 19 Wye Alternative, the reconductored overhead transmission line (Site 7—Le Grand Junction/Sandy Mush Road, Warnerville–Wilson 230 kV Transmission Line) would result in slightly taller structures in rural agricultural areas, and near patches of residences, and near Section 4(f) protected recreational facilities (Washington Elementary School and El Capitan High School play areas, and Richard Bernasconi Neighborhood Park), primarily in the city of Merced. The existing 77- to 86-foot-tall self-supporting lattice steel towers would be raised or replaced with new self-supporting lattice steel towers, resulting in a change in structure height of 29–32 percent (102–111 feet tall). However, the height increase would occur to the highest and narrowest point of the self-supporting lattice steel structure with the new self-supporting lattice steel structures being of similar mass and form of the existing self-supporting lattice steel structures. The Site 7—Le Grand Junction/Sandy Mush Road, Wilson – Dairyland

(idle) 115 kV Power Line[8] would also result in slightly taller structures in rural agricultural areas; the approximately 60- to 90-foot-tall existing wood poles would be replaced with 75- to 100-foot-tall wood poles or light duty steel (a height increase of 11-25 percent). These minor, incremental visual changes would not affect views and/or use of Section 4(f)-protected recreational facilities. The Site 7—Le Grand Junction/Sandy Mush Road, Dutchman Switching Station and 115 kV Tie-Line are new components that could contrast against the natural colors and textures of existing plants, fields, and crops, resulting in a drop in overall visual quality from moderate to moderately low. However, there are no residential viewer groups in this area and viewer response in the landscape unit is considered moderately low. Moreover, existing power and distribution lines are located in the same area where the Site 7—Le Grand Junction/Sandy Mush Road, Dutchman Switching Station and 115 kV Tie-Line are proposed.

The visual quality in the Rural Agricultural Landscape Unit would decrease as a result of the presence of HSR infrastructure. Effects would vary by alternative because of the length of each alternative's alignment through the landscape unit. The Avenue 21 to Road 13 Wye Alternative would run almost entirely in the Rural Agricultural Landscape Unit, along both Avenue 21 and Road 13, so it would have the greatest impact, followed by the SR 152 (North) to Road 11 Wye Alternative, then the SR 152 (North) to Road 19 Wye Alternative. The SR 152 (North) to Road 13 Wye Alternative would traverse the shortest path through the landscape unit, resulting in the fewest number of viewer groups affected.

CEQA Conclusion

The impact under CEQA would be less than significant because introduction of HSR infrastructure would not substantially degrade existing visual quality. Although visual quality would decrease, viewers with moderately low viewer response would not be adversely affected by the degradation of the existing visual character or quality of the site and its surroundings. CEQA does not require the identification of any additional mitigation.

Impact AVR#4: Decreased Visual Quality in the Robertson Boulevard Landscape Unit

SR 152 (North) to Road 13 Wye Alternative

The SR 152 (North) to Road 13 Wye Alternative would cross Robertson Boulevard in two locations, causing a disruption in the straight, 7.3-mile procession of historic palms that lines the roadway. This alternative would disturb approximately 4,516 linear feet of the tree row along Robertson Boulevard, extending the existing tree row gap at the SR 152 interchange from approximately 1,700 feet to approximately 3,600 feet. This increase in the gap would be approximately the same for all the SR 152 alternatives because the geometry of the roadway overcrossing would be the same for all alternatives. The increase in the gap would further diminish the visual strength of the Robertson Boulevard Tree Row lining the roadway. Constructing a viaduct across Robertson Boulevard for the Merced to Fresno leg of HSR would further diminish views by blocking the long views of the roadway and parallel tree rows. For travelers with a moderately high viewer response viewing the historic Robertson Boulevard Tree Row, removing blocks of consecutive trees for construction of HSR grade separations and a new SR 152 interchange would permanently diminish the visual quality of the tree rows lining the roadway.

The incorporation of context-sensitive solutions during final design would minimize the potential for diminished visual quality by increasing the compatibility of the HSR infrastructure with an existing, specific local design context, such as providing special gateway landscaping and design treatments to the SR 152 interchange, the HSR structures, and Robertson Boulevard (AVR-IAMF#2). In addition, following the Authority's aesthetic review process would minimize the potential for diminished visual quality from the HSR infrastructure by involving local jurisdictions in developing contextually appropriate aesthetic solutions for the area (AVR-IAMF#3). While IAMFs

[8] This network upgrade is included in the Rural Agricultural Landscape Unit and the Robertson Boulevard Landscape Unit because the majority of it is located within or adjacent to the Rural Agricultural Landscape Unit; and a small portion of it would be reconductored in the vicinity of Robertson Boulevard Tree Row.

would reduce impacts, they would not eliminate the visual impact from the break in the unity of the tree row. The result would be a reduction of visual quality from high to moderate.

The analysis of the Robertson Boulevard Landscape Unit and KVP 13 in the *Merced to Fresno Section: Central Valley Wye Aesthetics and Visual Quality Technical Report* (Authority and FRA 2016: Section 6.1.1.4), describes this impact in detail. KVP 13 is shown on Figure 3.16-20.

Source: Architecture 21, 2016

Figure 3.16-20 KVP 13: Photosimulation, SR 152 (North) to Road 13 Wye Alternative, SR 233/Robertson Boulevard near SR 152 (southward view)

Travelers along the road are the main viewer group. Because of the prominence of their view of the palm trees lining the straight roadway, they have a high visual sensitivity. Their exposure to the view is moderately high as they drive along the boulevard. Residents make up a secondary viewer group, more so north of SR 152 where homes are closer together in a linear neighborhood. As residents, they possess a moderately high viewer sensitivity. They do not experience the long view down the boulevard from their homes. Their views to the boulevard are either perpendicular or at an obtuse angle. Many homes have views to the boulevard obscured by mature landscaping, making their exposure moderate, resulting in an overall moderately high viewer response.

The SR 152 (North) to Road 13 Wye Alternative would also pass concentrations of residences, as the wye would cross Robertson Boulevard near Madison Road and Valeta Drive as it curves toward Road 13. HSR infrastructure would introduce permanent changes to the aesthetic and visual quality of existing residential views that would contrast with the rural setting. Neatly fenced HSR tracks, lines of overhead catenary system poles, berms, and embankments rising from the flat landscape, and overcrossings and viaducts for HSR and roadways would impart an industrial or urban aesthetic to the landscape.

The Authority would use HSR infrastructure design standards and apply design approaches to integrate structures within a community to reduce the intrusiveness of large, elevated structures and berms (AVR-IAMF#1). This would limit potential impacts on residential viewers in the Robertson Boulevard Landscape Unit by reducing these structures. While the design

characteristics of the Central Valley Wye alternatives would reduce impacts, they cannot avoid the loss of residential views from HSR infrastructure rising above the landscape. As fill material for berms and embankments to support the grade separation of HSR rises above the natural grade of the landscape, it would block views from adjacent viewpoints and become a feature of the landscape. The scale and industrial aesthetic of HSR infrastructure would contrast with the rural landscape. Residential viewers with a moderately high viewer response would be permanently affected.

The SR 152 (North) to Road 13 Wye Alternative would disrupt the continuous line of palm trees along Robertson Boulevard. The HSR viaduct would also block views along Robertson Boulevard, diminishing the visual presence of the tree row and contrasting with the scale and context of residential areas. Because the SR 152 (North) to Road 13 Wye Alternative would cross Robertson Boulevard twice, and in an area where both travelers and residents with a moderately high to high viewer response are present, it would have the greatest impact on visual resources of the four alternatives.

CEQA Conclusion

The impact under CEQA would be significant for the SR 152 (North) to Road 13 Wye Alternative, because this alternative would substantially damage the Robertson Boulevard Tree Row by removing trees at the SR 152 interchange and where the Merced to Fresno leg of the wye would cross the roadway. This tree row is identified as an important visual resource in the Madera County and Chowchilla General Plans and an eligible historic property. The HSR viaduct would also block views along Robertson Boulevard, diminishing the visual presence of the tree row and contrasting with the scale and context of residential areas. The Authority would implement mitigation measures to limit the degradation to visual quality. AVR-MM#3, Incorporate Design Criteria for Elevated Guideways That Can Adapt to Local Context, would adapt the design of the HSR structures and SR 152 Robertson Boulevard interchange through incorporating design features and landscaping to reinforce Robertson Boulevard as a gateway to Chowchilla. AVR-MM#4, Provide Vegetation Screening along At-Grade and Elevated Guideways Adjacent to Residential Areas, would provide landscaping to screen the HSR from residential areas, reducing views to the contrasting HSR infrastructure. AVR-MM#5, Replant Unused Portions of Lands Acquired for the HSR, would replant unused portions of land acquired for the HSR project, providing replacement palms where possible to reduce gaps in the historic tree row created during HSR construction. AVR-MM#6, Landscape Treatments along the HSR Overcrossings and Retained Fill Elements, would provide landscaping for HSR and highway overcrossing and retained fills, softening the contrast with the existing landscape. All these mitigation measures would reduce the degradation to visual quality, but they would not restore views blocked by HSR infrastructure, nor would they fill in all the gaps in the tree row at the interchange or the HSR crossing of Robertson Boulevard adjacent to SR 152. Even with implementation of these mitigation measures, the visual presence of the tree row would be diminished; therefore, the impact under CEQA would remain significant.

SR 152 (North) to Road 19 Wye Alternative

The introduction of HSR to the Robertson Boulevard Landscape Unit for the SR 152 (North) to Road 19 Wye Alternative would require reconstruction of the interchange at SR 152, bringing the boulevard over both the freeway and the HSR. This change would disturb approximately 4,428 linear feet of the tree row along Robertson Boulevard, diminishing the visual quality of the tree rows lining the roadway. While the existing Site 7—Le Grand Junction/Sandy Mush Road, Dairyland–Le Grand (idle) 115 kV Power Line currently crosses the Robertson Boulevard Tree Row near Avenue 21, no trees would be removed as part of the proposed reconductoring. For travelers with a moderately high viewer response viewing the historic Robertson Boulevard Tree Row, removing blocks of consecutive trees for construction of the HSR grade separation and a new SR 152 interchange would permanently diminish the visual quality of the tree rows lining the roadway. The same design measures described for the SR 152 (North) to Road 13 Wye Alternative would apply for the SR 152 (North) to Road 19 Wye Alternative, which would reduce but not eliminate the impacts from the break in the unity of the tree row. The impacts on the Robertson Boulevard Tree Row would reduce visual quality from high to moderate. The analysis

of the Robertson Boulevard Landscape Unit and KVP 13 in the *Merced to Fresno Section: Central Valley Wye Aesthetics and Visual Quality Technical Report* (Authority and FRA 2016: Section 6.1.2.4), describes this impact in detail. KVP 13 is shown on Figure 3.16-21.

Source: Architecture 21, 2016

Figure 3.16-21 KVP 13: Photosimulation, SR 152 (North) to Road 19 Wye Alternative, Robertson Boulevard near SR 152 (southward view)

The SR 152 (North) to Road 19 Wye Alternative would disrupt the continuous line of palm trees along Robertson Boulevard where the San Jose to Fresno leg would pass beneath Robertson Boulevard north of SR 152, and at the SR 152/Robertson Boulevard interchange. The SR 152 (North) to Road 19 Wye Alternative would cross Robertson Boulevard only once in an area where both travelers and residents with a moderately high to high viewer response are present, extending the existing tree row gap at the SR 152 interchange from approximately 1,700 feet to approximately 3,600 feet. This increase in the gap would be approximately the same for all the SR 152 alternatives because the geometry of the roadway overcrossing is the same for all alternatives. The increase in the gap would further diminish the visual strength of the Robertson Boulevard Tree Row lining the roadway. It would have the second greatest impact on visual resources.

CEQA Conclusion

The impact under CEQA would be significant for the SR 152 (North) to Road 19 Wye Alternative because this alternative would substantially damage the Robertson Boulevard Tree Row by removing trees at the SR 152 interchange, diminishing the visual presence of the tree row. The tree row is identified as an important visual resource in the Madera County and Chowchilla general plans, The Authority would implement mitigation measures to limit the degradation to visual quality. AVR-MM#3 would adapt the design of the HSR structures through incorporating design features and landscaping to reinforce Robertson Boulevard as a gateway to Chowchilla. AVR-MM#4 would provide landscaping to screen the HSR from residential areas, reducing views to the contrasting HSR infrastructure. AVR-MM#5 would replant unused portions of land acquired for the HSR project, providing replacement palms where possible to reduce gaps in the historic tree row created during HSR construction. AVR-MM#6 would provide landscaping for HSR overcrossing and retained fills, softening the contrast with the existing landscape. These

mitigation measures would help reinforce Robertson Boulevard as a gateway to Chowchilla by providing landscaping and design features at the SR 152/Robertson Boulevard interchange and along Robertson Boulevard, but they would not fill in all the gaps in the tree row at the interchange or at the HSR crossing of Robertson Boulevard adjacent to SR 152. Even with implementation of these measures, the visual presence of the tree row would be diminished; therefore, the impact under CEQA would remain significant.

Avenue 21 to Road 13 Wye Alternative

The San Jose to Fresno leg of HSR, following Avenue 21, would intersect the Robertson Boulevard Landscape Unit. Robertson Boulevard would cross over both the HSR and Avenue 21 on a structure. In the same area, the San Jose to Merced leg of HSR would pass over Robertson Boulevard near Avenue 22. This change would disturb approximately 5,590 linear feet of the tree row along Robertson Boulevard, diminishing the visual strength of the tree rows lining the roadway. The number of palm trees removed would be higher than for any of the SR 152 alternatives because the tree row is generally intact along this portion of Robertson Boulevard, whereas there is an existing gap of approximately 1,700 feet where Robertson Boulevard crosses SR 152. For travelers with a moderate viewer response viewing the historic Robertson Boulevard Tree Row, removing blocks of consecutive trees for construction of the HSR grade separations would permanently diminish the visual quality of the tree rows lining the roadway. The same design measures described for SR 152 (North) to Road 13 Wye Alternative would apply for the Avenue 21 to Road 13 Wye Alternative, which would reduce but not eliminate the impacts from the break in the unity of the tree row. The result would be a reduction of visual quality from a high to moderately high impact on visual quality. The analysis of the Robertson Boulevard Landscape Unit in the *Merced to Fresno Section: Central Valley Wye Aesthetics and Visual Quality Technical Report* (Authority and FRA 2016: Section 6.1.3.4), describes this impact in detail.

The Avenue 21 to Road 13 Wye Alternative would disrupt the continuous line of palm trees along Robertson Boulevard for approximately 3,600 feet where the roadway would rise to cross the San Jose to Fresno leg of HSR and Avenue 21. This gap is approximately the same length as for the SR 152 alternatives because the geometry of the roadway overcrossing is the same for all locations. The HSR viaduct for the Merced to Fresno leg of HSR would also block views along Robertson Boulevard, diminishing the visual presence of the tree row. South of SR 152, Robertson Boulevard is a county road lined with the continued procession of palms, but the flanking land uses transition rapidly from residential north of the expressway to agricultural as it proceeds away from Chowchilla. Robertson Boulevard is not a designated scenic highway south of SR 152. The observed traffic volumes are much lower than north of SR 152. Peak-hour traffic volumes more than triple along Robertson Boulevard north of SR 152 relative to the portion of Robertson Boulevard south of SR 152.[9] Many fewer traveling viewers in the area of the tree row that would be affected by the Avenue 21 to Road 13 Wye Alternative reduces viewer exposure to moderately low. The density of buildings lining the road is lower as well, more characteristic of the Rural Agricultural Landscape Unit, with most viewers being moderately sensitive agricultural workers. Because of the lower viewer response where the Avenue 21 to Road 13 Wye Alternative would cross Robertson Boulevard, the impact on visual resources would be the least of all Central Valley Wye alternatives.

CEQA Conclusion

The impact under CEQA would be significant for the Avenue 21 to Road 13 Wye Alternative because this alternative would substantially damage the Robertson Boulevard Tree Row by removing trees where the HSR crosses the roadway. The tree row is identified as an important visual resource in the Madera County and Chowchilla general plans. The Authority would implement mitigation measures to limit the degradation to visual quality. AVR-MM#3 would adapt the design of the HSR structures through incorporating design features and landscaping to reinforce Robertson Boulevard as a gateway to Chowchilla. AVR-MM#4 would provide landscaping to screen the HSR from residential areas, reducing views to the contrasting HSR infrastructure. AVR-MM#5 would replant unused portions of land acquired for the HSR project, providing replacement palms where possible to reduce gaps in the historic tree row created during HSR construction. AVR-MM#6 would provide landscaping

[9] County of Madera Traffic Monitoring Program – 2015 Traffic Volume Report, Madera CTC, August 2015, page 24

for HSR overcrossing and retained fills, softening the contrast with the existing landscape. All these mitigation measures would reduce the degradation to visual quality, but they would not restore views blocked by HSR infrastructure, nor fill in all the gaps in the tree row where HSR would cross Robertson Boulevard. Even with implementation of these measures, the visual presence of the tree row would be diminished; therefore, the impact under CEQA would remain significant.

SR 152 (North) to Road 11 Wye Alternative

The introduction of HSR to the Robertson Boulevard Landscape Unit for the SR 152 (North) to Road 11 Wye Alternative would require reconstruction of the interchange at SR 152, bringing the boulevard over both the freeway and the HSR. This change would disturb approximately 4,088 linear feet of the tree row along Robertson Boulevard, extending the existing tree row gap at the SR 152 interchange from approximately 1,700 feet to approximately 3,600 feet. This increase in the gap would be approximately the same for all the SR 152 alternatives because the geometry of the roadway overcrossing is the same for all alternatives. The increase in the gap would further diminish the visual strength of the Robertson Boulevard Tree Row lining the roadway. For travelers with a moderately high viewer response viewing the historic Robertson Boulevard Tree Row, removing blocks of consecutive trees for construction of the HSR grade separation and a new SR 152 interchange would permanently diminish the visual strength of the tree rows lining the roadway. The same design measures described for SR 152 (North) to Road 13 Wye Alternative would apply to the SR 152 (North) to Road 11 Wye Alternative, which would reduce but not eliminate the impacts from the break in the unity of the tree row.

The analysis of the Robertson Boulevard Landscape Unit and KVP 13 in the *Merced to Fresno Section: Central Valley Wye Aesthetics and Visual Quality Technical Report* (Authority and FRA 2016: Section 6.1.4.4), describes this impact in detail. KVP 13 is shown on Figure 3.16-22.

Source: Architecture 21, 2016

Figure 3.16-22 KVP 13: Photosimulation, SR 152 (North) to Road 11 Wye Alternative, Robertson Boulevard near SR 152 (southward view)

The impacts on the Robertson Boulevard Tree Row would reduce visual quality from high to moderate. Because the SR 152 (North) to Road 11 Wye Alternative would cross Robertson Boulevard only once in an area where both travelers and residents with a moderately high to high

viewer response are present, and would disturb approximately 4,088 linear feet of the tree row this alternative would have the second greatest impact on visual resources, the same as the SR 152 (North) to Road 19 Wye Alternative.

CEQA Conclusion

The impact under CEQA would be significant for the SR 152 (North) to Road 11 Wye Alternative because it would substantially damage the Robertson Boulevard Tree Row by removing trees where the HSR would cross the roadway, disrupting the continuous line of palm trees along Robertson Boulevard. The tree row is identified as an important visual resource in the Madera County and Chowchilla general plans. The Authority would implement mitigation measures to limit the degradation of visual quality. AVR-MM#3 would adapt the design of the HSR structures through incorporating design features and landscaping to reinforce Robertson Boulevard as a gateway to Chowchilla. AVR-MM#4 would provide landscaping to screen the HSR from residential areas, reducing views to the contrasting HSR infrastructure. AVR-MM#5 would replant unused portions of land acquired for the HSR project, providing replacement palms where possible to reduce gaps in the historic tree row created during HSR construction. AVR-MM#6 would provide landscaping for HSR overcrossing and retained fills, softening the contrast with the existing landscape. These mitigation measures would help reinforce Robertson Boulevard as a gateway to Chowchilla by providing landscaping and design features at the SR 152/Robertson Boulevard interchange and along Robertson Boulevard, but they would not fill in all the gaps in the tree row at the interchange and or at the HSR crossing of Robertson Boulevard adjacent to SR 152. Even with implementation of these measures, the visual presence of the tree row would be diminished; therefore, the impact under CEQA would remain significant.

Impact AVR#5: Decreased Visual Quality in the Fairmead Landscape Unit

SR 152 (North) to Road 13 Wye Alternative

The SR 152 (North) to Road 13 Wye Alternative would pass within 0.25 mile of concentrations of residences north of the community Fairmead. HSR infrastructure would introduce permanent changes to the aesthetic and visual quality of existing residential views that would contrast with the rural and agricultural setting. Neatly fenced HSR tracks, lines of overhead catenary system, berms, and embankments rising from the flat landscape, and overcrossings and viaducts for HSR and roadways would impart an industrial or urban aesthetic to the landscape.

Design standards for the HSR infrastructure would include approaches to integrate structures within a community and reduce the intrusiveness of large, elevated structures and berms on residential views (AVR-IAMF#1). While the design characteristics of the Central Valley Wye alternatives would lessen the intrusiveness, they would not avoid the loss of residential views from HSR infrastructure rising above the landscape. As fill material for berms and embankments to support HSR tracks or roadways approaching HSR grade separations rises above the natural grade of the landscape, it would block views from adjacent viewpoints and become a feature of the landscape. Sensitive viewers such as nearby residents would be permanently affected by high berms altering the character of their surrounding by introducing a long and solid form that would block views from their homes, such as distant views to the Sierra Nevada range. Examples of this impact are provided in the *Merced to Fresno Section: Central Valley Wye Aesthetics and Visual Quality Technical Report* (Authority and FRA 2016: Section 6.1.1.5); and KVP 5 and KVP 6, both in the community of Fairmead. KVP 6 is shown in Figure 3.16-23.

The SR 152 (North) to Road 13 Alternative would degrade visual quality for residential viewers, including the loss of distant scenic views. The Central Valley Wye alternatives would include design standards to integrate structures within a community and to reduce intrusiveness of large structures, which would reduce but not avoid loss of views. The Authority would implement mitigation measures to minimize the impacts on residential views. As part of AVR-MM#4, the Authority or its contractors, prior to the commencement of HSR operations, would provide landscape screening to obscure HSR infrastructure from residential viewers. As part of AVR-MM#5, lands acquired for the Central Valley Wye alternatives that are not used for the HSR would be replanted or replaced with similar vegetation that, upon maturity, would be similar in size and character to the removed vegetation. This would minimize the aesthetic and visual

impacts of land made fallow, because it would replace vegetation removed during construction and enhance the visual appeal of areas in proximity to HSR infrastructure, thereby reducing the resulting area, scale, and exposure to decreased visual quality. As part of AVR-MM#6, the Authority or its contractors, prior to the commencement of HSR operations, would provide landscaping along overcrossings and retained fill elements of the HSR. These mitigation measures would soften and obscure the conflicting aesthetic of the HSR infrastructure, but they would not return views lost to HSR construction.

Source: Architecture 21, 2016

Figure 3.16-23 KVP 6: Photosimulation, Fairmead, Avenue 23 near Road 19 1/2 (eastward view)

Because the SR 152 (North) to Road 13 Wye Alternative would affect visual resources through an area where many residents with a high viewer response are present, it would have a greater impact on visual resources than the SR 152 (North) to Road 11 Wye and Avenue 21 to Road 13 Wye Alternatives, but less of an impact than the SR 152 (North) to Road 19 Wye Alternative.

CEQA Conclusion

The impact under CEQA would be significant because the SR 152 (North) to Road 13 Wye Alternative would result in the loss of distant scenic views for residential viewers, thereby substantially degrading the existing visual character or quality of the Fairmead Landscape Unit and its surroundings. The Central Valley Wye alternatives include design standards to integrate structures within a community and to reduce intrusiveness of large structures, which would reduce but not avoid loss of views. The Authority would implement mitigation measures to minimize the impacts on residential views. As part of AVR-MM#4, the Authority or its contractors, prior to the commencement of HSR operations, would provide landscape screening to obscure HSR infrastructure from residential viewers. As part of AVR-MM#5, lands acquired that are not used for the HSR would be replanted or replaced with similar vegetation that, upon maturity, would be similar in size and character to the removed vegetation. This would minimize the aesthetic and visual impacts of land made fallow because it would replace vegetation removed during construction and enhance the visual appeal of areas in proximity to HSR infrastructure, thereby reducing the resulting area, scale, and exposure to decreased visual quality. As part of AVR-MM#6, the Authority or its contractors, prior to the commencement of HSR operations,

would provide landscaping along overcrossings and retained fill elements of the HSR. These mitigation measures would soften and obscure the conflicting aesthetic of the HSR infrastructure, but they would not return views blocked by the Central Valley Wye alternatives. Therefore, the impact under CEQA would remain significant.

SR 152 (North) to Road 19 Wye Alternative

The SR 152 (North) to Road 19 Wye Alternative would pass within 0.25 mile of concentrations of residences north of the community Fairmead. This alternative would have similar impacts on visual resources as the SR 152 (North) to Road 13 Wye Alternative, with the same IAMFs incorporated and mitigations implemented, but as the alternative would be in the Fairmead Landscape Unit, there would be a greater distance of the alternative passing through the landscape unit, with more subsequent impacts on visual resources, including a greater distance of berms blocking distant views and more elevated structures contrasting with the rural and residential setting. Therefore, the SR 152 (North) to Road 19 Wye Alternative would have the greatest impact of the Central Valley Wye alternatives.

CEQA Conclusion

The impact under CEQA would be significant because the SR 152 (North) to Road 19 Wye Alternative would result in the loss of distant scenic views for residential viewers, thereby substantially degrading the existing visual character or quality of the Fairmead Landscape Unit and its surroundings. The Central Valley Wye alternatives would include design standards to integrate structures within a community and to reduce intrusiveness of large structures, which would reduce but not avoid loss of views. The Authority would implement mitigation measures to minimize the impacts on residential views. As part of AVR-MM#4, the Authority or its contractors, prior to the commencement of HSR operations, would provide landscape screening to obscure HSR infrastructure from residential viewers. As part of AVR-MM#5, lands acquired for the Central Valley Wye alternatives that are not used for the HSR would be replanted or replaced with similar vegetation that, upon maturity, would be similar in size and character to the removed vegetation. This would minimize the aesthetic and visual impacts of land made fallow because it would replace vegetation removed during construction and enhance the visual appeal of areas in proximity to HSR infrastructure, thereby reducing the resulting area, scale, and exposure to decreased visual quality. As part of AVR-MM#6, the Authority or its contractors, prior to the commencement of HSR operations, would provide landscaping along overcrossings and retained fill elements of the HSR. These mitigation measures would soften and obscure the conflicting aesthetic of the HSR infrastructure, but they would not return views blocked by the Central Valley Wye alternatives. Therefore, the impact under CEQA would remain significant.

Avenue 21 to Road 13 Wye Alternative

The Avenue 21 to Road 13 Wye Alternative would not pass through the Fairmead Landscape Unit; therefore, it would have no impact, the least impact of the Central Valley Wye alternatives.

CEQA Conclusion

There would be no impact under CEQA because the Avenue 21 to Road 13 Wye Alternative would not pass through the Fairmead Landscape Unit. Therefore, CEQA does not require any mitigation.

SR 152 (North) to Road 11 Wye Alternative

The SR 152 (North) to Road 11 Wye Alternative would follow the same alignment as the SR 152 (North) to Road 13 Wye Alternative through the Fairmead Landscape Unit, resulting in the same impacts on visual resources.

CEQA Conclusion

The impact under CEQA would be significant because the SR 152 (North) to Road 11 Wye Alternative would be the same as described for the SR 152 (North) to Road 13 Wye Alternative. The Authority would implement the same mitigation measures identified for the SR 152 (North) to Road 13 Wye Alternative to minimize visual impacts in the Fairmead Landscape Unit. These mitigation measures would soften and obscure the conflicting aesthetic of the HSR infrastructure, but they would not return views blocked by the Central Valley Wye alternatives. Therefore, the impact under CEQA would remain significant.

Impact AVR#6: Visual Quality Changes in the Freeway and Expressway Landscape Unit

SR 152 (North) to Road 13 Wye Alternative

The SR 152 (North) to Road 13 Wye Alternative would run parallel to SR 152 for almost 16 miles from SR 59 to SR 99 in Merced and Madera Counties. See KVP 9 (Figure 3.16-24). Closing existing intersections and providing new interchanges at major crossroads would increase the overall visual intactness and unity of the freeway corridor from moderately high to high. Removing the intersections would visually reinforce the long views down the corridor by removing visual distractions. Additionally, the line of the HSR overhead contact system along the north side of the highway would focus and reinforce the long view down the highway. Overall, visual quality would increase from moderately high to high. When the new interchanges are constructed and existing at-grade intersections closed, making the freeway operational, travelers would have increased viewer sensitivity because they would not need to focus on potential cross traffic, increasing their ability to view the passing landscape. The HSR, running parallel to the freeway for almost 16 miles, would result in a high visual exposure because of the extended period of time travelers would be driving adjacent to, and viewing, the HSR.

Source: Architecture 21, 2016

Figure 3.16-24 KVP 9: Photosimulation, SR 152 near Kingwood Road/Road 6 (eastward view)

Where the wye for the SR 152 (North) to Road 13 Wye Alternative occurs, the HSR viaduct would be a prominent feature within 0.25 mile. It would be similar in appearance but much taller and longer than roadway overcrossing structures commonly encountered by motorists in the RSA, reducing the overall visual quality from moderately high to moderate. Motorists would be the primary affected viewer group. In general, motorists have a low sensitivity to changes in visual quality and a short exposure to the view, as they would be traveling at highway speeds, resulting in a low viewer response. The decrease in visual quality and the increased viewer response would only occur for a short distance along the SR 152 roadway where the HSR viaduct is visible.

However, the visual quality would be enhanced for the majority of the distance HSR would run parallel to SR 152, approximately 16 miles between SR 59 and SR 99. The enhancement of the view down the highway for travelers on SR 152, created by the elimination of distracting at-grade intersections and the addition of the adjacent, parallel HSR infrastructure that would reinforce the long view down the highway resulting in an overall increase in visual quality and viewer response for the Freeway and Expressway Landscape Unit.

The Site 7 – Wilson, Wilson Substation would undergo a reconfiguration within the fence line of the existing substation which would not be perceptible to motorists in the area. The Site 7 – Wilson, 230 kV Tie-Line would be located adjacent to existing electrical power and transmission lines; therefore, it would be similar in mass and form to the existing environment and would not be

discernable to motorists in the area. The lattice steel telecommunication microwave tower at the Site 7 – Wilson Traction Power Substation is consistent in mass and form with the open-truss communications tower that was previously analyzed in the Merced to Fresno Final EIR/EIS. Accordingly, the impact determination to aesthetics and visual resources from this additional piece of equipment would not change.

The SR 152 (North) to Road 13 Wye Alternative would include a complete wye, with viaducts to carry tracks across the HSR line for both legs of the wye, immediately adjacent to the highway. As a result, it would have the same level of enhanced visual effect as the SR 152 (North) to Road 11 Wye Alternative, but would have less of a visual improvement relative to the SR 152 (North) to Road 19 Wye Alternative.

CEQA Conclusion

The impact under CEQA would be less than significant because introduction of HSR infrastructure would increase visual quality because of the prominence of the view down the highway for travelers on SR 152, enhanced by parallel HSR infrastructure that would reinforce the long view down the highway. Visual quality would also increase because of the elimination of distracting at-grade vehicular intersections where drivers need to scan cross traffic for dangerous conditions. With at-grade vehicular intersections replaced by highway interchanges and overcrossings, travelers would have a greater exposure the passing landscape. Therefore, CEQA does not require any mitigation.

SR 152 (North) to Road 19 Wye Alternative

The SR 152 (North) to Road 19 Wye Alternative follows the same alignment along SR 152 as the SR 152 (North) to Road 13 Wye Alternative. The wye for the SR 152 (North) to Road 19 Wye Alternative includes only viaduct for the western leg of the alternative's wye immediately adjacent to the highway, resulting in a greater visual quality than the SR 152 (North) to Road 13 Wye or SR 152 (North) to Road 11 Wye Alternatives.

In the view depicted in KVP 10 (Figure 3.16-25), the San Jose to Fresno Section leg of the SR 152 (North) to Road 19 Wye Alternative would run adjacent to the expressway, on its north (right) side, on a rising embankment. The San Jose to Merced Section leg of the wye would be visible rising and crossing the HSR mainline. Road 17-1/2 would descend below grade to pass under SR 152. SR 152 would remain at grade, passing over the depressed Road 17-1/2 on parallel structures. This would preserve the expansive vista of open fields to the south (left) side and down the highway.

Views to the north would be blocked by the HSR embankment and viaduct.

Source: Architecture 21, 2016

Figure 3.16-25 KVP 10: Photosimulation, SR 152 near Road 17-1/2 (westward view)

As shown by the simulated view, the HSR viaduct would be a prominent feature within 0.25 mile. It would be similar in appearance but much taller and longer than roadway overcrossing structures commonly encountered by motorists in the aesthetics and visual resources RSA, dropping the intactness of the view from moderately high to moderate, and bringing the overall visual quality from moderately high to moderate. Motorists would be the primary affected viewer group. In general, motorists have a low sensitivity to changes in visual quality and a short-duration view, which would result in a low viewer response, but given the distance that the elevated viaduct would run parallel to the highway, the length of time viewers would see the structure would increase viewer exposure to the SR 152 (North) to Road 19 Wye Alternative. Overall viewer response would be moderate. The decrease in visual quality and the increased viewer response would only occur for a short distance along the SR 152 roadway where the HSR viaduct is visible.

However, the visual effect would be enhanced for the majority of the distance HSR parallels SR 152, approximately 16 miles between SR 59 and SR 99. The enhancement of the view down the highway for travelers on SR 152, created by the elimination of distracting at-grade intersections and the addition of the adjacent, parallel HSR infrastructure that would reinforce the long view down the highway resulting in an overall increase in visual quality and viewer response for the Freeway and Expressway Landscape Unit.

The southernmost 2.3 miles of the existing Site 7—Le Grand Junction/Sandy Mush Road, Warnerville–Wilson 230 kV Transmission Line, associated with the SR 152 (North) to Road 19 Wye alternative, would also be reconductored within the Freeway and Expressway Landscape Unit. However, as disclosed in Impact AVR#3, the change in structure height would be a 29–32 percent increase (102–111 feet tall) compared to the existing height of the structures (77–86 feet tall), which would occur to the highest and narrowest point of the self-supporting lattice steel structure with the new self-supporting lattice steel structures being of similar mass and form of the existing self-supporting lattice steel structures. This minor, incremental visual change would not be perceptible by motorists.

CEQA Conclusion

The impact under CEQA would be less than significant because introduction of HSR infrastructure would increase visual quality, related to the prominence of the view down the highway for travelers on SR 152, enhanced by parallel HSR infrastructure that would reinforce the

long view down the highway and because of the elimination of distracting at-grade intersections. Therefore, CEQA does not require any mitigation.

Avenue 21 to Road 13 Wye Alternative

The Avenue 21 to Road 13 Wye Alternative would not run adjacent to SR 152, and therefore SR 152 would remain an expressway with at-grade crossings as in its existing condition with no increase in visual quality. Where the HSR would cross SR 152 and SR 99, the long form of the HSR viaduct, stretching to the far edges of the view in a straight line, would also be complementary to the lines and forms of the freeway. Figure 3.16-26 shows where the alignment would cross SR 99 south of Fairmead. Overall visual quality would not be affected. The scale of the viaduct and approach embankment would be visible from a long distance on the highway, increasing motorists' duration of exposure to the Central Valley Wye alternatives from low to high, resulting in a moderate overall viewer response.

Source: Architecture 21, 2016

Figure 3.16-26 KVP 12: Photosimulation, SR 99 near Avenue 21 (frontage road looking southward)

Where the Avenue 21 to Road 13 Wye Alternative would cross over SR 99 and SR 152, the presence of the HSR viaduct would be complementary to the lines and forms of the freeway and overall visual quality would not be affected. Because the Avenue 21 to Road 13 Wye Alternative would not parallel SR 152, viewer exposure to the alternative would be the least of all Central Valley Wye alternatives, with none of the positive impacts on visual resources described for the other alternatives, resulting in no impact on visual resources.

CEQA Conclusion

The impact under CEQA would be less than significant for the Avenue 21 to Road 11 Wye Alternative because there would be no substantial degradation of existing visual character. The presence of the HSR viaduct where it crosses SR 99 and SR 152 would be complementary to the lines and forms of the freeway, and overall visual quality would not be affected. Therefore, CEQA does not require any mitigation.

SR 152 (North) to Road 11 Wye Alternative

The SR 152 (North) to Road 11 Wye Alternative would follow the same alignment along SR 152 as the SR 152 (North) to Road 13 Wye Alternative and would result in the same impacts. This alternative is also similar to the SR 152 (North) to Road 13 Wye Alternative in that it would include a wye with viaducts for both legs immediately adjacent to the highway, and therefore would have less of a visual improvement than the SR 152 (North) to Road 19 Wye Alternative.

CEQA Conclusion

The impact under CEQA would be less than significant for the same reasons described for the SR 152 (North) to Road 13 Wye Alternative. Therefore, CEQA does not require any mitigation.

Operations Impacts

Operations of the Central Valley Wye alternatives would include train passbys as part of regularly scheduled HSR service, as well as inspection and maintenance activities along the track and railroad right-of-way, on structures, fencing, power system, train control, and communications. Operations and maintenance activities are more fully described in Chapter 2. Light from passing trains would be temporary and directed along the guideway, which would not cause glare impacts on nighttime views. Lighting for safety and security at fixed HSR facilities, such as traction power facilities, would incorporate design-related measures, such as shielding and alternating light direction, to avoid and minimize light and glare impacts, while providing adequate general illumination and lighting for safety and security. As a result, operations would not result in impacts on aesthetics and visual resources.

3.16.7 Mitigation Measures

This section identifies several mitigation measures from the Merced to Fresno Final EIR/EIS that would be applied to the Central Valley Wye alternatives. The list has been edited and refined to be specific to the Central Valley Wye alternatives. No additional mitigation measures are identified. The applicable mitigation measures are:

AVR-MM#1: Minimize Visual Disruption from Construction Activities

Prior to construction (any ground disturbing activity) the contractor would prepare a technical memorandum identifying how the project would adhere to local jurisdiction construction requirements (if applicable) regarding construction-related visual/aesthetic disruption. In order to minimize visual disruption, construction would employ the following activities:

- Minimize preconstruction clearing to that necessary for construction.
- Limit the removal of buildings to those that would obstruct project components.
- Preserve existing vegetation, when possible, particularly vegetation along the edge of construction areas that may help screen views.
- After construction, regrade areas disturbed by construction, staging, and storage to original contours and revegetate with plant material similar in replacement numbers and types to that which was removed based upon local jurisdictional requirements. If there are no local jurisdictional requirements, replace removed vegetation at a 1:1 replacement ratio for shrubs and small trees, and a 2:1 replacement ratio for mature trees. For example, if 10 mature trees in an area are removed, replant 20 younger trees that after 5 to 15 years (depending upon the growth rates of the trees) would provide coverage similar to the coverage provided by the trees that were removed for construction.
- To the extent feasible, do not locate construction staging sites within the immediate foreground distance (0 to 500 feet) of existing residential, recreational, or other high-sensitivity receptors. Where such siting is unavoidable, staging sites would be screened from sensitive receptors using appropriate solid screening materials such as temporary fencing and walls. Any graffiti or visual defacement of temporary fencing and walls would be painted over or removed within 5 business days.
- The technical memorandum would be submitted to the Authority for review and approval.

This mitigation measure would be effective in minimizing the aesthetic and visual impacts of construction activities because it would reduce the resulting area, scale, and exposure to decreased visual quality.

Secondary impacts of this mitigation would be blocked views where screening is placed in locations where views were previously available to residents and other sensitive viewers. Where

the screening is placed around temporary activities, such as material yards, and removed after construction is complete, the impact would be temporary, as the view would be restored. Where screening is placed in front of construction of berms or other permanent HSR infrastructure, the impact of the screening would also be temporary, but when the screening is removed, the view would be blocked by the permanent infrastructure.

AVR-MM#2: Minimize Light Disturbance during Construction

Prior to any ground disturbing activity requiring nighttime construction, the contractor would prepare a technical memorandum verifying how the contractor would shield nighttime construction lighting and direct it downward in such a manner to minimize the light that falls outside the construction site boundaries.

The technical memorandum would be submitted to the Authority for review and approval.

This mitigation measure would minimize the aesthetic and visual impacts of nighttime construction light spillover to nearby viewer groups.

Implementation of this mitigation measure would have environmental impacts because it would not change the scope, scale, or location of construction activities beyond those that have been described as part of the Central Valley Wye alternatives.

AVR-MM#3: Incorporate Design Criteria for Elevated Guideways That Can Adapt to Local Context

Prior to construction (any ground disturbing activity) the contractor would prepare a technical memorandum describing how the contractor, partnering with the Authority, coordinated with local jurisdictions on the design of elevated guideways so that they appropriately fit in with the visual context of the areas near them. This would include the following activities:

- For elevated guideways in cities or unincorporated communities: During the elevated guideway design process, establish a process with the city or county with jurisdiction over the land along the elevated guideway to advance the final design through a collaborative, context-sensitive solutions approach. Participants in the consultation process would meet on a regular basis to develop a consensus on the urban design elements that are to be incorporated into the final guideway designs. The process would include activities to solicit community input in the affected neighborhoods.

Actions taken to help achieve integration with the local design context during the context-sensitive solutions process include the following:

- For the elevated guideways and columns, incorporate architectural elements, such as graceful curved or tapered sculptural forms and decorative surfaces, to provide visual interest. Include decorative texture treatments on large-scale concrete surfaces such as parapets and other portions of elevated guideways. Include a variety of texture, shadow lines, and other surface articulation to add visual and thematic interest.
- The designs in cities and unincorporated communities would reflect the results of the context-sensitive solutions design process. During the context-sensitive solutions design process, the HSR project's obligations and constraints related to planning, mitigation, engineering, performance, funding, and operational requirements would be taken into consideration.

The technical memorandum would be submitted to the Authority to document compliance.

This mitigation measure would be effective in minimizing the aesthetic and visual impacts of HSR infrastructure because the implementation of a context-sensitive design process and resulting design elements would enhance the visual landscape, increasing the vividness and unity of the HSR infrastructure and reducing decreased visual quality.

Implementation of this measure would not trigger secondary environmental impacts because it would not change the scope, scale, or location of construction activities beyond those that have been described as part of the Central Valley Wye alternatives.

AVR-MM#4: Provide Vegetation Screening along At-Grade and Elevated Guideways Adjacent to Residential Areas

Prior to operation and maintenance of HSR, the contractor would plant trees along the edges of the HSR rights-of-way in locations adjacent to residential areas to visually screen the elevated guideway and the residential area. The species of trees to be installed would be selected based on their mature size and shape, growth rate, hardiness, and drought tolerance. No species on the Invasive Species Council of California's list would be planted. Upon maturity, the crowns of trees used would be tall enough partially, or fully, to screen views of the elevated guideway from adjacent at-grade areas. Upon maturity, trees would allow ground-level views under the crowns (with pruning if necessary) and would not interfere with the 15-foot clearance requirement for the guideway. The trees would be maintained and irrigation systems would be installed within the tree planting areas by the Authority.

The contractor would prepare a technical memorandum within 90 days of completing any construction section or segment documenting the species of trees that were incorporated into the edges of the HSR right-of-way adjacent to residential uses. The technical memorandum would be submitted to the Authority to document compliance.

This mitigation measure would be effective in minimizing the aesthetic and visual impacts of HSR infrastructure because it would reduce the contrast between existing views and views of HSR infrastructure. The planting of trees and other vegetation to provide visual relief to sensitive viewers from HSR facilities would introduce new visual features, such as hedgerows, that would block distant views. This mitigation measure is typical of visual treatments applied to similar infrastructure facilities and would be designed in coordination with local jurisdictions. In the context of the flat, open landscape of the RSA, the planting of flora to block views of the HSR facilities would reduce the extent of the visual contrast between the industrial aesthetic of the HSR and the surrounding rural/agricultural area, but the flora would also block views that were previously open.

Impacts from this mitigation would be blocked views where screening is placed in locations where views were previously available to residents and other sensitive viewers, resulting in a permanent impact.

AVR-MM#5: Replant Unused Portions of Lands Acquired for the HSR

Prior to operation and maintenance, the Authority would plant vegetation within lands acquired for the project (e.g., shifting roadways) that are not used for the HSR or related supporting infrastructure. Plantings would allow adequate space between the vegetation and the HSR alignment and catenary lines. All street trees and other visually important vegetation removed in these areas during construction would be replaced with similar vegetation that, upon maturity, would be similar in size and character to the removed vegetation. The Authority would make sure that vegetation would be continuously maintained and appropriate irrigation systems would be installed within the planting areas. No species that is listed on the Invasive Species Council of California's list of invasive species would be planted.

This mitigation measure would be effective in minimizing the aesthetic and visual impacts of land made fallow because it would replace vegetation removed during construction and enhance the visual appeal of areas in proximity to HSR infrastructure, thereby reducing the resulting area, scale, and exposure to decreased visual quality.

Implementation of this measure is not anticipated to trigger secondary environmental impacts as new vegetation would primarily be replacing old vegetation and would not affect visual quality or other resources.

AVR-MM#6: Landscape Treatments along the HSR Overcrossings and Retained Fill Elements

During final design, the Authority would consult with cities and counties regarding the landscaping program for planting the slopes of the overcrossings and retained fill. Within 90 days from the completion of construction, the contractor would plant the surface of the ground below

overpasses (slope-fill overpasses) and retained fill elements with plant species that are consistent with the surrounding landscape (in terms of vegetative type, color, texture, and form) and based on their mature size and shape, growth rate, and drought tolerance. No species on the Invasive Species Council of California's list would be planted. The landscaping would be continuously maintained and appropriate irrigation systems would be installed if needed by the Authority.

Where wall structures supporting the overpass or retained fill are proposed, architectural details, low-maintenance trees, and other vegetation would be employed to screen the structure, minimize graffiti, and reduce the effects of large walls. Surface coatings would be applied on wood and concrete to facilitate cleaning and the removal of graffiti. Any graffiti or visual defacement or damage of fencing and walls would be painted over or repaired by the Authority within a reasonable time (approximately 10 business days) after notification.

The contractor would prepare a technical memorandum documenting implementation and submit the memorandum to Authority to document compliance.

This mitigation measure would be effective in minimizing the aesthetic and visual impacts of HSR infrastructure because it would reduce the visual impact on sensitive viewers resulting from the contrast between existing views and views of high-speed rail infrastructure.

Impacts of this mitigation would be blocked views where screening is placed in locations where views were previously available to residents and other sensitive viewers, resulting in a permanent impact.

3.16.8 Impacts Summary for NEPA Comparison of Alternatives

This section summarizes the impacts of the Central Valley Wye alternatives and compares them to the anticipated impacts of the No Project Alternative. Table 3.16-4 provides a comparison of the potential impacts of each of the Central Valley Wye alternatives, summarizing the more detailed information provided in Section 3.16.6. A comparison of the impacts on aesthetic and visual resources of the different Central Valley Wye alternatives follows Table 3.16-4.

As discussed in Chapter 2, under the No Project Alternative, development pressures resulting from an increasing population in Merced and Madera Counties would continue to lead to associated direct and indirect impacts on aesthetic and visual resources. Many of the development projects anticipated to occur under the No Project Alternative would result in similar types of impacts on aesthetic and visual resources as the Central Valley Wye alternatives. Because a large portion of planned development in the San Joaquin Valley is expected to occur on land that is now in agricultural use, a continued loss of the rural visual landscape in the region would occur under the No Project Alternative. These projects would also increase sources of evening light and glare that could degrade nighttime views. However, cities and counties in the region would evaluate the aesthetic impacts of projects in the course of environmental review and require that projects incorporate visual measures to mitigate for impacts. The No Project Alternative would include the widening and expansion of SR 99 and development patterns associated with projected growth. Widening transportation corridors does not necessarily degrade a corridor's visual quality, but the indirect effects of opening adjacent lands to freeway-oriented commercial development, to the extent permitted by local agencies, and increasing the amount of billboard-type signage, could include the incremental degradation of expansive views toward the existing agricultural landscape from the Freeway and Expressway Landscape Unit.

Table 3.16-4 Comparison of Central Valley Wye Alternative Impacts

Impacts	SR 152 (North) to Road 13 Wye	SR 152 (North) to Road 19 Wye	Avenue 21 to Road 13 Wye	SR 152 (North) to Road 11 Wye
Construction				
Impact AVR#1: Degraded Visual Quality for Residential Viewers during Construction	Would affect the most residential viewers	Would affect residential viewers	Would affect the least residential viewers	Would affect residential viewers
Impact AVR#2: Decreased Visual Quality in the San Joaquin River Landscape Unit				
Viewer Group Impacts	Would affect fewer viewer groups than Avenue 21 to Road 13	Would affect fewer viewer groups than Avenue 21 to Road 13	Would affect the greatest number of viewer groups	Would affect fewer viewer groups than Avenue 21 to Road 13
Visual Quality – Existing	Moderate			
Visual Quality – With Project	Low	Low	Low	Low
Viewer Response – Existing	Moderately Low			
Viewer Response – With Project	Moderately Low	Moderately Low	Moderately Low	Moderately Low
Impact AVR#3: Decreased Visual Quality in the Rural Agricultural Landscape Unit				
Viewer Group Impacts	Would affect the fewest number of viewer groups	Would affect the second fewest number of viewer groups	Would affect the greatest number of viewer groups	Would affect the second greatest number of viewer groups
Visual Quality – Existing	Moderate			
Visual Quality – With Project	Moderately Low	Moderately Low	Moderately Low	Moderately Low
Viewer Response – Existing	Moderately Low			
Viewer Response – With Project	Moderately Low	Moderately Low	Moderately Low	Moderately Low
Impact AVR#4: Decreased Visual Quality in the Robertson Boulevard Landscape Unit				
Viewer Group Impacts	Would affect the greatest number of viewer groups	Would affect fewer viewer groups than the SR 152 (North) to Road 13 Wye Alternative	Would affect the fewest number of viewer groups	Would affect fewer viewer groups than the SR 152 (North) to Road 13 Wye Alternative
Visual Quality – Existing	High			
Visual Quality – With Project	Moderate	Moderate	Moderately High	Moderate

Impacts	SR 152 (North) to Road 13 Wye	SR 152 (North) to Road 19 Wye	Avenue 21 to Road 13 Wye	SR 152 (North) to Road 11 Wye
Viewer Response – Existing	Moderately High	Moderately High	Moderately Low	Moderately High
Viewer Response – With Project	Moderately High	Moderately High	Moderately Low	Moderately High
Impact AVR#5: Decreased Visual Quality in the Fairmead Landscape Unit				
Viewer Group Impacts	Would affect fewer residential viewers than the SR 152 (North) to Road 19 Wye Alternative	Would affect the greatest number of residential viewers	No effect	Would affect fewer residential viewers than the SR 152 (North) to Road 19 Wye Alternative
Visual Quality – Existing	Moderate	Moderate	Not applicable	Moderate
Visual Quality – With Project	Moderate	Moderate	Not applicable	Moderate
Viewer Response – Existing	High	High	Not applicable	High
Viewer Response – With Project	High	High	Not applicable	High
Impact AVR#6: Visual Quality Changes in the Freeway and Expressway Landscape Unit				
Visual Improvements	Would result in less visual improvement than the SR 152 (North) to Road 19 Wye Alternative	Would result in the greatest visual improvement	No effect	Would result in less visual improvement than the SR 152 (North) to Road 19 Wye Alternative
Visual Quality – Existing	Moderately High			
Visual Quality – With Project	High	High	Moderate	High
Viewer Response – Existing	Low			
Viewer Response – With Project	Moderately Low	Moderately Low	Low	Moderately Low

Source: Authority and FRA, 2018
Note: Visual Quality/Viewer Response scale, from low to high: Low, Moderately Low, Moderate, Moderately High, High

The Merced to Fresno Final EIR/EIS concluded that development of the HSR system would result in potential impacts on aesthetic and visual resources. The Merced to Fresno Final EIR/EIS (Authority and FRA 2012: page S-17) concluded that the HSR system would cause temporary visual disturbance during construction, including new sources of light and glare, and would introduce permanent visual nuisance in some areas adjacent to residential and historic resources.

The Central Valley Wye alternatives would incorporate IAMFs that would avoid, minimize, and reduce impacts on aesthetic and visual resources. These IAMFs would design guidelines established to create a minimum aesthetic quality for a long-lasting infrastructure and minimize impacts on aesthetic and visual resources. However, infrastructure that would block or alter views and introduce features that contrast in scale and materials with the existing environment would require mitigation where responsive viewers are present.

Temporary impacts from construction activities along the HSR alignment would result in dust and material stockpiles that could create an untidy appearance, collectively degrading the visual unity and intactness of the surroundings. Highly responsive viewers would be substantially affected where construction occurs within 0.25 mile of their viewpoint. The impact would be temporary, occurring only within the construction period.

Implementing the Central Valley Wye alternatives would result in impacts on aesthetic and visual resources from blocking the views of residents and other highly responsive viewers. In the San Joaquin River, Rural Agricultural, and Freeway and Expressway Landscape Units, with few residences and therefore few highly responsive viewers, the impacts for all alternatives would be minimal.

The SR 152 (North) to Road 13, SR 152 (North) to Road 19, and SR 152 (North) to Road 11 Wye alternatives would introduce permanent changes to the aesthetic and visual quality, affecting sensitive viewers such as residential viewers in the Robertson Boulevard and Fairmead Landscape Units. Neatly fenced HSR tracks; lines of overhead catenary system poles and overhead power and transmission lines, substations and switching stations, berms, and embankments rising from the flat landscape; and overcrossings and viaducts for HSR and roadways would impart an industrial or urban aesthetic to the landscape. As fill material for berms and embankments to support future HSR tracks or roadways approaching HSR grade separations rises above the natural grade of the landscape, it would block views from adjacent viewpoints and become a feature of the landscape. Sensitive viewers such as nearby residents would be permanently affected by high berms altering the character of their surrounding by introducing a long and solid form that would block views from their homes, such as distant views to the Sierra Nevada range.

The Avenue 21 to Road 13 Wye Alternative would also introduce permanent changes to the aesthetic and visual quality, similar to those described above, affecting sensitive viewers such as residential viewers, but the alternative's impact would be lower than the others in the Robertson Boulevard Landscape Unit, as the Avenue 21 to Road 13 Wye Alternative passes through the landscape unit in a location with fewer residences. It would have no impact in the Fairmead Landscape Unit, as it does not pass through that landscape unit.

All Central Valley Wye alternatives would result in the permanent alteration of historic Robertson Boulevard Tree Row in the Robertson Boulevard Landscape Unit.

- The SR 152 (North) to Road 13 Wye Alternative would remove blocks of consecutive trees for construction of HSR grade separations and a new SR 152 interchange at Robertson Boulevard. This would permanently diminish the visual strength of the tree rows lining the roadway, affecting travelers with a moderately high viewer response who are experiencing Robertson Boulevard as a gateway to Chowchilla. Constructing a viaduct across Robertson Boulevard would further diminish views by blocking the long views of the roadway and parallel tree rows. In total, this alternative would disturb approximately 4,516 linear feet of the tree row, and the removal of trees in this area would increase an existing gap in the tree row from approximately 1,700 feet to approximately 3,600 feet.
- The SR 152 (North) to Road 19 Wye Alternative would require reconstruction of the SR 152 interchange at Robertson Boulevard. This alternative would disturb approximately 4,428 linear feet of the tree row located along Robertson Boulevard, affecting travelers with a moderately high viewer response who are experiencing Robertson Boulevard as a gateway to Chowchilla. The removal of trees in this area would increase an existing gap in the tree row from approximately 1,700 feet to approximately 3,600 feet.
- The Avenue 21 to Road 13 Wye Alternative would disturb approximately 5,590 linear feet of the tree row located along Robertson Boulevard, diminishing the visual strength of the tree rows lining the roadway. The removal of trees would create a gap in the tree row approximately 3,600 feet in length in an area where the tree row is currently continuous. The viewer exposure in the affected area would be moderately low because of the relatively low number of travelers.

- The SR 152 (North) to Road 11 Wye Alternative would require reconstruction of the SR 152 interchange at Robertson Boulevard. The new interchange would disturb approximately 4,088 linear feet of the tree row along Robertson Boulevard, affecting travelers with a moderately high viewer response who are experiencing Robertson Boulevard as a gateway to Chowchilla. The removal of trees in this area would increase an existing gap in the tree row from approximately 1,700 feet to approximately 3,600 feet.

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 all run adjacent to SR 152 for almost 16 miles, closing existing intersections and providing new interchanges at major crossroads, which would increase the visual quality of the Freeway and Expressway Landscape Unit. The Avenue 21 to Road 13 Wye Alternative would not run adjacent to SR 152, resulting in no change to visual quality to the Freeway and Expressway Landscape Unit.

3.16.9 CEQA Significance Conclusions

Table 3.16-5 provides a summary of the CEQA determination of significance for all construction and operations impacts discussed in Section 3.16.6.3. Where there are differences in impacts before or after mitigation among the four Central Valley Wye alternatives, it is noted in the table. Where there is no difference in the CEQA level of significance before and after mitigation for a particular impact, the level of significance for that impact is the same for all Central Valley Wye alternatives.

Table 3.16-5 CEQA Significance Conclusions for Aesthetics and Visual Resources for the Central Valley Wye Alternatives

Impacts	Impact Description and CEQA Level of Significance	Mitigation Measure(s)	CEQA Level of Significance after Mitigation
Construction			
Impact AVR#1: Degraded Visual Quality for Residential Viewers During Construction	Significant: Construction activities would degrade visual unity and intactness, affecting responsive viewers for all alternatives	AVR-MM#1: Minimize Visual Disruption from Construction Activities AVR-MM#2: Minimize Light Disturbance during Construction	Less than significant
Impact AVR#2: Decreased Visual Quality in the San Joaquin River Landscape Unit	Less than significant for all alternatives	No mitigation measures are required	Not applicable
Impact AVR#3: Decreased Visual Quality in the Rural Agricultural Landscape Unit	Less than significant for all alternatives	No mitigation measures are required	Not applicable
Impact AVR#4: Decreased Visual Quality in the Robertson Boulevard Landscape Unit	Significant: Removal of historic palms would alter the visual unity of the historic tree row, diminishing the visual presence of the tree row for all alternatives	AVR-MM#3: Incorporate Design Criteria for Elevated Guideways and Station Elements That Can Adapt to Local Context AVR-MM#4: Provide Vegetation Screening along At-Grade and Elevated Guideways Adjacent to Residential Areas AVR-MM#6: Landscape Treatments along the HSR Overcrossings and Retained Fill Elements	Significant and unavoidable
Impact AVR#5: Decreased Visual Quality in the Fairmead Landscape Unit	Significant for SR 152 (North) to Road 13 Wye, SR 152 (North) to Road 19 Wye, and SR 152 (North) to Road 11 Wye Alternatives: HSR infrastructure would block views and contrast in scale and material with residential environment, affecting highly responsive viewers for SR 152 (North) to Road 13 Wye, SR 152 (North to Road 19 Wye, and SR 152 (North) to Road 11 Wye alternatives	AVR-MM#4: Provide Vegetation Screening along At-Grade and Elevated Guideways Adjacent to Residential Areas AVR-MM#5: Replant Unused Portions of Lands Acquired for the HSR AVR-MM#6: Landscape Treatments along the HSR Overcrossings and Retained Fill Elements	Significant and unavoidable
	No impact for Avenue 21 to Road 13 Wye Alternative	No mitigation measures are required	Not applicable

Impacts	Impact Description and CEQA Level of Significance	Mitigation Measure(s)	CEQA Level of Significance after Mitigation
Impact AVR#6: Visual Quality Changes in the Freeway and Expressway Landscape Unit	Less than significant for all alternatives	No mitigation measures are required	Not applicable

Source: Authority and FRA, 2018