

4 DRAFT SECTION 4(f)/6(f) EVALUATIONS

This section provides an analysis of Section 4(f)-protected resources associated with the Bakersfield to Palmdale Project Section (B-P) of the California High-Speed Rail (HSR) System.

Summary of Results

The California High-Speed Rail Authority (Authority) has made a preliminary finding of *de minimis* impact for the Pacific Crest Trail and Dr. Robert C. St. Clair Parkway under all four B-P Build Alternatives. Construction of all four B-P Build Alternatives, including the Preferred Alternative (Alternative 2), would result in a use of the Big Creek Hydroelectric System Historic District (BCHSHD). The Authority has preliminarily concluded that none of the B-P Build Alternatives would result in a use of the Nuestra Señora Reina de La Paz/César E. Chávez National Monument (La Paz). The Authority also has preliminarily concluded that temporary construction impacts on several Section 4(f)-protected properties meet the criteria for a “temporary occupancy exception,” which means there would be no use of those properties.

Under Alternative 5, a permanent use would also occur at Whit Carter Park and the National Register of Historic Places (NRHP) eligible Denny’s Restaurant #30 (Village Grille).

Based on review of the California Department of Parks and Recreation¹ and National Park Service (NPS) websites,² there are no Section 6(f) properties in the resource study area (RSA) for the B-P Build Alternatives.

The No Project Alternative would not include the construction of the HSR project or any associated facilities and, therefore, would have no effect on any Section 4(f) resources associated with the construction and operation of the HSR.

4.1 Introduction

This chapter provides the analysis to support preliminary determinations to comply with the provisions of U.S. Code (U.S.C.) Title 49, §303 (hereinafter referred to as “Section 4(f)”).

Under Section 4(f), an operating agency of the U.S. Department of Transportation may not approve a project that uses protected resources unless there are no prudent or feasible alternatives to such use (permanent, temporary, or constructive) and the project includes all possible planning to minimize harm to such resources, or the agency finds that the project has a *de minimis* impact consistent with the requirements of 49 U.S.C. 303(d). Section 4(f) resources are publicly owned lands of a park, recreation area, or wildlife and waterfowl refuge, or land of a historical site of national, state, or local significance that is listed on or eligible for listing on the NRHP, as determined by the federal, state, regional, or local officials with jurisdiction (OWJ) over the resource. Historic properties may be publicly or privately owned. The State Historic Preservation Officer (SHPO) is the OWJ over historic properties.

This chapter:

- Describes the statutory requirements associated with Section 4(f)
- Identifies the resources in the study area protected by Section 4(f)

¹ California Department of Parks and Recreation, Land and Water Conservation Fund (LWCF) Projects, 1964–2013. www.parks.ca.gov/pages/1008/files/lwcf_all_projects_1964_2013.pdf (accessed September 13, 2016).

² National Park Service. Land and Water Conservation Fund. Project List by County and Summary Reports. <http://waso-lwcf.ncrc.nps.gov/public/index.cfm> (accessed November 2016).

Section 4(f) of the U.S. Department of Transportation Act of 1966 includes special provisions for the approval of a transportation program or project that uses land from publicly owned parks, recreational areas, wildlife and waterfowl refuges, or public and private historic properties.

Section 6(f) of the Land and Water Conservation Fund Act (LWCF) Act includes special provisions for parklands acquired or developed with grants provided to state or local governments under the LWCF Act.

- Preliminarily determines whether the Bakersfield to Palmdale Project Section of the California HSR Project would result in the use of any of those resources
- Identifies feasible and prudent alternatives, to the extent that any exist, that would avoid or minimize the use of those resources
- Identifies measures to minimize harm to resources used by an B-P Build Alternative
- Provides a preliminary least-harm analysis for project alternatives that would result in the use of Section 4(f) resources

Section 6(f) resources are recreation resources created or improved with funds from the LWCF. Land purchased with these funds cannot be converted to a nonrecreational use without approval from with the Department of the Interior, National Park Service (NPS), and mitigation that includes replacement of the quality and quantity of land used.

Additional information on publicly owned parks, recreation lands, wildlife and waterfowl refuges, and historic sites is provided in Section 3.7, Biological Resources and Wetlands; Section 3.15, Parks, Recreation, and Open Space; and Section 3.17, Cultural Resources, in this environmental impact report/environmental impact statement (EIR/EIS) and in the *Bakersfield to Palmdale Project Section: Historic Architectural Survey Report* (California High-Speed Rail Authority [Authority] 2016a). Publicly owned parks and recreation resources, and historic properties evaluated per the requirements of Sections 4(f) are discussed in this chapter. There are no wildlife or waterfowl refuges in the RSA; therefore, evaluation of those types of resource under Section 4(f) is not needed and they are not discussed in this chapter. Evaluation of effects of the B-P Build Alternatives related to biological resources is provided in Section 3.7.

This chapter provides the analysis to support the Authority's preliminary determinations to comply with the provisions of Sections 4(f) and 6(f). Specifically, this chapter describes the statutory requirements associated with Sections 4(f) and 6(f), discusses the methodology for identifying resources protected under Sections 4(f) and 6(f), and makes a preliminary assessment of the impacts of the B-P Build Alternatives on resources protected under Sections 4(f) and 6(f).

4.1.1 Laws, Regulations, and Orders

4.1.1.1 U.S. Department of Transportation Act (23 U.S.C. 138 and 49 U.S.C. 303(c) (Section 4(f))

The U.S. Department of Transportation, including its operating administrations, must comply with Section 4(f) before approving federal funding and/or granting other discretionary approvals for a transportation project. Section 4(f) protects publicly owned parks, recreational areas, and wildlife and waterfowl refuges. Section 4(f) also protects historic sites of national, state, or local significance located on public or private land that are listed on or found eligible for listing on the NRHP.

The Federal Railroad Administration's (FRA) *Procedures for Considering Environmental Impacts* (64 Federal Register 25445) contains the FRA processes and protocols for compliance with the National Environmental Policy Act (NEPA) and other federal laws, including Section 4(f). As of November 28, 2018, the FRA adopted the regulations in 23 Code of Federal Regulations (C.F.R.) Part 774 as FRA's Section 4(f) implementing regulations. The FRA also considers the interpretations provided in the Federal Highway Administration's Section 4(f) Policy Paper (FHWA 2012) when implementing these regulations.

The Authority may not approve the use of a Section 4(f) resource, as described in 49 U.S.C. 303(c), unless it determines that there is no feasible and prudent alternative to avoid the use of the resource and the action includes all possible planning to minimize harm resulting from such use, or the project has a *de minimis* impact consistent with the requirements of 49 U.S.C. 303(d). An alternative is not feasible if it cannot be built as a matter of sound engineering judgment. In determining whether an alternative is not prudent, the Authority may consider if the alternative would result in any of the following:

- Compromise the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need
- Unacceptable safety or operational problems
- After reasonable mitigation, severe social, economic, or environmental impacts; severe disruption to established communities; severe disproportionate impacts on minority or low-income populations; or severe impacts on environmental resources protected under other federal statutes
- Additional construction, maintenance, or operational costs of an extraordinary magnitude
- Other unique problems or unusual factors
- Multiple factors that, while individually minor, cumulatively cause unique problems or impacts of extraordinary magnitude

If the Authority determines that there is both the use of a Section 4(f) resource and no prudent and feasible alternative to the use of a Section 4(f) resource, the Authority must ensure the project includes all possible planning to minimize harm to the resource, which includes all reasonable measures to minimize harm or mitigate impacts (49 U.S.C. 303(c)(2)).

After making a Section 4(f) determination and identifying reasonable measures to minimize harm, if there is more than one alternative that results in the use of a Section 4(f) resource, the Authority must also compare the alternatives to determine which alternative has the potential to cause the least overall harm. The least overall harm may be determined by balancing the following factors:

- The ability to mitigate adverse impacts on each Section 4(f) resource (including any measures that result in benefits to the resource)
- The relative severity of the remaining harm, after mitigation, to the protected activities, attributes, or features that qualify each Section 4(f) resource for protection
- The relative significance of each Section 4(f) resource
- The views of the OWJ(s) over each Section 4(f) resource
- The degree to which each alternative meets the purpose and need for the project
- After reasonable mitigation, the magnitude of any adverse impacts on resources not protected by Section 4(f)
- Substantial differences in costs among the alternatives

4.1.1.2 Section 6(f) of the Land and Water Conservation Fund Act (54 U.S.C. §200305(f) and 36 C.F.R. 59.1) of 1965

State and local governments often obtain grants through the LCWF Act to acquire or make improvements to parks and recreation areas. Section 6(f) of this act prohibits the conversion of property acquired or developed with these grants to a nonrecreational purpose without the approval of the NPS. Section 6(f) specifically directs the NPS to ensure that replacement lands of comparable value and function, location, and usefulness, are provided as conditions to such conversions.

4.1.1.3 National Historic Preservation Act (54 U.S.C. § 300101 et seq. including Section 106 of the NHPA, 54 U.S.C. § 306108)

The National Historic Preservation Act (NHPA), as amended, establishes the federal government policy on historic preservation and the programs, including the NRHP, through which this policy is implemented. Under the NHPA, significant cultural resources, referred to as historic properties, include any prehistoric or historic district, site, building, structure, object, or landscape included in, or determined eligible for inclusion in, the NRHP. Historic properties also include resources determined to be National Historic Landmarks (NHL). NHLs are nationally significant historic places designated by the Secretary of the Interior because they possess exceptional value or

quality in illustrating or interpreting U.S. heritage. A property is considered historically significant if it meets one or more of the NRHP criteria and retains sufficient historic integrity to convey its significance. This act also established the Advisory Council on Historic Preservation, an independent agency responsible for implementing Section 106 of the NHPA by developing procedures to protect cultural resources included in, or eligible for inclusion in, the NRHP. Regulations are published in 36 C.F.R. Parts 60, 63, and 800.

4.1.1.4 Section 110 of the National Historic Preservation Act

Section 110 of the NHPA requires that federal agencies exercise a higher standard of care when considering undertakings that may directly and adversely affect NHLs. The law requires that agencies, “to the maximum extent possible, undertake such planning and actions as may be necessary to minimize harm to such landmark.” Section 110 is not applicable unless an undertaking both “directly and adversely” affects an NHL. Direct effects are considered to include such actions as physical destruction, damage, or encroachment to an NHL.¹

The Secretary of the Interior’s Standards and Guidelines go on to explain that where such alternatives appear to require undue cost or to compromise the undertaking’s goals and objectives, the agency must balance those goals and objectives with the intent of Section 110. In doing so, the agency should consider:

1. The magnitude of the undertaking's harm to the historical, archaeological, and cultural qualities of the NHL
2. The public interest in the NHL and in the undertaking as proposed
3. The effect a mitigation action would have on meeting the goals and objectives of the undertaking

4.1.2 Study Area

The RSA, as defined below, defines the area within which Section 4(f) resources were identified for evaluation.

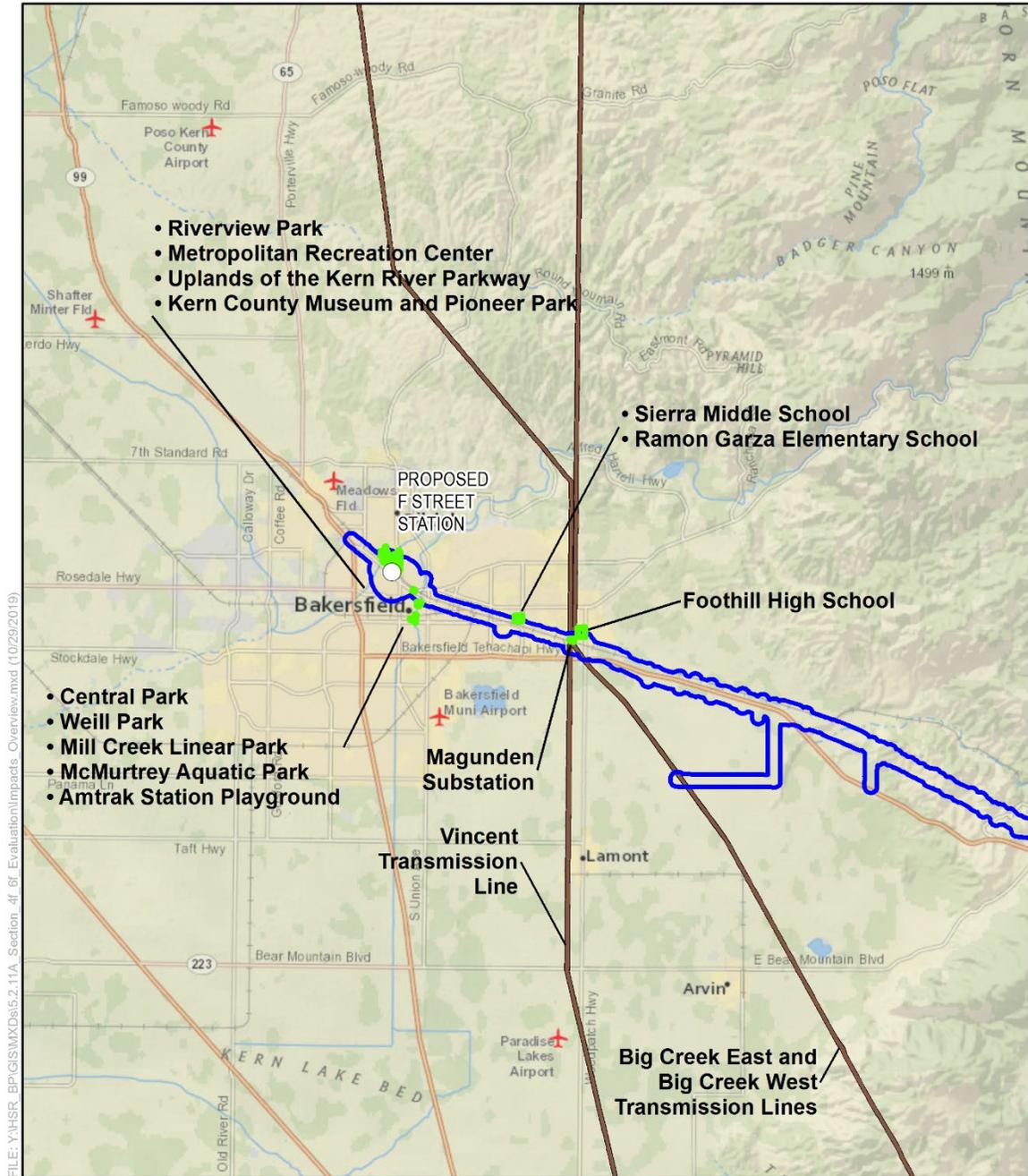
4.1.2.1 Public Park and Recreation Resources

The RSA for publicly owned parks and recreation resources is defined as 1,000 feet on either side of the maximum disturbance limits of the alternative alignments and 0.5 mile around station areas and support facilities for the B-P Build Alternatives. The RSA for park and recreation resources in this Section 4(f) evaluation is shown on Figure 4-1, Resource Study Area for Section 4(f). Section 4.5, provided later in this chapter, discusses resources protected under the requirements of Section 4(f) and provides figures (Figure 4-2, Figure 4-3, Figure 4-4, Figure 4-5, Figure 4-6, Figure 4-7, Figure 4-8, and Figure 4-9) showing the locations of the resources in the RSA for the B-P Build Alternatives.

4.1.2.2 Historic Properties

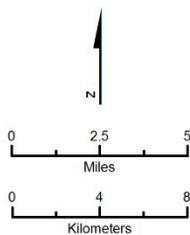
Because this project is a federal undertaking, it must comply with the NHPA. The NHPA implementing regulations at 36 C.F.R. 800.4(a)(1) require the establishment of an Area of Potential Effect (APE). The APE for archaeology is the geographic area or areas within which an undertaking may result in direct impacts; the APE for built resources is generally larger to also take into account potential effects that can occur from changes to physical features of a property’s setting, or the introduction of visual, atmospheric, or audible intrusions that may affect the character or use of historic properties. Therefore, the built resources APE serves as the RSA for Section 4(f) historic properties that are listed on, determined eligible for listing on, or recommended as eligible for listing on the NRHP.

¹ In a letter dated February 15, 2019 to the Authority and FRA, the National Park Service defined a “direct effect” as follows: “direct effects are those that as a direct result of the project will result in an adverse effect” (i.e., that there did not need to be physical destruction, damage, or encroachment to constitute a direct effect).



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PRELIMINARY DRAFT/SUBJECT TO CHANGE - HSR ALIGNMENT IS NOT DETERMINED
 SOURCE: National Geographic (2015); CHSRA (4/2016, 10/2019)



- Resource Study Area (RSA) - Maximum Extent of the RSAs for Alternatives 1, 2, 3, and 5
- Section 4(f) Resource
- Historic District (Big Creek Hydroelectric System Historic District)

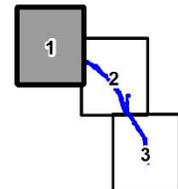


Figure 4-1 Resource Study Area for Section 4(f)

(Sheet 1 of 3)

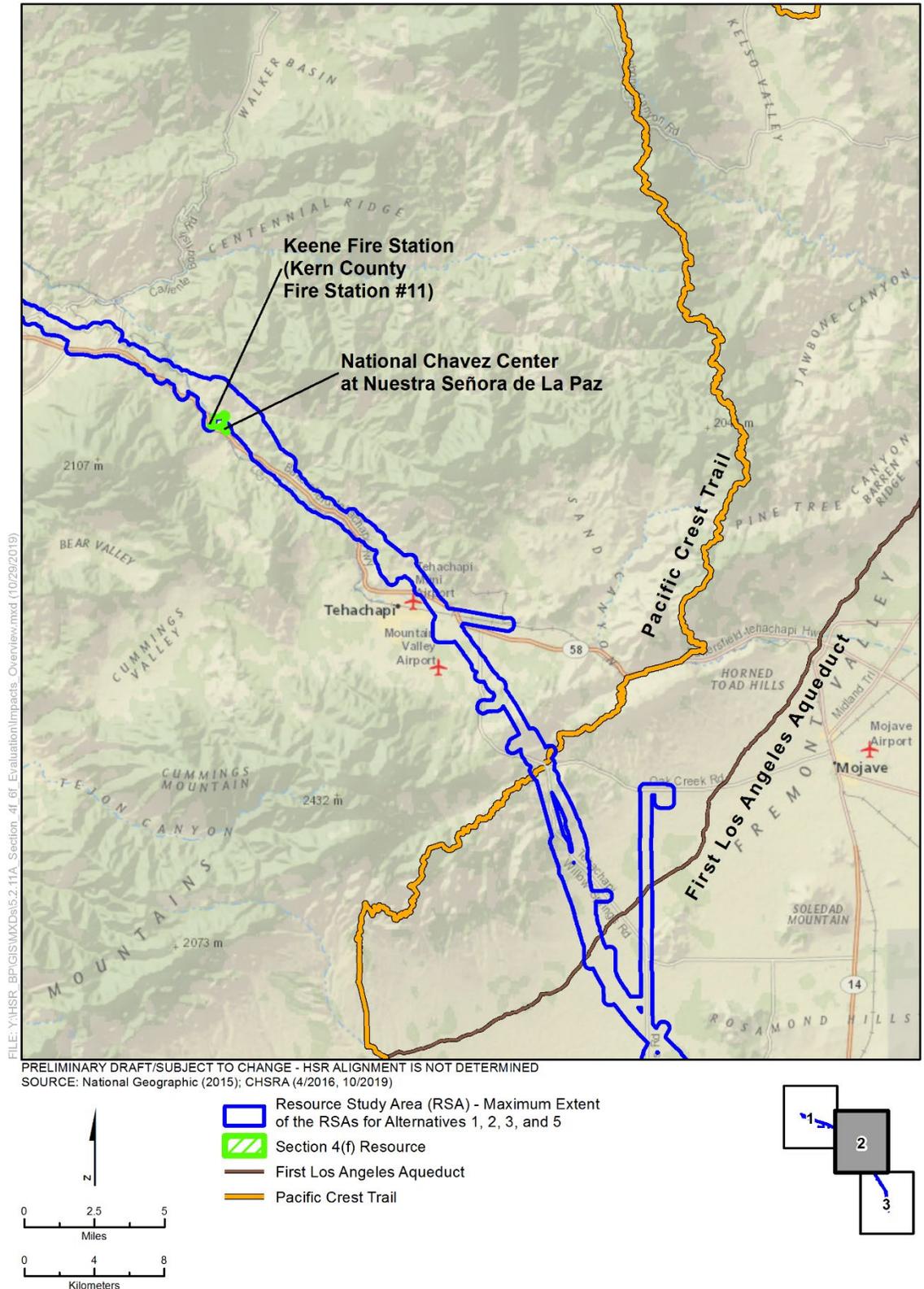
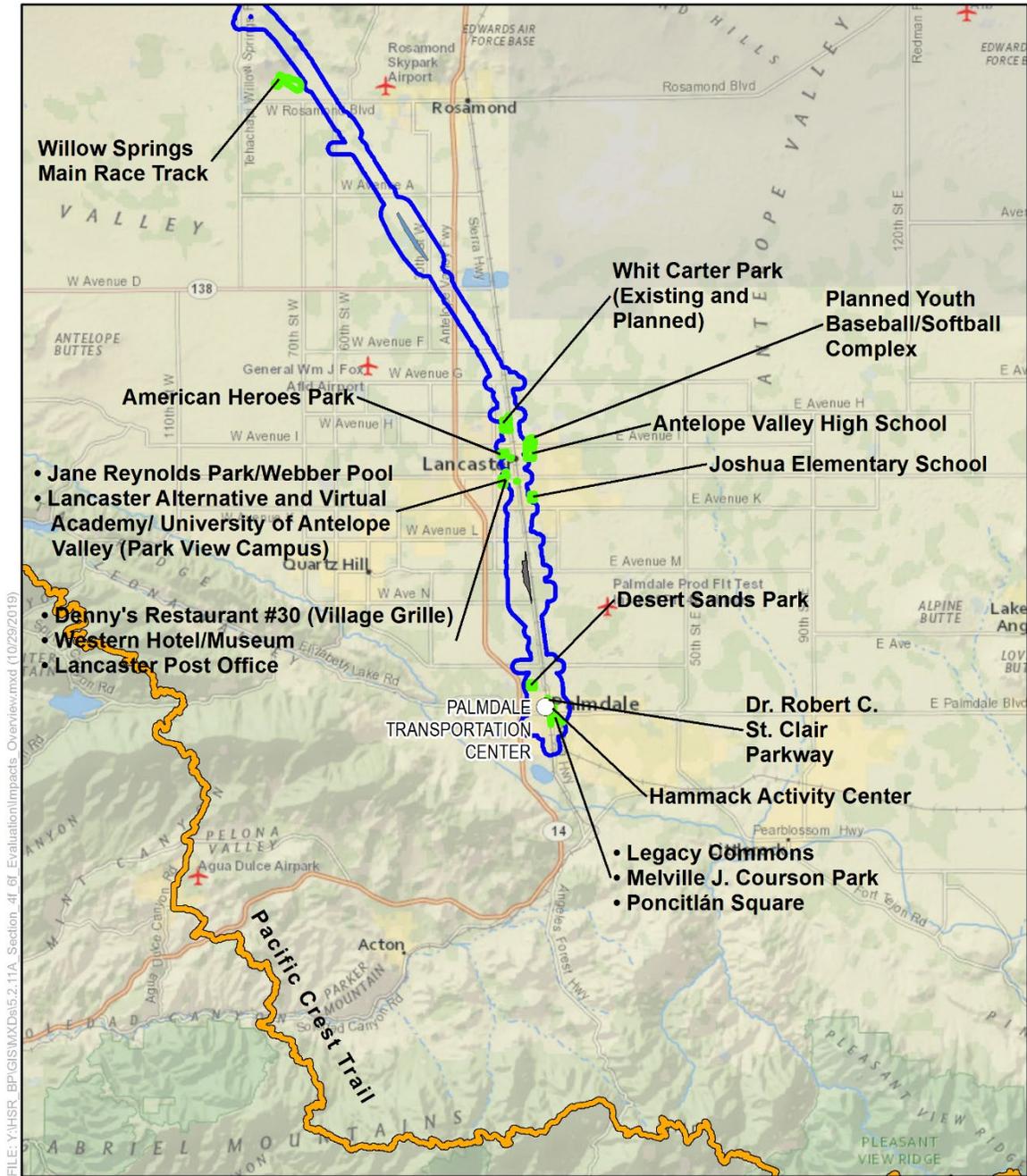
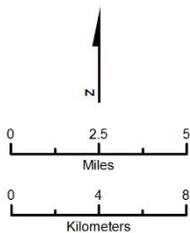


Figure 4-1 Resource Study Area for Section 4(f)
(Sheet 2 of 3)



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PRELIMINARY DRAFT/SUBJECT TO CHANGE - HSR ALIGNMENT IS NOT DETERMINED
 SOURCE: National Geographic (2015); CHSRA (4/2016, 10/2019)



- Resource Study Area (RSA) - Maximum Extent of the RSAs for Alternatives 1, 2, 3, and 5
- Section 4(f) Resource
- Pacific Crest Trail
- Avenue M LMF
- Lancaster North B MOWF

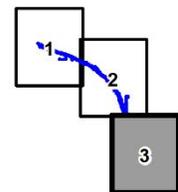


Figure 4-1 Resource Study Area for Section 4(f)

(Sheet 3 of 3)

The definition of the APE for this project is governed by the *Programmatic Agreement Among the Federal Railroad Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California High-Speed Rail Authority Regarding Compliance with Section 106 of the National Historic Preservation Act, as it Pertains to the California High-Speed Train Project* (PA), executed in June 2011. The PA outlines an approach for compliance with Section 106 of the NHPA for the entire California HSR System, including guidelines for defining the APE. Within the APE, the PA requires an assessment of all properties that contain buildings, structures, objects, sites, landscapes, and districts more than 50 years of age at the time the cultural resources survey was conducted. The APE and the historic properties in the APE are further described in Section 3.17, Cultural Resources. In accordance with the PA, the APE includes:

- Properties within the proposed right-of-way
- Properties where historic materials or associated landscape features would be demolished, moved, or altered by construction of a B-P Build Alternative
- Properties near the undertaking where railroad materials, features, and activities have not been part of their historic setting and where the introduction of visual or audible elements may affect the use or characteristics of those properties that would be the basis for their eligibility for listing in the NRHP
- Properties near the undertaking that were either used by a railroad or served by a railroad, or where railroad materials, features, and activities have long been part of their historic setting, but only in such cases where the undertaking would result in a substantial change from the historic use, access, or noise and vibration levels that were present 50 years ago or during the period of significance of a property, if different

The APE for the B-P Build Alternatives is shown on Figure 3.17-1 in Section 3.17. Figure 4-3, Figure 4-4, Figure 4-6, Figure 4-7, and Sheets 2 and 3 of Figure 4-8, provided later in Section 4.5, show the historic properties (discussed in Section 4.5.2) in the APE that qualify for protection under Section 4(f).

4.1.3 Section 4(f) Applicability

A park or recreation resource qualifies for protection under Section 4(f) if (1) it is publicly owned at the time when the “use” occurs; (2) it is open to the general public; (3) the land has been officially designated as a park or recreation area by a federal, State, or local agency; (4) the primary purpose is related to the property’s primary function and how it is intended to be managed; and (5) it is considered significant by the OWJ over the property. The same criteria generally apply to refuges, except that a refuge may qualify for Section 4(f) protection even if public access is restricted.

For publicly owned, multi-use land holdings, Section 4(f) applies only to those portions of a property that are designated by statute or identified in an official management plan of the administering agency as primarily for public park, recreation, or wildlife and waterfowl purposes, and are determined to be significant for such purposes.

A historic property is protected under Section 4(f) if it is listed in or eligible for listing in the NRHP. Although the statutory requirements of Section 106 and Section 4(f) are similar, if a proposed action results in an adverse effect at a historic site under Section 106, there would not automatically be a use of that property under Section 4(f). Similarly, a use under Section 4(f) does not necessarily result in an adverse effect under Section 106. To determine whether a use of an NRHP-protected property would occur, the Authority completes a separate Section 4(f) analysis and determination for that property in addition to the analyses completed in compliance with the Section 106 process.

For a property to be eligible for the NRHP, it must meet at least one of four criteria. Specifically, the quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location,

design, setting, materials, workmanship, feeling, and association and meet one or more of the following criteria:

- **Criterion A**—Properties that are associated with events that have made a significant contribution to the broad patterns of our history
- **Criterion B**—Properties that are associated with the lives of persons significant in our past
- **Criterion C**—Properties that embody distinctive characteristics of a type, period, or method of construction; that represent the work of a master; that possess high artistic values; or that represent a significant and distinguishable entity whose components may lack individual distinction
- **Criterion D**—Properties that have yielded, or may be likely to yield, information important in prehistory or history

Historic properties that are listed in or eligible for listing in the NRHP under Criteria A, B, and/or C are considered to have value intrinsic to the resource’s location. An archaeological resource that is eligible only under Criterion D generally is considered valuable only in terms of the data that can be recovered from it. For such resources (such as pottery scatters and refuse deposits), it is generally assumed that there is minimal value attributed to preserving such resources in place. In other words, Section 4(f) does not apply to a site if it is important chiefly because of what can be learned by data recovery and has minimal value for preservation in place.

4.1.4 Section 4(f) Use Definitions

4.1.4.1 Permanent Use

A permanent use of a Section 4(f) resource occurs when property is permanently incorporated into a proposed transportation facility. This might occur as a result of partial or full acquisition, permanent easements, or temporary easements that exceed the conditions for temporary occupancy.

4.1.4.2 Temporary Occupancy

A temporary occupancy of a Section 4(f) resource occurs when a Section 4(f) property, is required for construction-related activities. A temporary occupancy would be considered a use if the property is not permanently incorporated into a transportation facility but the activity is considered adverse in terms of the preservationist purposes of the Section 4(f) statute. A temporary occupancy of property does not constitute a use of a Section 4(f) resource when the following conditions are satisfied:

- The occupancy must be of temporary duration (e.g., shorter than the period of construction) and must not involve a change in ownership of the property.
- The scope of work must be minor, with only minimal changes to the protected resource.
- There must be no permanent adverse physical impacts on the protected resource or temporary or permanent interference with the activities or purpose of the resource.
- The property being used must be fully restored to a condition that is at least as good as that which existed before project construction.
- There must be documented agreement of the appropriate officials having jurisdiction over the resource regarding the foregoing requirements.

4.1.4.3 Constructive Use

A constructive use of a Section 4(f) resource occurs when a transportation project does not permanently incorporate property from a protected resource, but the proximity of the project results in impacts (e.g., noise, vibration, visual, access, ecological) that are so severe, even after incorporation of mitigation measures, that the protected activities, features, or attributes that qualify the resource for protection under Section 4(f) are substantially impaired. Substantial

impairment occurs only if the protected activities, features, or attributes of the resource are substantially diminished. This determination is made after taking the following steps:

- Identifying the current activities, features, or attributes of the resource that may be sensitive to proximity impacts.
- Analyzing the potential proximity impacts on the resource.
- Consulting with the appropriate officials having jurisdiction over the resource.

It is important to note that erecting a structure over a Section 4(f) resource, and thus requiring an air lease, does not constitute a use unless the criteria for a constructive use have been met. Further, an indirect adverse effect to a historic property under Section 106 of the NHPA does not in and of itself result in a use of the resource under Section 4(f) unless the criteria for a constructive use have been met.

4.1.4.4 De Minimis Impact

According to 49 U.S.C. 303(d), the following criteria must be met for the Authority to reach a *de minimis* impact determination:

- For parks and recreation resources, a *de minimis* impact determination may be made if the Authority concludes that the transportation project would not adversely affect the activities, features, and attributes qualifying the resource for protection under Section 4(f) after mitigation. In addition, to make a *de minimis* impact determination there must be:
 - The OWJ over the property must be informed regarding the intent to make a *de minimis* determination, after which public notice and opportunity for public review and comment must be provided.
 - After consideration of comments, if the OWJ concurs in writing that the project will not adversely affect the activities, features, or attributes that make the property eligible for Section 4(f) protection, then the Authority may finalize the finding of a *de minimis* impact.
- For a historic site, a *de minimis* impact determination may be made only if, in accordance with the Section 106 process of the NHPA:
 - The Authority determines that the transportation program or project would have No Effect or No Adverse Effect on historic properties
 - The Authority has received written concurrence from the OWJ(s) over the property (e.g., the SHPO) in that determination
 - The Authority has taken into account the views of consulting parties to the Section 106 process as required by 36 C.F.R. 800.

4.2 Coordination

4.2.1 Coordination with Local Jurisdictions

Coordination with local jurisdictions has been ongoing during the planning process for the HSR project. That coordination has included the discussions noted below regarding Section 4(f) resources in the RSA for the B-P Build Alternatives. Table 4-1 includes a summary of coordination with local jurisdictions outside of formal Section 4(f) consultation requirements. Efforts included coordination with OWJs regarding the boundaries for resources in the RSA in geographic information systems (GIS) data format and potential project effects on those resources, discussions of trail detours, and land ownership information. These coordination efforts have been categorized in Table 4-1 as Agency Staff (AS), Elected Officials (EL), and Stakeholder Organizations (STO).

Coordination with the applicable jurisdictions and officials regarding the potential effects of the B-P Build Alternatives on resources protected under Section 4(f) is ongoing.

Table 4-1 Summary of the Section 4(f) Outreach Meetings, January 2012–August 2017

Date	Meeting	Category ¹	County
March 21, 2012	Rosamond Community Services District	STO	Kern
May 16, 2012	City of Tehachapi	AS	Kern
August 23, 2012	Rosamond Community Services District/Municipal Advisory Council	STO	Kern
October 10, 2012	Rosamond Community Services District	STO	Kern
October 10, 2012	City of Lancaster	AS	Los Angeles
October 11, 2012	City of Palmdale	AS	Los Angeles
January 8, 2013	City of Palmdale	EL	Los Angeles
January 15, 2013	City of Lancaster	AS	Los Angeles
January 15, 2013	City of Palmdale	AS	Los Angeles
January 31, 2013	City of Tehachapi	AS	Kern
March 6, 2013	National Chavez Center	STO	Kern
March 6, 2013	Tejon Ranch	STO	Kern
March 7, 2013	Edison Middle School	STO	Kern
March 14, 2013	City of Tehachapi	AS	Kern
April 10, 2013	Bureau of Land Management—Ridgecrest Office	AS	Kern
April 11, 2013	Rosamond Community Services District	AS	Kern
May 14, 2013	City of Lancaster	AS	Los Angeles
March 4, 2014	National Chavez Center	STO	Kern
April 16, 2014	City of Palmdale Coordination Meeting	AS	Los Angeles
April 16, 2014	City of Lancaster Coordination Meeting	AS	Los Angeles
May 27, 2014	Rosamond Community Services District	AS	Los Angeles
July 14, 2014	City of Palmdale Coordination Meeting	AS	Los Angeles
October 10, 2014	California State University, Bakersfield	STO	Kern
October 15, 2014	City of Palmdale Coordination Meeting	AS	Los Angeles
October 15, 2014	City of Lancaster Coordination Meeting	AS	Los Angeles
March 4, 2015	City of Tehachapi	AS	Kern
March 12, 2015	Tejon Ranch	STO	Kern
March 12, 2015	Edison Elementary School District	STO	Kern
April 13, 2015	Rosamond Community Services District	AS	Kern
April 22, 2015	City of Tehachapi	AS	Kern
May 6, 2015	City of Lancaster Coordination Meeting	AS	Los Angeles
May 26, 2015	Meet and Greet—Rosamond Municipal Advisory Council	EL	Los Angeles
June 22, 2015	City of Lancaster	EL	Los Angeles
June 24, 2015	City of Lancaster Coordination Meeting	AS	Los Angeles
July 16, 2015	Rosamond Municipal Advisory Council/Rosamond Chamber of Commerce	STO	Kern
January 12, 2016	Back Country Horsemen—Antelope Valley Chapter	STO	Kern
February 23, 2016	Tejon Ranch and Tejon Ranch Conservancy	STO	Kern
February 23, 2016	City of Tehachapi	AS	Kern
May 16, 2016	Pacific Crest Trail Association	STO	Kern

Date	Meeting	Category ¹	County
July 20, 2016	Field Trip/Working Lunch with City of Tehachapi Staff	AS	Kern
August 16, 2016	Pacific Crest Trail Association	STO	Kern
August 30, 2016	Rosamond Community Services District	AS	Kern
September 6, 2016	Tejon Ranch	STO	Kern
September 13, 2016	City of Lancaster	AS	Los Angeles
September 20, 2016	Edison Elementary School District/Edison Middle School	STO	Kern
September 27, 2016	National Chavez Center	STO	Kern
December 6, 2016	Pacific Crest Trail Association	STO	Kern
December 16, 2016	National Chavez Center	STO	Kern
March 13, 2017	National Chavez Center	STO	Kern
April 25, 2017	National Chavez Center	STO	Kern
June 5, 2017	National Chavez Center	STO	Kern
June 25, 2017	National Chavez Center and National Parks Service	AS/STO	Kern
August 8, 2017	City of Lancaster	AS	Los Angeles
August 24, 2017	US. Forest Service/Pacific Crest Trail Association	AS/STO	Kern
September 8, 2017	U.S. Forest Service	AS	Kern
September 24, 2017	U.S. Forest Service, Bureau of Land Management, Pacific Crest Trail Association	AS/STO	Kern
September 4, 2018	National Chavez Center and National Parks Service	AS/STO	Kern
July 11, 2019	National Chavez Center and National Park Service	AS	Kern
August 28, 2019	National Chavez Center and National Park Service	AS	Kern
October 16, 2019	National Chavez Center, National Park Service, Advisory Council on Historic Preservation, State Office of Historic Preservation, National Trust for Historic Preservation, and National Parks Conservation Association	AS	Kern

Source: California High-Speed Rail Authority, 2019

¹ Category Key: AS = Agency Staff; EL = Elected Officials; STO = Stakeholder Organization

4.2.2 Section 4(f) Consultation

49 U.S.C. 303(b) requires consultation with the Secretary of the Interior (and the Secretaries of Housing and Urban Development and Agriculture, if appropriate/applicable) in the development of transportation projects.

Table 4-2 lists the consultation to be conducted with agencies with jurisdiction for resources protected under Section 4(f). The Section 106 consultation under the NHPA is summarized in Section 3.17, Cultural Resources. The Authority would consult with the agencies with jurisdiction over public park and recreation resources (Table 4-2) to discuss potential impacts of the B-P Build Alternatives on Section 4(f) resources.

Table 4-2 Summary Section 4(f) Consultation with Officials with Jurisdiction

Participants	General Topic(s)
Bakersfield City School District	
Authority and school district staff	Discussion of the official with jurisdiction's concerns with regard to the B-P Build Alternatives in the vicinity of Ramon Garza Elementary School and Sierra Middle School.

Participants	General Topic(s)
Kern High School District	
Authority and school district staff	Discussion of the official with jurisdiction's concerns with regard to the B-P Build Alternatives in the vicinity of Foothill High School.
National Park Service, California State Historic Preservation Officer, and Advisory Council on Historic Preservation	
Authority, National Park Service California State Historic Preservation Officer, and Advisory Council on Historic Preservation	Discussion of the official with jurisdiction's concerns with regard to the B-P Build Alternatives in the vicinity of La Paz.
U.S. Forest Service, Bureau of Land Management	
Authority, U.S. Forest Service and Bureau of Land Management staff	Discussion of the proposed mitigation measure for Pacific Crest Trail realignment and the official with jurisdiction's concerns with regard to the B-P Build Alternatives in the vicinity of the Pacific Crest Trail.
City of Lancaster	
Authority and city staff	Discussion of the official with jurisdiction's concerns with regard to the B-P Build Alternatives in the vicinity of Whit Carter Park, Planned Youth Baseball/Softball Complex, American Heroes Park, and Jane Reynolds Park/Webber Pool.
Antelope Valley Union High School District	
Authority and school district staff	Discussion of the official with jurisdiction's concerns with regard to the B-P Build Alternatives in the vicinity of Antelope Valley High School and R. Rex Parris High School.
Lancaster School District	
Authority and school district staff	Discussion of the official with jurisdiction's concerns with regard to the B-P Build Alternatives in the vicinity of Lancaster Alternative and Virtual Academy/ University of Antelope Valley (Park View Campus), and Joshua Elementary School.
City of Palmdale	
Authority and city staff	Discussion of the official with jurisdiction's concerns with regard to the B-P Build Alternatives in the vicinity of Desert Sands Park, Dr. Robert C. St. Clair Parkway, Hammack Activity Center, Poncitlán Square, Legacy Commons, and Melville J. Courson Park.

Source: California High-Speed Rail Authority, 2019

Authority = California High-Speed Rail Authority

B-P = Bakersfield to Palmdale Project Section

La Paz = Nuestra Señora Reina de La Paz/César E. Chávez National Monument

TBP = to be provided

U.S. = United States

The Authority and the FRA have consulted with the SHPO, NPS, the Native American Heritage Commission, interested Tribes, and other interested parties to identify and assess impacts on cultural resources in compliance with Section 106 as described in Section 3.17. Consultation and coordination with the applicable jurisdictions and SHPO regarding the effects of the B-P Build Alternatives on resources protected under Section 4(f) are ongoing.

4.3 Purpose and Need

The purpose of the statewide HSR system is to provide a reliable electric-powered HSR system that links major metropolitan areas in the state and delivers predictable and consistent travel times. An additional objective is to provide an interface with commercial airports, mass transit, and the highway network, and to relieve capacity constraints of the existing transportation system as increases occur in California intercity travel demand, in a manner sensitive to and protective of California's unique natural resources (Authority 2005).

The purpose of the Bakersfield to Palmdale Project Section is to: (1) implement the California HSR System between the cities of Bakersfield and Palmdale to provide the public with electric-powered HSR service that provides predictable and consistent travel times between major urban centers and connectivity to airports, mass transit, and the highway network in the Antelope Valley; and (2) connect the northern and southern segments of the system. For more information on the project objectives and the need for the HSR system in California and in the Antelope Valley, refer to Chapter 1, Project Purpose, Need, and Objectives.

4.4 Alternatives

The Bakersfield to Palmdale Project Section is approximately 80 miles long and traverses valley, mountain, and high desert terrain, as well as urban, rural, and agricultural lands. From the north, this project section begins at the Bakersfield Station and travels south and southeast through the Tehachapi Mountains, then descends into the Antelope Valley, where it terminates at the Palmdale Station in the south. This project section includes a potential light maintenance facility (LMF) and a maintenance-of-way facility (MOWF) in the Lancaster area.

This section briefly describes the Bakersfield to Palmdale Project Section alternatives (Alternatives 1, 2, 3, and 5), including the No Project Alternative. Alternatives 1, 2, 3, and 5 would be generally more constructible (fewer tunnel miles and lower capital costs) and would generally have lower potential impacts to right-of-way and displacements, potential Section 4(f) resources, cultural resources, and community resources. Chapter 2, Alternatives, provides a comprehensive description of the Bakersfield to Palmdale Project Section as well as figures showing the alignments of the B-P Build Alternatives. Refer to the *Bakersfield to Palmdale Project Section Supplemental Alternatives Analysis Report* (Authority 2016b)¹ for discussion of alternatives that were considered but eliminated from further consideration in this EIR/EIS. The B-P Build Alternative alignments are described from north to south.

The B-P Build Alternatives converge into a single alignment as they pass La Paz. Consulting parties to the undertaking expressed concerns that the B-P Build Alternatives presented in 2016 would cause adverse noise and visual effects to La Paz. In response to concerns expressed by consulting parties between June 2017 and February 2019, the Authority developed 10 design options that either avoid or minimize adverse effects to La Paz. These design options included the CCNM Design Option and the Refined CCNM Design Option. These design options are analyzed separately and can be applied to each of the B-P Build Alternatives.

4.4.1 No Project Alternative for the Bakersfield to Palmdale Project Section

The HSR system would not be built under the No Project Alternative. The No Project Alternative represents the condition of this project section as it currently exists and as it would exist without the HSR project through the 2040 time horizon identified for the environmental analysis. In assessing future conditions, it was assumed that all currently known, programmed, and funded improvements to the intercity transportation system (highway, rail, and transit) and reasonably foreseeable local development projects (with funding sources already identified) would be developed as planned by 2040. The No Project Alternative is based on a review of all city and county general plans, regional transportation plans for all modes of travel, and agency-provided lists of pending and approved projects in the following jurisdictions: Kern County, Los Angeles County, and the cities of Bakersfield, Tehachapi, Lancaster, and Palmdale.

Because this alternative does not include construction of the Bakersfield to Palmdale Project Section or any associated facilities, it would have no impact on any Section 4(f) resources. However, there could be impacts to Section 4(f) resources as a result of the non-HSR existing and planned improvements associated with the No Project Alternative.

The No Project Alternative would not meet the purpose and need for the project. This alternative is insufficient to meet existing and future travel demand; current and projected future congestion of

¹ www.hsr.ca.gov/docs/brdmeetings/2016/brdmtg_041216_Item6_ATTACHMENT_Bakersfield_to_Palmdale_Supplemental_Alternatives_Analysis.pdf.

the transportation system would continue to result in deteriorating air quality, reduced reliability, and increased travel times. The No Project Alternative is feasible because the non-HSR improvements in this alternative could be designed, constructed, and operated. However, because the No Project Alternative does not meet the project purpose and need, it is not prudent and is not discussed further as an avoidance alternative for impacts on Section 4(f) resources.

4.4.2 Alternative 1

Alternative 1 begins at the Bakersfield Station. The alignment starts at the Bakersfield Station on a viaduct. From Oswell Street to Morning Drive (State Route [SR] 184), the Alternative 1 centerline is located on the north side of Edison Highway. East of Morning Drive, the Alternative 1 alignment transitions from the Edison Highway corridor to the SR 58 corridor, reaching the freeway corridor at Edison Road. Once clear of the Edison Highway right-of-way, the Alternative 1 profile would stay elevated on an embankment. At Edison Road, the freeway would be relocated to the south, allowing the HSR alignment to run within the existing freeway right-of-way, parallel to the relocated SR 58 alignment along the north side.

The Alternative 1 alignment would proceed eastward along the existing SR 58 alignment to Towerline Road, where the relocated freeway would tie back into existing SR 58 as it curves away from Edison Highway. The HSR alignment would continue eastbound parallel to Edison Highway toward Caliente Creek.

From Caliente Creek to Bealville Road, Alternative 1 would continue southeast through Keene before beginning to climb the Tehachapi Mountains at a 2.8 percent vertical grade. The alignment would include a viaduct over Caliente Creek and a combination of cuts, fills, tunnels, and viaducts before reaching and passing underneath Bealville Road.

East of Bealville Road, the alignment would generally follow SR 58 north of the freeway to the SR 58 interchange with Broome Road. Between Bealville Road and Broome Road, the alignment would include three tunnels and three viaducts. The viaducts would span the Union Pacific Railroad (UPRR), Tehachapi Creek northwest of La Paz, and SR 58 at Broome Road.

East of the SR 58/Broome Road interchange, for a distance of almost 3 miles, Alternative 1 would cross SR 58 three more times as the two facilities form a braided configuration within the Tehachapi Creek canyon. As SR 58 turns south approaching the City of Tehachapi, Alternative 1 would continue on an easterly path, along the edge of the city's future development area, through an approximately 8,200-foot tunnel. The alignment would then curve further south and pass to the east of the city, crossing over SR 58 near Arabian Drive.

Alternative 1 would pass through the mountains southeast of Tehachapi in an approximately 13,250-foot tunnel roughly following Tehachapi Willow Springs Road. As Alternative 1 begins the 2.8 percent descending grade into the northern Antelope Valley, it would cross Tehachapi Willow Springs Road near the Cameron Canyon Road intersection, where it would also cross the Pacific Crest Trail (PCT) and the Garlock fault. The alignment would pass just west of the CalPortland Company limestone quarry in an approximately 9,500-foot tunnel, then continue southeast past the east side of Willow Springs International Motorsports Park, where it would proceed across the Antelope Valley through Rosamond toward the north end of the City of Lancaster.

The alignment would pass over SR 138 and SR 14 near their interchange and then enter the City of Lancaster at Avenue H, running parallel to the Sierra Highway/UPRR corridor through Lancaster and Palmdale. From Avenue H through the City of Lancaster, Alternative 1 would combine the HSR, UPRR, and Metrolink rail corridors into one combined corridor. Under Alternative 1, the new combined rail corridor matches the current westerly extent of the existing rail right-of-way and widens the corridor to the east, as necessary, to accommodate all three rail systems and their respective separation requirements. The alternative would require the relocation of all the UPRR and Metrolink facilities in the corridor from north of Avenue H to approximately Avenue L. The alternative would create separate rights-of-way for the UPRR and Metrolink rail corridors to the east of the HSR right-of-way. Therefore, Alternative 1 would be aligned east of Sierra Highway and west of the UPRR corridor.

To avoid airspace restrictions from the U.S. Air Force Plant 42 Airport to the south, the alignment would begin a transition to the west at Avenue K. It would continue this transition to Avenue M, where the HSR alignment would be situated west of the existing UPRR/Metrolink right-of-way, which would remain in its existing location. The HSR alignment would then continue south, parallel to and along the westerly side of the existing rail corridor, until the section terminus at the Palmdale Station, located at the Palmdale Transportation Center. The westerly transition of the alignment, from Avenue K to Avenue O, would require the relocation of approximately 4.2 miles of Sierra Highway to the west. Preliminary routes for this highway relocation would be approximately 1,500 feet west of its existing location. This would provide a separation of 500 feet to 2,800 feet between the rail corridor and the highway. The alignment ends at the Palmdale Station.

4.4.3 Alternative 2

Alternative 2 would follow the same alignment from Bakersfield to Palmdale as Alternative 1 except through the community of Edison. Alternative 2 would vary from Alternative 1 between Edison Road and Towerline Road, where the HSR alignment runs along the south side of existing SR 58 on an elevated embankment. Under Alternative 2, SR 58 would remain in its current alignment, but this alternative would require an elevated structure for the HSR spanning the SR 58/Edison Road interchange diagonally. This would require another elevated structure crossing back over SR 58 just past Towerline Road, and three additional elevated structures to cross the HSR over existing north-south roads (Malaga Road, Comanche Drive, and Tejon Highway) spaced approximately 1 mile apart between Edison Road and Towerline Road.

4.4.4 Alternative 3

Alternative 3 would follow the same alignment from Bakersfield to Palmdale as Alternative 1 except along the southern base of the Tehachapi Mountains. Alternative 3 varies from Alternative 1 just south of Tehachapi in the vicinity of the CalPortland Company quarry, where the alignment travels closer to Tehachapi Willow Springs Road. The alignment would cross Tehachapi Willow Springs Road farther west but still near the Cameron Canyon Road intersection.

These two most southerly tunnels, while in the same general location as Alternative 1, would consist of one approximately 13,500-foot tunnel and another approximately 13,000-foot tunnel, in contrast to Alternatives 1, 2, and 5, which would each consist of one approximately 12,700-foot tunnel and another approximately 9,500-foot tunnel. South of Tehachapi, Alternative 3 would split off in a more westerly direction than Alternative 1 until it reconnects at the common connection point of Alternative 1, approximately 17 miles south of Tehachapi.

4.4.5 Alternative 5

Alternative 5 would follow the same alignment from Bakersfield to Palmdale as Alternative 1 except in the City of Lancaster. Between Avenue H and Avenue M in the City of Lancaster, Alternative 5 would be situated west of the existing UPRR and Metrolink facilities, avoiding the need to relocate them, except for the Lancaster Metrolink station building and parking facilities. Sierra Highway would need to be relocated for approximately 10.3 miles. The highway would be relocated west of the HSR alignment except for when it reconnects to existing Sierra Highway at Avenue G to the north and Avenue P-14 to the south. The alignment ends at the Palmdale Station.

4.4.6 Design Options

4.4.6.1 CCNM Design Option

In June 2018, the Authority presented a minimization option (the César E. Chávez National Monument Design Option [CCNM Design Option]) to the Advisory Council on Historic Preservation, the NPS, the National Parks Conservation Association, the SHPO, and the National Chavez Center, and described the constraints of constructing an alignment that would completely avoid adverse effects to La Paz. The CCNM Design Option was developed to either avoid or minimize adverse effects to La Paz specifically related to visual and noise impacts.

The CCNM Design Option's northern terminus is north of SR 58 at Buddy Court, and its southern terminus is northwest of Marcel Drive and SR 58. Similar to the alignment alternatives, the CCNM

Design Option would generally follow SR 58 south to the southern terminus. The CCNM Design Option would also include cut sections, fill sections, tunnels, and viaducts within the Keene area. The cut sections in this area range between 0 and 225 feet in height, while the fill sections range between approximately 0 and 110 feet in height. The CCNM Design Option would also cross through two tunnels 3,320 and 4,300 feet in length in this area. The viaducts would span the UPRR alignment and Tehachapi Creek, an access road, Tweedy Creek, another access road, and SR 58 near Broome Road, ranging from approximately 0 to 160 feet in height. At its closest proximity to La Paz, the CCNM Design Option would be approximately 830 feet northeast of the La Paz property boundary, compared to 440 feet for the alignment alternatives. The CCNM Design Option would be the same under all four B-P Build Alternatives.

4.4.6.2 Refined CCNM Design Option

In response to concerns expressed by consulting parties between June 2017 and February 2019, the Authority has developed 10 design options that either avoid or minimize adverse effects to the NHL. In 2019, the Authority issued the *Design Options Screening Report for the César E. Chávez/Nuestra Señora Reina de la Paz National Historic Landmark* (Authority 2019a) and the *Addendum to the Design Options Screening Report for the César E. Chávez/Nuestra Señora Reina de la Paz National Historic Landmark* (Authority 2019b), which evaluate 10 potential design options developed to avoid or minimize impacts on La Paz. This process resulted in the Refined CCNM Design Option for the project section.

The Refined CCNM Design Option would begin 180 feet east of Bealville Road in Keene and would begin at grade for 1.15 miles and then continue underground for about 1.04 miles. The Refined Design Option would transition to at grade for 0.81 mile and cross an access road and the UPRR on a 0.17-mile-long viaduct. The Refined CCNM Design Option would then continue east at grade for 0.30 mile, cross over an existing access road on a 0.06-mile-long viaduct, then return to at grade for 0.59 mile where the Refined CCNM Design Option transitions underground for 0.80 mile. The Refined CCNM Design Option would then emerge where it would pass La Paz. The Refined CCNM Design Option would be 0.53 mile north of La Paz at its closest proximity when it emerges from the tunnel.

While passing La Paz, the Refined CCNM Design Option would be at grade for 0.57 mile at a distance ranging from 0.53 mile to 0.73 mile from the boundary of La Paz before crossing a 0.13-mile viaduct over Tweedy Creek and a local access road. The Refined CCNM Design Option would travel at grade for approximately 0.25 mile before going underground in a 1.7-mile-long tunnel. The Refined CCNM Design Option would then transition to at grade for 0.71 mile before crossing over an access road for 0.06 mile and return to at grade for 1.71 miles. The Refined CCNM Design Option would then cross SR 58 and Tehachapi Creek on a 0.89-mile-long viaduct, transitioning back to at grade for 0.87 mile before entering a tunnel for 1.68 miles. The Refined CCNM Design Option would emerge from the tunnel north of the City of Tehachapi at grade for 1.48 miles before finally ending in a 0.13-mile-long viaduct, where it would tie back into the B-P Build Alternatives at SR 58 in the City of Tehachapi.

4.4.7 Station Sites

The Bakersfield to Palmdale Project Section will be served by stations in Bakersfield and Palmdale. Stations would be designed to optimize access to the California HSR System, particularly to allow for intercity travel and connections to the local transit, airports, highways, and bicycle and pedestrian network. All stations would include the following elements:

- Passenger boarding platforms
- Station head house with ticketing, waiting areas, passenger amenities, vertical circulation, administration and employee areas, and baggage and freight-handling service
- Vehicle parking (short-term and long-term)
- Pick-up and drop-off areas
- Motorcycle/scooter and bicycle parking

- Waiting areas and queuing space for taxis and shuttle buses
- Pedestrian walkway connections

Chapter 2 provides figures showing the locations of these stations.

4.4.7.1 Bakersfield Station

Since the approved 2014 Record of Decision for the Fresno to Bakersfield Section, the Authority and the City of Bakersfield have agreed to consider an alternate station location at F Street. This alternative was evaluated through a Supplemental EIR/EIS for the Fresno to Bakersfield Project Section.

At the October 16, 2018, Authority Board meeting, the Authority certified the Fresno to Bakersfield Section Final Supplemental EIR (Authority 2018b) and approved the F Street Station. Resolutions #HSRA 18-16 and #HSRA 18-17 can be found on the Authority's website. The issuance of the Final Supplemental EIS and the Record of Decision took place in October 2019.

Analysis of the Bakersfield Station (including the subsection extending from the Bakersfield Station to Oswell Street) is included in the Fresno to Bakersfield Project Section documents (including the Fresno to Bakersfield Section Draft Supplemental EIR/EIS [Authority and FRA 2017], Fresno to Bakersfield Section Final Supplemental EIR for the Locally Generated Alternative [LGA] [Authority 2019c], and Final Supplemental EIS for the Fresno to Bakersfield LGA [Authority 2019d]) and is incorporated by reference in this document. The Authority's action in October 2018 reserved making a decision on the alignment from south of the F Street Station to Oswell Street to its future action on the Bakersfield to Palmdale Project Section.

The Fresno to Bakersfield Section Final EIR/EIS, Final Supplemental EIR/EIS for the F-B LGA, and technical reports supporting the environmental impact evaluation are available upon request. For information on how to access and review technical reports, please refer to the Authority's website at www.hsr.ca.gov.

4.4.7.2 Palmdale Station

The Palmdale Station would be located along the proposed HSR alignment parallel to the existing rail corridor. The existing Palmdale Transportation Center would be expanded to the south to accommodate the HSR and would be bounded by Technology Drive to the north and Palmdale Boulevard to the south. The Palmdale Station would consist of train platforms, pedestrian walkways/connectors, a transit plaza pick-up/drop-off facility for private automobiles, and surface parking areas. The station would consist of several facilities occupying approximately 50 acres.

Train platforms would be constructed along either side of the proposed HSR alignment, beginning approximately 200 feet south of E Avenue Q. The southbound platform would be west of the southbound tracks, and the northbound platform would be east of the northbound tracks. Each platform would be approximately 1,410 feet long. In addition, the existing Metrolink platform would be replaced by a 700-foot Metrolink platform, which would be constructed east of the HSR platform, running north-south along the Metrolink tracks.

Pedestrian access to the station would be provided through a transit plaza and pedestrian overheads spanning the rail alignments. These overheads would connect the train station/platforms to surrounding parking areas, which would provide 1,550 parking spaces in multiple lots. Potential additional surface parking (about an additional 1,750 spaces, for a grand total of approximately 3,300 parking spaces) can be accommodated within 0.5 mile of the station. Two transit centers, one on either side of the HSR alignment, would house bus terminals for buses and shuttles.

4.4.8 Maintenance Facilities

The California HSR System includes four types of maintenance facilities: MOWFs, maintenance of infrastructure siding facilities, heavy maintenance facilities (HMF), and LMFs. The California HSR System would require one HMF for the system, which will not be located within this section. The design and spacing of maintenance facilities along the HSR alignment would require the Bakersfield to Palmdale Project Section to include four maintenance facilities: an LMF, an

MOWF, and two maintenance of infrastructure siding facilities. The LMF and MOWF are anticipated to be located in the Antelope Valley. The two maintenance of infrastructure siding facilities are anticipated to be located in Edison and Tehachapi. The locations of these facilities are anticipated to be generally the same for all the B-P Build Alternatives.

The Avenue M LMF would be sited on the west side of the HSR alignment. The zone extends generally between W Avenue L and Avenue M-12. The zone is primarily in an open and urban area.

The LMF facility would include double-ended access, which facilitates movements of trains entering and exiting the site and allows connections to the HSR mainline at each end of the LMF site. The LMF, including lead tracks, would require approximately 160 acres with space for all activities associated with fleet storage, cleaning, repair, overnight layover accommodations, and servicing facilities.

The LMF site will be sized to support the level of daily service dispatched by the nearby terminal at the start of each revenue service day. The Authority defines three levels of maintenance that can be performed at an LMF:

- **Level I**—Daily inspections, including pre-departure cleaning and testing
- **Level II**—Monthly inspections
- **Level III**—Quarterly inspections, including wheel-truing

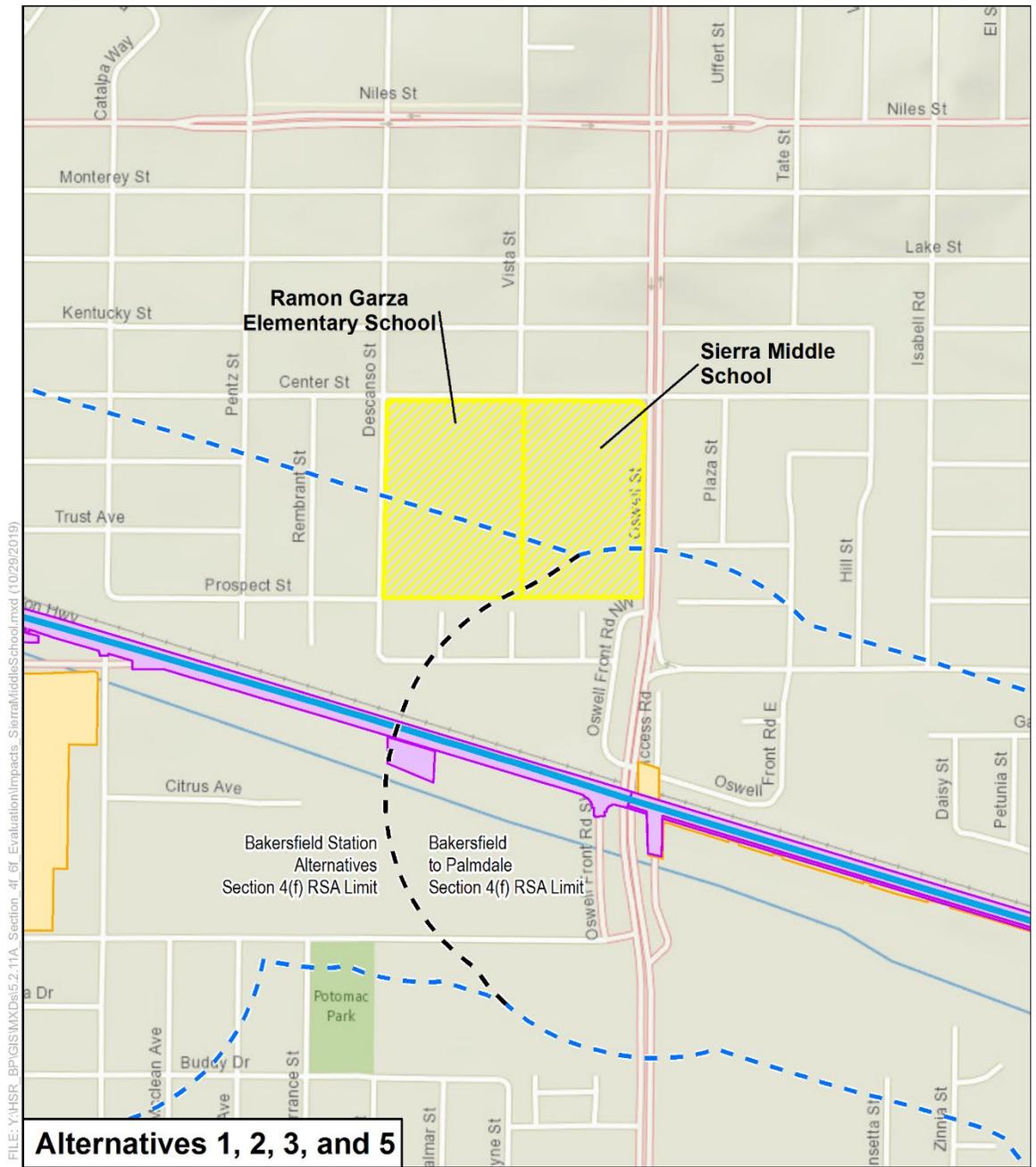
At this time, the Authority is anticipating the identification and selection of an HMF site built in the Central Valley that would service the entire statewide system. If necessary, the Avenue M LMF in Lancaster could be modified within its current footprint to accommodate a reduced HMF that would service the Bakersfield to Palmdale Project Section and potential projects to the south.

In addition to an LMF, the Bakersfield to Palmdale Project Section would include an MOWF. The MOWF would be sited at the Lancaster North B site, which is a smaller site within the boundary of the Lancaster North A site. The Lancaster B site is west of the Antelope Valley Freeway (SR 14), generally between W Avenue C and W Avenue B. The facility would occupy a linear site adjacent to the HSR tracks and would require approximately 84 acres to accommodate an MOWF, including lead tracks. The MOWF would provide regional maintenance machinery servicing storage, materials storage, personnel, and maintenance and administration.

An LMF co-located with an MOWF could be sited at the Lancaster North A site. This site offers an acceptable location for housing both the LMF and an MOWF due to its size. The combined facility would require approximately 210 acres, including lead tracks.

4.5 Section 4(f) Applicability Analysis

Section 4.5.1 identifies the public park and recreation resources in the RSA that meet the criteria for protection under Section 4(f). Section 4.5.2 describes historic properties in the APE (also shown on Figure 3.17-1 in Chapter 3 of this document) that meet the criteria for protection under Section 4(f). All the Section 4(f) resources are shown on Figure 4-2, Figure 4-3, Figure 4-4, Figure 4-5, Figure 4-6, Figure 4-7, Figure 4-8, and Figure 4-9. Table 4-3 and Table 4-4 provide information about the attributes of those park and recreation resources and where they are located in the RSA. Table 4-5 and Table 4-6 provide information about the historic properties within the APE.



FILE: Y:\HSR_BP\GIS\MXDs\5.2.11A_Section_4f_Evaluation\Impacts_SierraMiddleSchool.mxd (10/29/2019)

PRELIMINARY DRAFT/SUBJECT TO CHANGE - HSR ALIGNMENT IS NOT DETERMINED
 SOURCE: National Geographic (2015); CHSRA (4/2016, 10/2019)

October 29, 2019

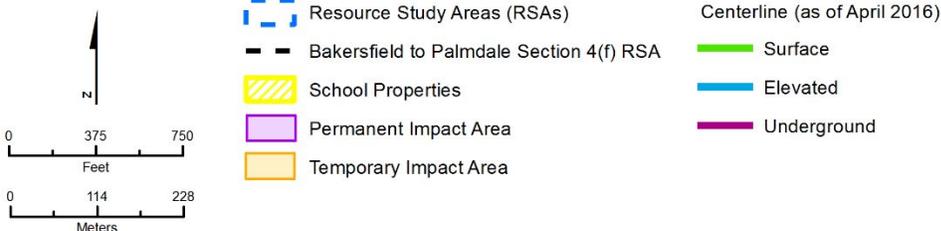


Figure 4-2 Ramon Garza Elementary School and Sierra Middle School

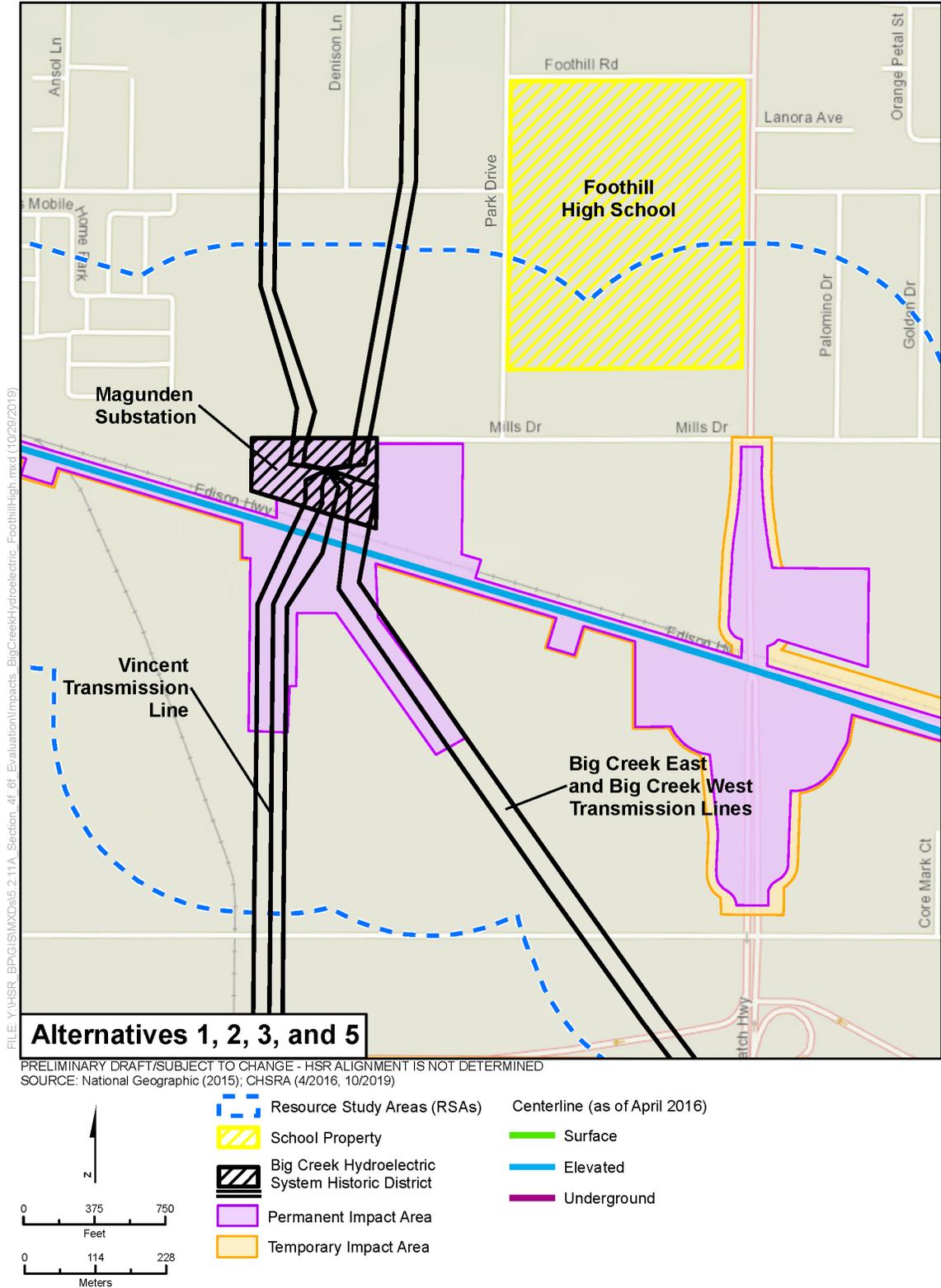
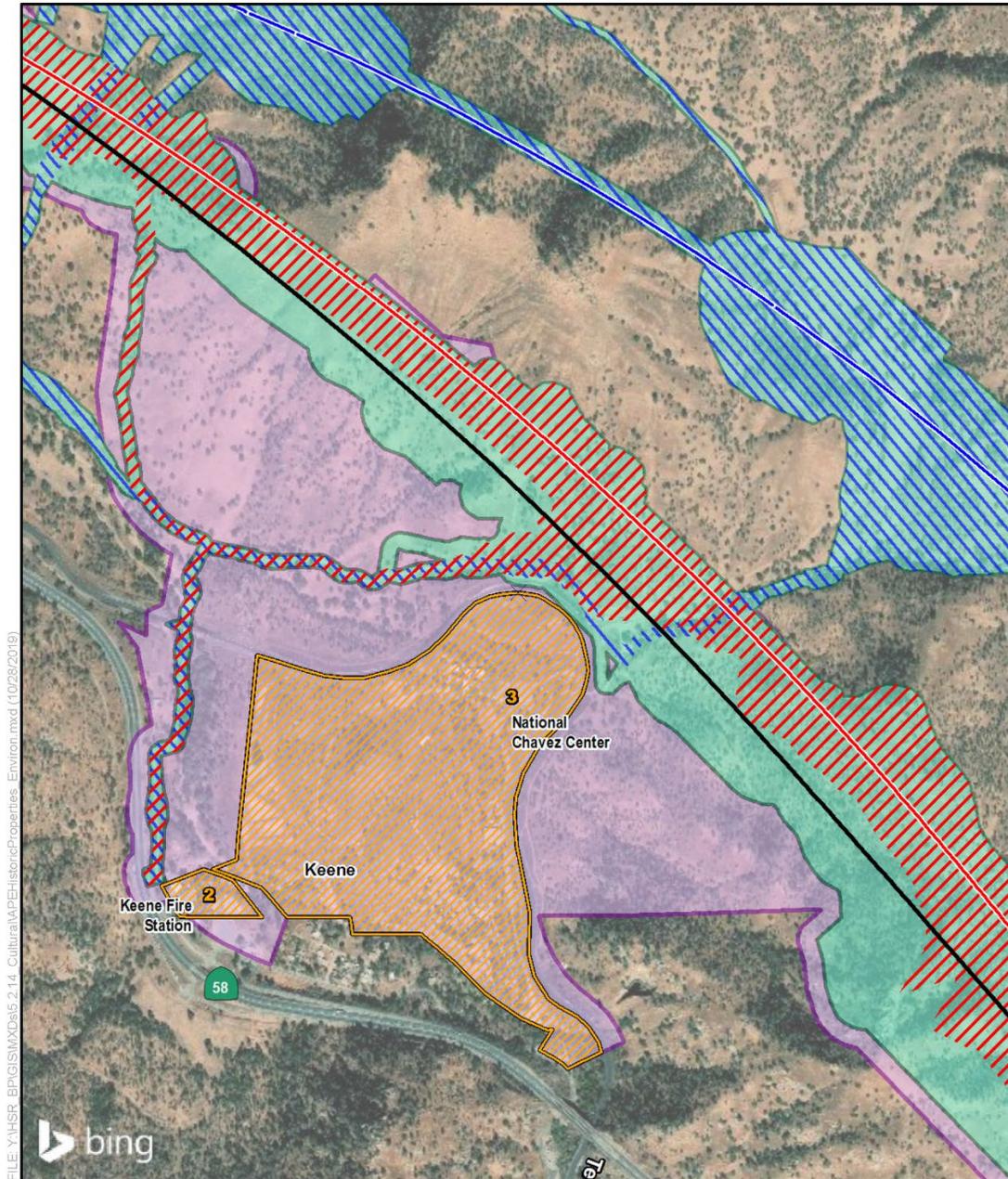
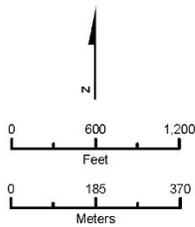


Figure 4-3 Big Creek Hydroelectric System Historic District and Foothill High School



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PRELIMINARY DRAFT/SUBJECT TO CHANGE - HSR ALIGNMENT IS NOT DETERMINED
 SOURCE: Bing Maps (2014); CHSRA (4/2016, 8/2018, 10/2019)



- Alternative Alignment
- Alignment Footprint
- Historic Built Resources
- Area of Potential Effects (APE)
- Section 106 Historic Property
- CCNM Design Option
- CCNM Design Option Impact Footprint
- Refined CCNM Design Option
- Refined CCNM Design Option Impact Footprint

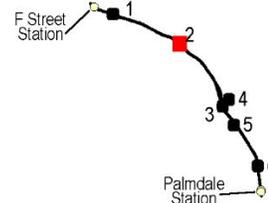
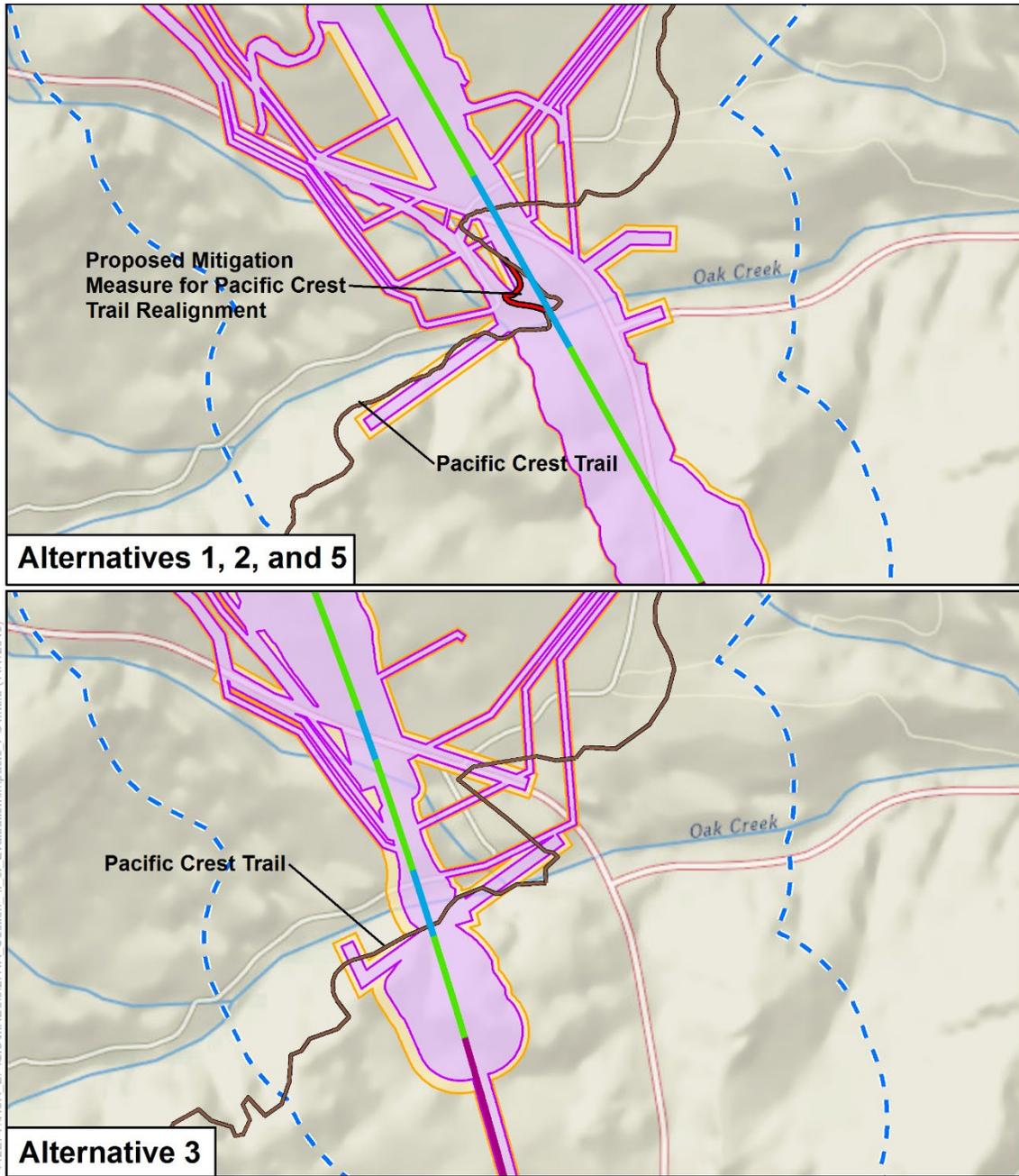


Figure 4-4 Keene Fire Station and La Paz



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PRELIMINARY DRAFT/SUBJECT TO CHANGE - HSR ALIGNMENT IS NOT DETERMINED
 SOURCE: National Geographic (2015); CHSRA (4/2016)

November 7, 2019

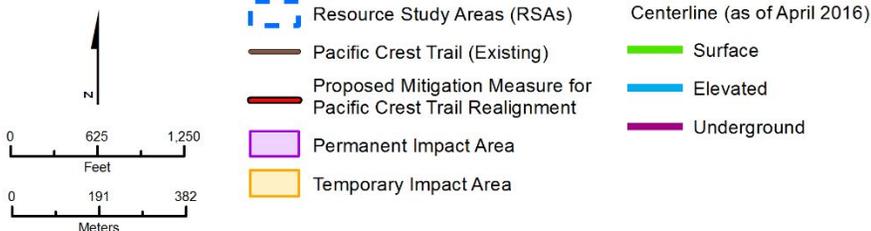
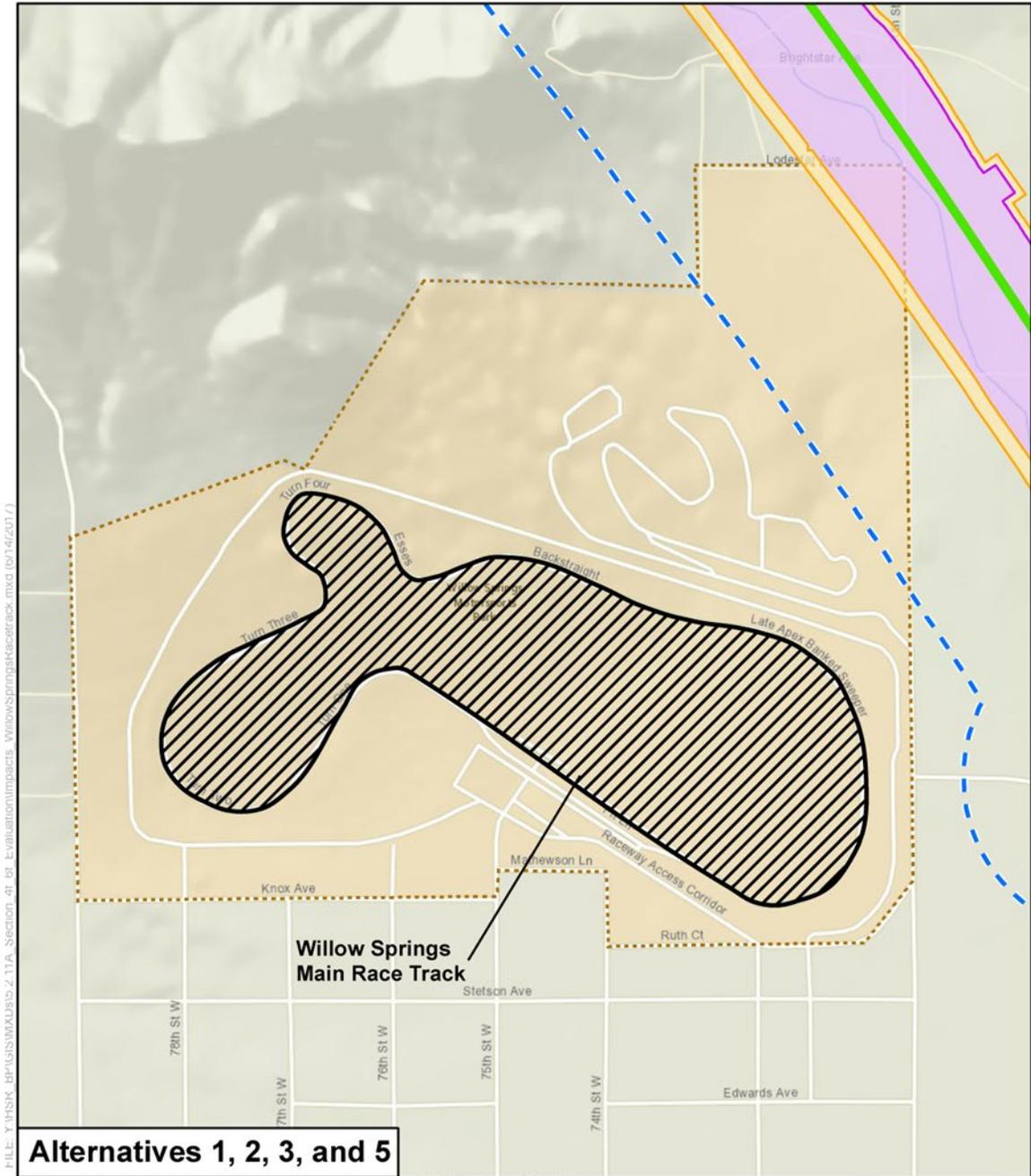


Figure 4-5 Pacific Crest Trail*

** Still undergoing agency consultation.*



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HSR ALIGNMENT IS NOT DETERMINED
 SOURCE: National Geographic (2015); CHSRA (4/2016)

June 14, 2017

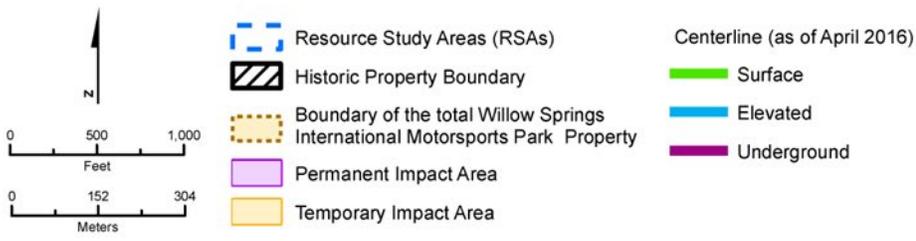


Figure 4-7 Willow Springs Main Race Track

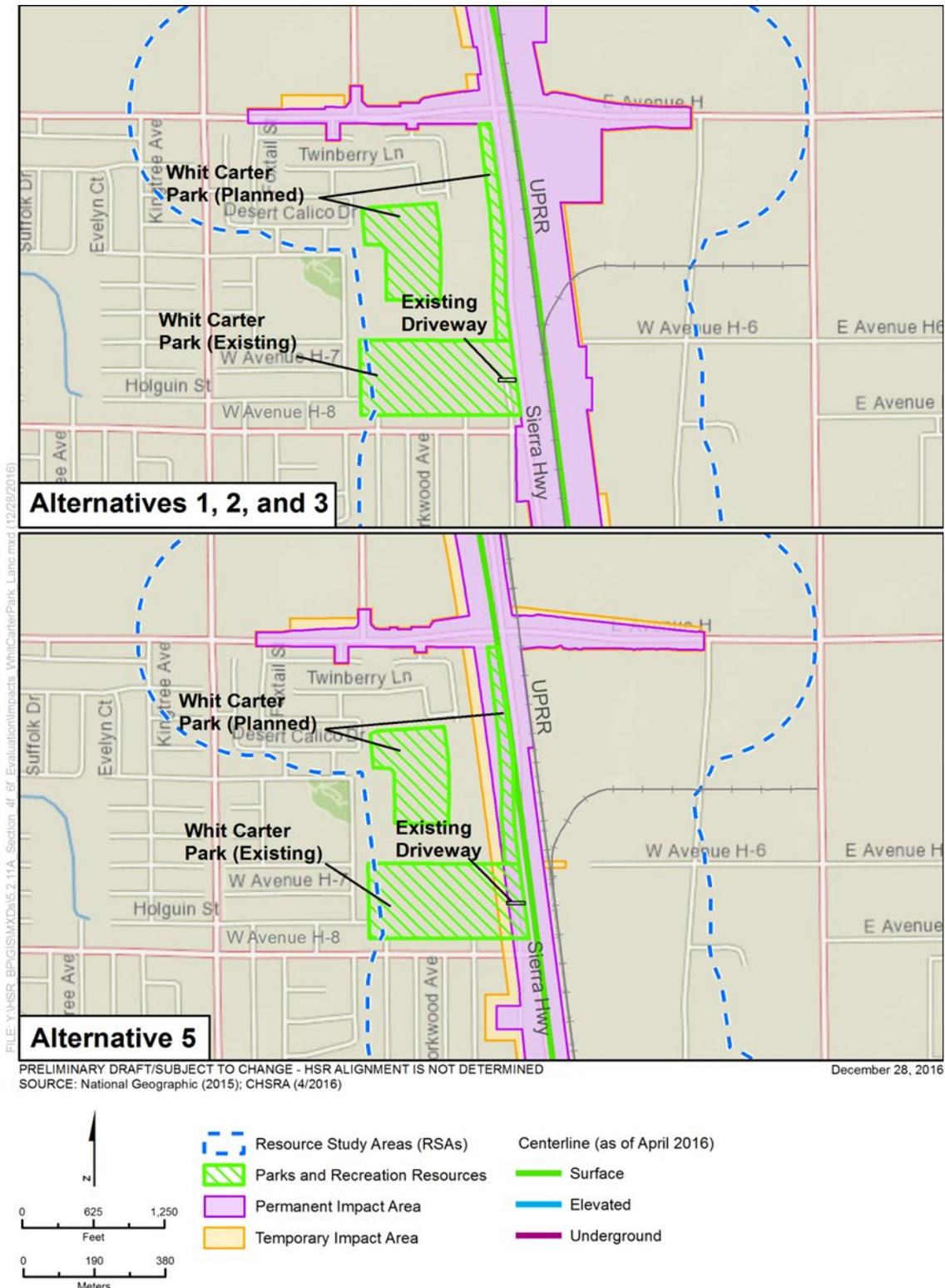


Figure 4-8 Lancaster Section 4(f) Resources
(Sheet 1 of 4)

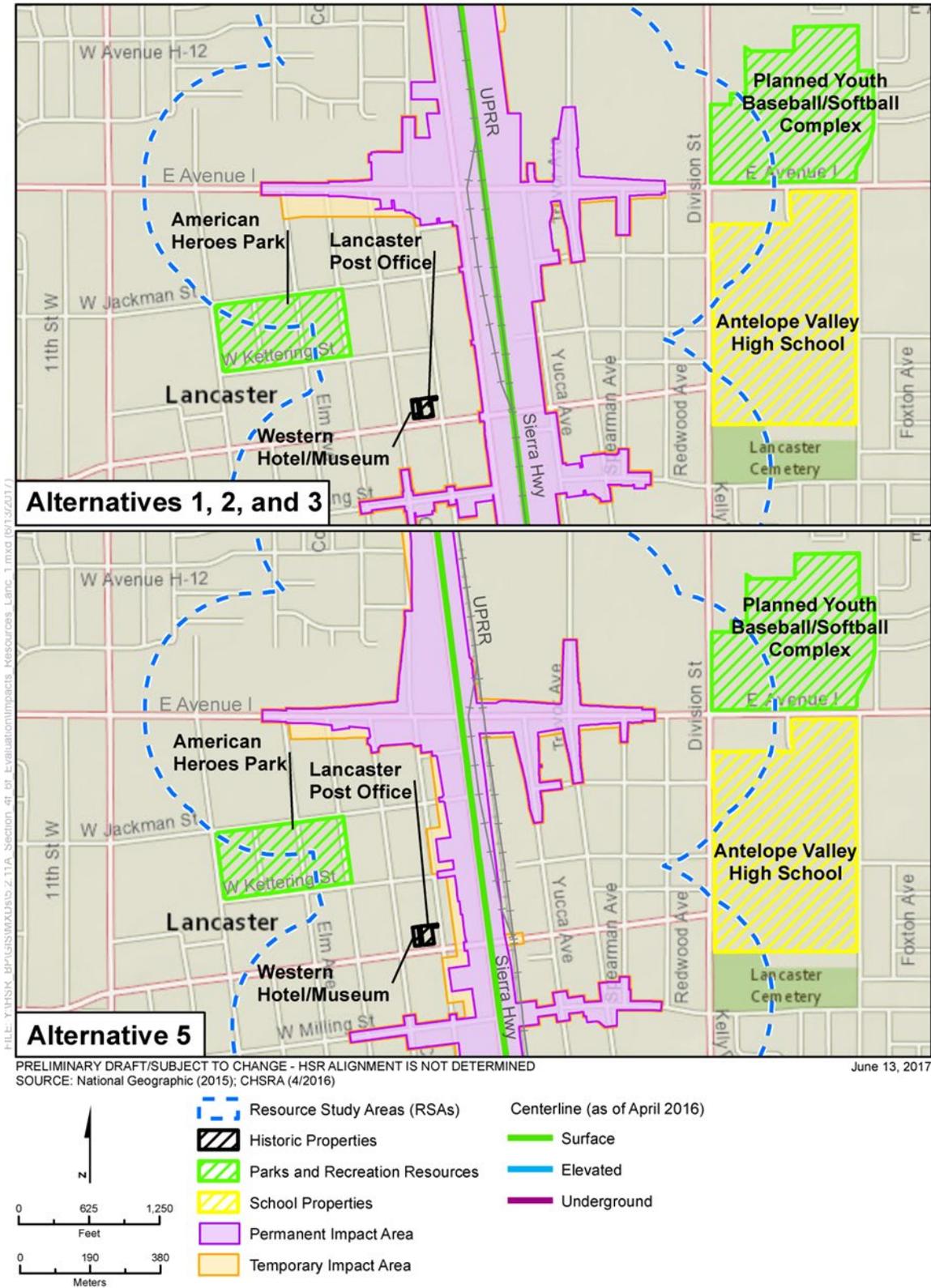
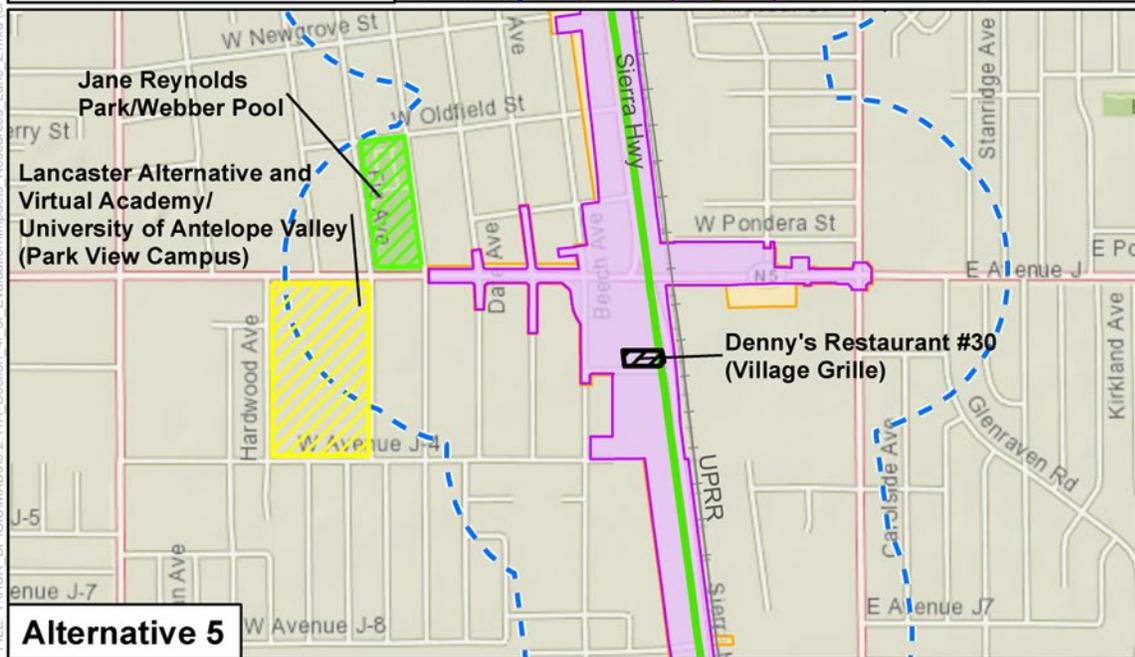
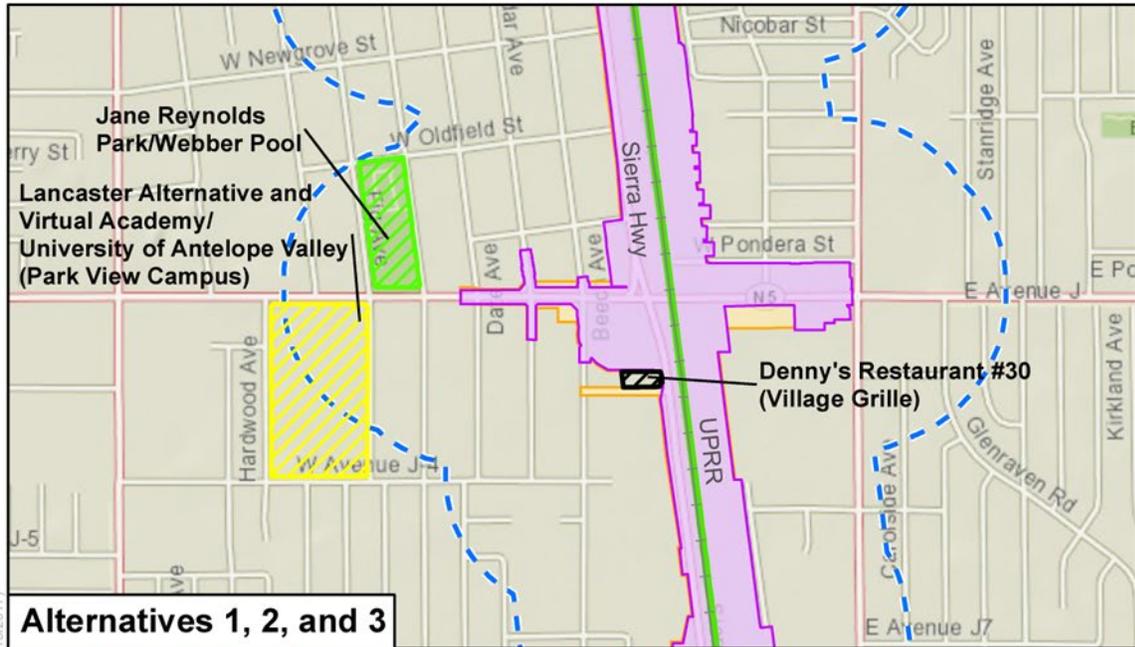


Figure 4-8 Lancaster Section 4(f) Resources

(Sheet 2 of 4)



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HSR ALIGNMENT IS NOT DETERMINED
 SOURCE: National Geographic (2015); CHSRA (4/2016) June 13, 2017



Figure 4-8 Lancaster Section 4(f) Resources
 (Sheet 3 of 4)

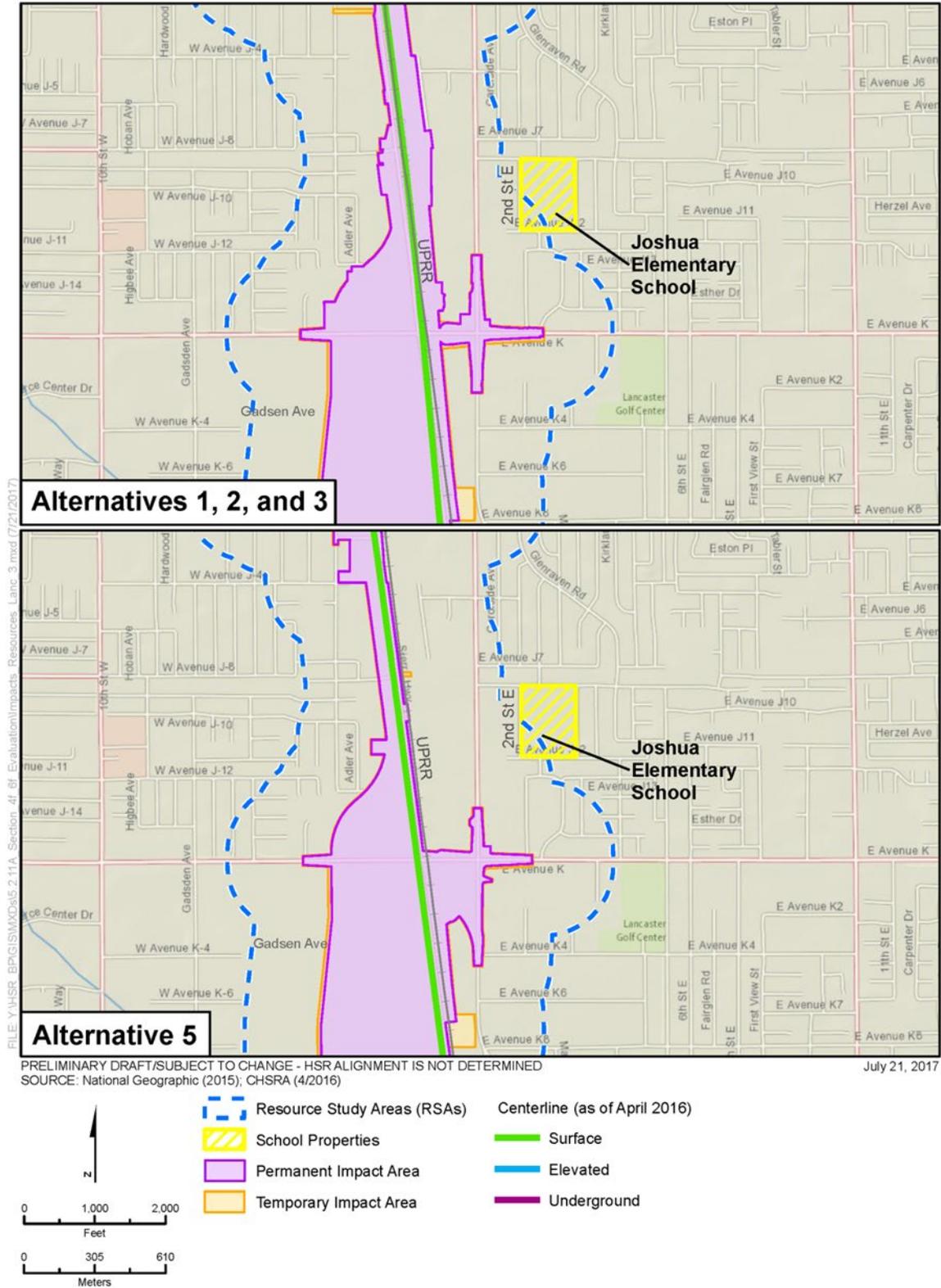
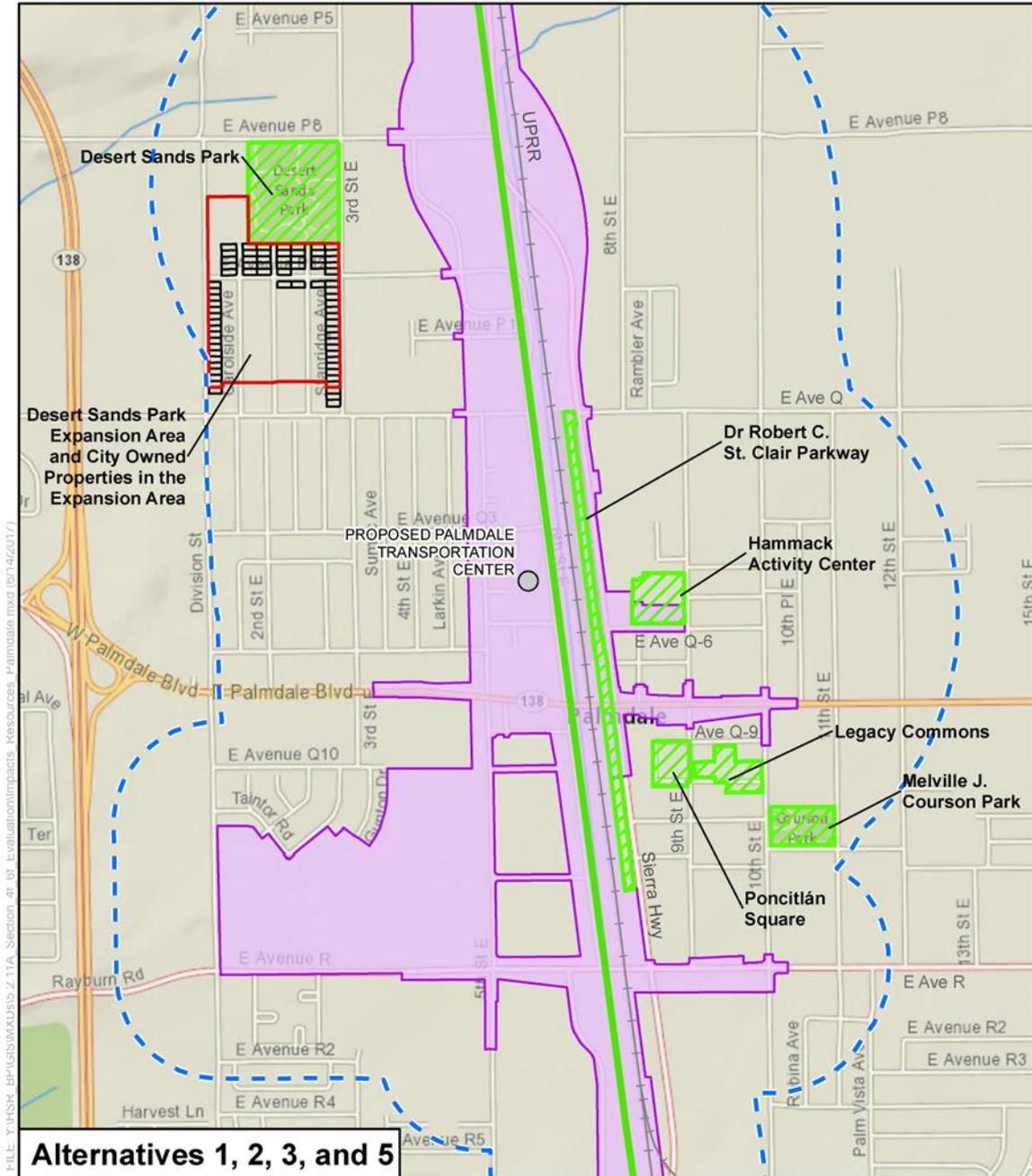


Figure 4-8 Lancaster Section 4(f) Resources
(Sheet 4 of 4)



Alternatives 1, 2, 3, and 5
 PRELIMINARY DRAFT/SUBJECT TO CHANGE - HSR ALIGNMENT IS NOT DETERMINED
 SOURCE: National Geographic (2015); CHSRA (4/2016) June 14, 2017

Figure 4-9 Palmdale Section 4(f) Resources

4.5.1 Public Parks and Recreation Resources

Data collection to identify potential Section 4(f) resources consisted of review of the plans and policies described in Section 3.15, Parks, Recreation, and Open Space; review of parks and recreation resource information on public agency websites; consultation with OWJs over resources; field reviews; public input; and GIS data banks. Where available, the local jurisdictions and counties provided the boundaries for parks and recreation resources in the RSA in GIS data format, on their websites, and in adopted plans.

Section 3.15, Parks, Recreation, and Open Space, describes the park and recreation resources in the RSA. However, not all of those facilities meet the requirements for protection under Section 4(f). The locations of parks and recreation resources in the RSA for Alternatives 1, 2, 3, and 5 that qualify for protection under Section 4(f) and that are evaluated in this section are shown on Figure 4-2, Figure 4-3, Figure 4-4, Figure 4-5, Figure 4-6, Figure 4-7, Figure 4-8, and Figure 4-9.

Preliminary use assessments for the public park and recreation resources relative to the B-P Build Alternatives are discussed in this section. However, only those resources that would incur a use, or are in close enough proximity to an alignment alternative to experience construction effects, are listed in Table 4-3 and described below. Resources determined not to be subject to the requirements for protection under Section 4(f) are described later in Section 4.5.3.

Table 4-3 Public Parks and Recreation Resources Evaluated under Section 4(f)

Resource Name	Ownership	Description	Official with Jurisdiction	Distance from Project Footprint
Ramon Garza Elementary School (Figure 4-2)	Public	<p>Location: 2901 Center Street, Bakersfield.</p> <p>Size: The school is on approximately 10 acres, of which approximately 7 acres are recreation areas.</p> <p>Features: Basketball courts, two playgrounds, and a track.</p> <p>The school recreation areas are available for public use outside school hours by approved organizations only.</p>	Bakersfield City School District	Alternatives 1, 2, 3, and 5: Approximately 980 feet
Sierra Middle School (Figure 4-2)	Public	<p>Location: 3017 Center Street, Bakersfield.</p> <p>Size: The school is on approximately 11.4 acres, of which approximately 7 acres are recreation areas.</p> <p>Features: Basketball courts, two softball fields, a track, and open play areas.</p> <p>The school recreation areas are available for public use on a reservation basis only. The school's facilities are used by community sports teams after school hours.</p>	Bakersfield City School District	Alternatives 1, 2, 3, and 5: Approximately 820 feet

Resource Name	Ownership	Description	Official with Jurisdiction	Distance from Project Footprint
Foothill High School (Figure 4-3)	Public	<p>Location: 501 Park Drive, Bakersfield.</p> <p>Size: The school is on approximately 42 acres, of which approximately 26 acres are recreation areas.</p> <p>Features: A football stadium with track and field facilities, two baseball fields, two softball fields, basketball courts, and tennis courts.</p> <p>The school recreation areas are available for public use outside school hours by approved organizations only.</p>	Kern High School District	Alternatives 1, 2, 3, and 5: Approximately 370 feet
Pacific Crest Trail (Figure 4-5)	Private	<p>Location: Ridgeline trails that extend along the Sierra Nevada and Cascade mountain ranges, from Mexico through California (including Los Angeles and Kern counties), Oregon, and Washington to Canada.</p> <p>Size: Approximately 2,650 miles long.</p> <p>Features: In the RSA, a 30-foot-wide trail easement across private and public lands. There are no drinking water facilities on these segments of the PCT. The trail is a designated National Scenic Trail.</p>	Pacific Southwest Region of the U.S. Department of Agriculture. The segments of the PCT in the RSA are on land owned by CalPortland Company and managed by the U.S. Department of the Interior, Bureau of Land Management. At the time of preparation of this EIR/EIS, the USFS owns the easements for public access on the PCT. This property was assumed to be a Section 4(f) resource for the purposes of this study.	Alternatives 1, 2, 3, and 5: 0 feet (in project footprint)
Whit Carter Park (Figure 4-8, Sheet 1)	Public	<p>Location: 45635 Sierra Highway (north of W Avenue H-8 and west of Sierra Highway), Lancaster.</p> <p>Size: Approximately 20 acres are currently developed and open for use; the park will be approximately 35 acres when fully developed.</p> <p>Features: Community park with trails, playgrounds, restrooms, picnic tables, open play areas, a playground, and off-street parking.</p>	City of Lancaster	Alternatives 1, 2, and 3: 0 feet (adjacent to project footprint) Alternative 5: 0 feet (in project footprint)
Planned Youth Baseball/ Softball Complex (Figure 4-8, Sheet 2)	Public	<p>Location: Northeast corner of Avenue I / Division Street, Lancaster.</p> <p>Size: 37 acres total (15 acres of the park are currently under construction).</p> <p>Features: Planned sports park with four softball fields and four baseball fields.</p>	City of Lancaster	Alternatives 1, 2, 3, and 5: Approximately 400 feet

Resource Name	Ownership	Description	Official with Jurisdiction	Distance from Project Footprint
Antelope Valley High School (Figure 4-8, Sheet 2)	Public	<p>Location: 44900 N Division Street, Lancaster.</p> <p>Size: The school is on approximately 56 acres, of which approximately 30 acres are recreation areas.</p> <p>Features: A football stadium with track and field facilities, two baseball fields, two softball fields, and tennis courts. The school recreation areas are available for public use on a reservation basis only. The school's facilities are also used by community sports teams after school hours.</p>	Antelope Valley Union High School District	Alternatives 1, 2, 3, and 5: Approximately 500 feet
American Heroes Park (Figure 4-8, Sheet 2)	Public	<p>Location: 701 W Kettering Street, Lancaster.</p> <p>Size: 12.2 acres.</p> <p>Features: Community park with playgrounds, soccer fields, two softball fields, basketball and handball courts, gazebos and trellis structures, restrooms, a dog park, and two parking lots.</p>	City of Lancaster	Alternatives 1, 2, 3, and 5: Approximately 600 feet
Jane Reynolds Park/Webber Pool (Figure 4-8, Sheet 3)	Public	<p>Location: 716 Oldfield Street, Lancaster.</p> <p>Size: 6.9 acres.</p> <p>Features: Neighborhood park with open play areas, an activity building, an outdoor pool, a basketball court, a softball field, picnic tables, and a playground.</p>	City of Lancaster	<p>Alternatives 1, 2, and 3: Approximately 290 feet</p> <p>Alternative 5: Approximately 50 feet</p>
Lancaster Alternative and Virtual Academy/ University of Antelope Valley (Park View Campus) (Figure 4-8, Sheet 3)	Public	<p>Location: 44310 Hardwood Avenue, Lancaster.</p> <p>Size: The school is on approximately 20 acres, of which approximately 10 acres are recreation areas.</p> <p>Features: Basketball courts, open play areas, and two baseball fields, which are open to the public outside school hours and currently used by Park View Little League. The City of Lancaster has joint use of the gymnasium.</p>	Lancaster School District	<p>Alternatives 1, 2, and 3: Approximately 650 feet</p> <p>Alternative 5: Approximately 430 feet</p>

Resource Name	Ownership	Description	Official with Jurisdiction	Distance from Project Footprint
Joshua Elementary School (Figure 4-8, Sheet 4)	Public	<p>Location: 43926 2nd Street E, Lancaster.</p> <p>Size: The school is on approximately 18 acres, of which approximately 10 acres are recreation areas.</p> <p>Features: A lighted baseball field, basketball courts, a playground, and open play areas.</p> <p>The school recreation areas are available for public use on a reservation basis only. The school's facilities are also used by community sports teams after school hours.</p>	Lancaster School District	<p>Alternatives 1, 2, and 3: Approximately 660 feet</p> <p>Alternative 5: Approximately 900 feet</p>
Desert Sands Park (Figure 4-9)	Public	<p>Location: 39117 3rd Street E, Palmdale.</p> <p>Size: 20 acres.</p> <p>Features: Two lighted tennis courts, two lighted softball fields, two lighted volleyball courts, a lighted soccer field, play lots, a group picnic area, an activity building, and a concession stand.</p> <p>Future expansion on 11 acres south of and adjacent to Desert Sands Park is planned.</p>	City of Palmdale	<p>Alternatives 1, 2, 3, and 5: Approximately 470 feet</p>
Dr. Robert C. St. Clair Parkway (Figure 4-9)	Public	<p>Location: West of Sierra Highway between E Avenue Q and Avenue R, Palmdale.</p> <p>Size: 8 acres.</p> <p>Features: Linear park: passive open space, a bikeway trail, park benches, tables, and pedestrian pathways.</p>	City of Palmdale	<p>Alternatives 1, 2, 3, and 5: 0 feet (in project footprint)</p>
Hammack Activity Center (Figure 4-9)	Public	<p>Location: 815 E Avenue Q-6, Palmdale.</p> <p>Size: 30,000-square-foot indoor recreation facility and two outdoor roller hockey rings totaling 52,000 square feet.</p> <p>Features: A 19,000-square-foot indoor recreation facility containing a gymnasium area and two outdoor roller hockey rings.</p> <p>In addition, the Boys and Girls Club of America leases 4,000 square feet of this facility from the city.</p>	City of Palmdale	<p>Alternatives 1, 2, 3, and 5: 0 feet (adjacent to project footprint)</p>
Poncitlán Square (Figure 4-9)	Public	<p>Location: 38315 9th Street E, Palmdale.</p> <p>Size: 2 acres.</p> <p>Features: A gazebo, a fountain, sidewalks, and benches.</p>	City of Palmdale	<p>Alternatives 1, 2, 3, and 5: Approximately 115 feet</p>

Resource Name	Ownership	Description	Official with Jurisdiction	Distance from Project Footprint
Legacy Commons (Figure 4-9)	Public	Location: 930 E Avenue Q-9, Palmdale. Size: Approximately 11,000-square-foot senior activity facility with adjacent grass areas. Features: Auditorium, conference room, dining hall, and patio; lawn with walking paths and picnic tables; bocce ball courts; a horseshoe pit; and a croquet lawn.	City of Palmdale	Alternatives 1, 2, 3, and 5: Approximately 150 feet
Melville J. Courson Park (Figure 4-9)	Public	Location: 38226 10th Street E, Palmdale. Size: 7.5 acres. Features: Park with a swimming pool and pool building, two lighted basketball courts, a lighted sand volleyball court, two play lots, a spray pool, a field house with restrooms, a gazebo, and picnic areas.	City of Palmdale	Alternatives 1, 2, 3, and 5: Approximately 550 feet
La Paz (Figure 4-29)	Public	Location: 29700 Woodford-Tehachapi Road, Keene Size: 10.5 acres Features: César E. Chávez Gravesite and Memorial Garden, visitor Center	NPS	Alternatives 1, 2, 3, and 5: Approximately 0 feet CCNM Design Option: Approximately 130 feet Refined CCNM Design Option: Approximately 2,800 feet

Source: California High-Speed Rail Authority, 2019

PCT = Pacific Crest Trail UPRR = Union Pacific Railroad
RSA = resource study area USFS = U.S. Forest Service

4.5.1.1 Bakersfield to Palmdale Project Section Public Parks and Recreation Resources

The park and recreation resources that qualify for protection under Section 4(f) are listed in Table 4-3 and described in detail in this section. Assessment of recreation resources at publicly owned schools is limited to playgrounds (refer to page 48, question 14, in the FHWA’s Section 4(f) Policy Paper [FHWA 2012]) that are available for use outside school hours for organized or substantial walk-on recreational purposes. Playgrounds are the parts of school properties provided for recreation purposes and include ballfields, tennis courts, track and field facilities, jungle gyms, and swing sets.

Ramon Garza Elementary School

Size and Location

Ramon Garza Elementary School, shown on Figure 4-2, is on approximately 10 acres, of which approximately 7 acres are recreation areas. The school is at 2901 Center Street in Bakersfield and is approximately 980 feet north of the nearest project improvements under Alternatives 1, 2,

3, and 5. The recreation areas at this school are approximately 700 feet north of an active railroad (Amtrak and freight) corridor with intervening residential uses.

Ownership

Ramon Garza Elementary School is owned and operated by the Bakersfield City School District.

Usage of Ramon Garza Elementary School (Actual/Current)

The outdoor recreation areas at this school are used by students during school hours and are for organized activities outside school hours conducted by organizations approved by the school or the school district. The recreation areas include basketball courts, two playgrounds, and a track. Parking is available in a designated parking lot adjacent to the recreation areas via an entrance from Center Street, as well as on-street parking on Descanso Street. Pedestrian access is available through gated entrances from Descanso Street and the designated parking lot.

Sierra Middle School

Size and Location

Sierra Middle School, shown on Figure 4-2, is on approximately 11.4 acres, of which approximately 7 acres are recreation areas. The school is at 3017 Center Street in Bakersfield and is approximately 820 feet north of the nearest project improvements under Alternatives 1, 2, 3, and 5. The recreation area at this school is adjacent to Oswell Street and approximately 500 feet north of an active railroad (Amtrak and freight) corridor with intervening residential uses.

Ownership

Sierra Middle School is owned and operated by the Bakersfield City School District.

Usage of Sierra Middle School (Actual/Current)

The recreation areas at this school are used by students during school hours and are open to public use outside school hours for organized activities conducted by organizations approved by the school or the school district. The outdoor recreation areas include basketball courts, two softball fields, a track, and open play areas. Parking is available in a parking lot located on Center Street as well as street parking on Oswell Street. Pedestrian access is available through gated entrances from Oswell Street and the parking lot.

Foothill High School

Size and Location

Foothill High School, shown on Figure 4-3, is on approximately 42 acres, of which approximately 26 acres are recreation areas. The school is at 501 Park Drive in Bakersfield and is approximately 370 feet northwest of the nearest project improvements under Alternatives 1, 2, 3, and 5. The recreation areas at this school are approximately 1,100 feet north of an active railroad (Amtrak and freight) corridor with intervening residential uses.

Ownership

Foothill High School is owned and operated by the Kern High School District.

Usage of Foothill High School (Actual/Current)

The recreation areas at this school are used by students during school hours and are open to public use outside school hours for organized activities conducted by organizations approved by the school or the school district. The recreation areas include a football stadium with track and field facilities, two baseball fields, two softball fields, basketball courts, and tennis courts. Parking is available in designated parking lots adjacent to the recreation areas via entrances on Park Drive. Pedestrian access is available through gated entrances from the designated parking lots.

Pacific Crest Trail (also known as the Pacific Crest National Scenic Trail)

Size and Location

The PCT, shown on Figure 4-5, is a series of ridgeline trails that extend approximately 2,650 miles along the Sierra Nevada and Cascade Mountain Ranges, from Mexico through California (including Los Angeles and Kern counties), Oregon, and Washington to Canada. It is part of the National Scenic Trail System. The PCT extends along and crosses existing transportation facilities, including the at-grade crossing at Tehachapi Willow Springs Road, and intersects with the project footprint under all four B-P Build Alternatives.

Ownership

The PCT passes through lands owned and managed by a range of federal, state, and county agencies; Native American Sovereignities; and private parties. The overall responsibility for managing the PCT in the U.S. is with the U.S. Forest Service (USFS) within the Pacific Southwest Region of the U.S. Department of Agriculture. The segments of the PCT potentially crossed by the HSR alignment consist of unpaved dirt trail in a 30-foot-wide trail easement on land owned by CalPortland Company and managed by the U.S. Bureau of Land Management (BLM). There is a trailhead at the Cameron Road intersection with Tehachapi-Willow Springs Road at the junction of the Desert and Cameron Ridge Segments of the PCT. At the time of preparation of this EIR/EIS, the USFS owns the easements for public access on the PCT; therefore, the PCT is protected under the requirements of Section 4(f).

Usage of the Pacific Crest Trail (Actual/Current)

The PCT is a long-distance hiking and equestrian trail which is generally closely aligned with the highest parts of the Sierra Nevada and Cascades mountain ranges. The trail is a designated National Scenic Trail and is open to use by hikers and equestrians, but not bicyclists or motorized vehicles. The PCT is the westernmost and second-longest component of the nearly 8,000-mile-long Triple Crown of Hiking (the PCT, the Appalachian Trail, and the Continental Divide Trail). In addition, the trail is part of the 6,875-mile Great Western Loop trail system (including the PCT, Pacific Northwest Trail, Continental Divide Trail, Grand Enchantment Trail, and Arizona Trail). It is estimated that thousands of persons travel the PCT annually, with some traveling only short distances and some traveling the entire length of the trail. The trail is parallel to and crosses the Pacific Crest Bicycle Trail a number of times. The Pacific Crest Bicycle Trail is not in the RSA.

Whit Carter Park

Size and Location

Whit Carter Park, shown on Sheet 1 of Figure 4-8, is an existing 20-acre park with a planned expansion (approximately 15 acres), for a total approximately 35-acre park. The existing and planned parts of the park are located at 45635 Sierra Highway in Lancaster. The project footprints for Alternatives 1, 2, and 3 are adjacent to, but do not extend into, the existing and planned parts of the park. Approximately 1.5 acres and 6.9 acres of the park are in the temporary and permanent impact areas, respectively, for Alternative 5. The park area is adjacent to Sierra Highway and approximately 140 feet west of an active railroad (Amtrak and freight) corridor.

Ownership

The total 35 acres for the existing and planned areas in Whit Carter Park are owned by the City of Lancaster. The existing park (20 acres) is operated by the city; the expanded 35-acre total park will also be operated by the city.

Usage of Whit Carter Park (Actual/Current)

The park is partially open, with 20 acres of the 35-acre park currently available for public use. The existing park areas include trails, playgrounds, restrooms, picnic tables, open play areas, a playground, and off-street parking. Parking is provided in a designated parking lot via an entrance from Sierra Highway in the southeast part of the park. The public park is readily accessible to large residential areas to the north, west, and south of the park boundary. Pedestrian access is

available at access points in the south, west, and east parts of the park. The park is open to use for all interested parties, and no admission fee is required.

Planned Youth Baseball/Softball Complex

Size and Location

The Youth Baseball/Softball Complex, shown on Sheet 2 of Figure 4-8, is included in the Lancaster Parks, Recreation, Open Space, and Cultural Master Plan (October 2007) and is planned for a total of approximately 37 acres, of which approximately 15 acres are currently under construction. The park is at the northeast corner of Avenue I/Division Street in Lancaster and is approximately 400 feet northeast of the nearest improvements under Alternatives 1, 2, 3, and 5. The planned sports complex is approximately 2,000 feet east of an active railroad (Amtrak and freight) corridor with intervening industrial land uses.

Ownership

The 37 acres of land for the planned Youth Baseball/Softball Complex are owned by the City of Lancaster, and the complex will be operated by the city when construction is complete.

Usage of the Planned Youth Baseball/Softball Complex (Intended/Planned)

The planned sports park will include four softball fields and four baseball fields. Vehicular access will be available from a parking lot on Division Street. Pedestrian access will be provided from the park perimeter along Division Street, Avenue I, and E 3rd Street.

Antelope Valley High School

Size and Location

Antelope Valley High School, shown on Sheet 2 of Figure 4-8, is on approximately 56 acres, of which approximately 30 acres are recreation areas. The school is at 44900 N Division Street in Lancaster, and the recreation areas at this school are approximately 500 feet southeast of the nearest project improvements under Alternatives 1, 2, 3, and 5. The recreation areas at this school are approximately 1,800 feet east of an active railroad (Amtrak and freight) corridor with intervening residential and industrial uses.

Ownership

Antelope Valley High School is owned and operated by the Antelope Valley Union High School District.

Usage of Antelope Valley High School (Actual/Current)

The recreation areas at this school are used by students during school hours and are open to public use outside school hours on a reservation basis for organized activities conducted by organizations approved by the school or the school district. The play areas include a football stadium with track-and-field facilities, two baseball fields, two softball fields, and tennis courts. Parking is available in designated parking lots adjacent to the recreation areas via entrances on Division Street. Pedestrian access is available through gated entrances from the designated parking lots.

American Heroes Park

Size and Location

American Heroes Park, shown on Sheet 2 of Figure 4-8, is on approximately 12.2 acres. The park is at 701 W Kettering Street in Lancaster and is approximately 600 feet south of the nearest improvements under Alternatives 1, 2, 3, and 5.

Ownership

American Heroes Park is owned and operated by the City of Lancaster.

Usage of American Heroes Park (Actual/Current)

The play areas include playgrounds, soccer fields, two softball fields, basketball and handball courts, gazebos and trellis structures, restrooms, a dog park, and two parking lots. Parking is available in designated parking lots adjacent to the recreation areas via entrances from W Jackman Street and W Kettering Street, as well as street parking on adjacent streets. Pedestrians can access facilities from the designated parking lots and the perimeter of the park along W Jackman Street, Fern Avenue, and W Kettering Street.

Jane Reynolds Park/Webber Pool

Size and Location

Jane Reynolds Park/Webber Pool, shown on Sheet 3 of Figure 4-8, is on approximately 6.9 acres. The park is at 716 Oldfield Street in Lancaster. The park is approximately 290 feet west of the nearest improvements under Alternatives 1, 2, and 3, and approximately 50 feet west of the nearest improvements under Alternative 5. The park is adjacent to Avenue J and approximately 1,500 feet west of an active railroad (Amtrak and freight) corridor with intervening residential uses.

Ownership

Jane Reynolds Park/Webber Pool is owned and operated by the City of Lancaster.

Usage of Jane Reynolds Park/Webber Pool (Actual/Current)

The play areas include open play areas, an activity building, an outdoor pool, a basketball court, a softball field, picnic tables, and a playground. The Webber Pool complex is only open during the summer season. Fees are required for admission for aquatic activities. Parking is available in a designated parking lot on W Oldfield Street. Pedestrians can access the park facilities from adjacent streets along the perimeter of the park.

Lancaster Alternative and Virtual Academy/University of Antelope Valley (Park View Campus)

Size and Location

Lancaster Alternative and Virtual Academy/University of Antelope Valley (Park View Campus), shown on Sheet 3 of Figure 4-8, is on approximately 20 acres, of which approximately 10 acres are recreation areas. The school is at 44310 Hardwood Avenue in Lancaster. The school is approximately 650 feet southwest of the nearest project improvements under Alternatives 1, 2, and 3. Under Alternative 5, the school is approximately 430 feet southwest of the nearest project improvements. The recreation area at this school is adjacent to Avenue J and approximately 2,000 feet west of an active railroad (Amtrak and freight) corridor with intervening residential uses.

In addition to academic functions, this resource also includes administrative functions associated with the alternative and virtual academic services.

Ownership

Lancaster Alternative and Virtual Academy/University of Antelope Valley (Park View Campus) is owned and operated by the Lancaster School District.

Usage of the Lancaster Alternative and Virtual Academy/University of Antelope Valley (Park View Campus) (Actual/Current)

The recreation areas are open to public use outside school hours for organized activities conducted by organizations approved by the school or the school district. The play areas include outdoor recreation areas, basketball courts, open play areas, and two baseball fields. The baseball fields are currently used by Park View Little League. Parking is available in designated parking lots on Hardwood Avenue and Fig Avenue, as well as street parking on adjacent streets. Pedestrian access is available through gated entrances on Hardwood Avenue, Fig Avenue, and W Avenue J-4.

Joshua Elementary School

Size and Location

Joshua Elementary School, shown on Sheet 4 of Figure 4-8, is approximately 18 acres. The school is at 43926 2nd Street E in Lancaster and is approximately 660 feet northeast of the nearest project improvements under Alternatives 1, 2, and 3. Under Alternative 5, the recreation areas at this school are approximately 900 feet northeast of the nearest project improvements under Alternative 5. The recreation areas at this school are approximately 1,500 feet east of an active railroad (Amtrak and freight) corridor with intervening residential uses.

Ownership

Joshua Elementary School is owned and operated by the Lancaster School District.

Usage of Joshua Elementary School (Actual/Current)

The recreation areas at this school are used by students during school hours and are open to public use outside school hours for organized activities conducted by organizations approved by the school or the school district. The play areas include outdoor recreation areas, including a lighted baseball field, basketball courts, a playground, and open play areas. Parking is available at a parking lot on 2nd Street E and on-street parking is available on 2nd Street E, Avenue J-12, and 3rd Street E. Pedestrian access is available from the parking lot and through gated entrances from Avenue J-12.

Desert Sands Park

Size and Location

Desert Sands Park, shown on Figure 4-9, is on approximately 20 acres. The park is at 39117 3rd Street E in Palmdale. The Palmdale General Plan indicates potential future expansion of this park on 11 acres south of and adjacent to the existing Desert Sands Park. The park is adjacent to E Avenue P-8 and 3rd Street E and is approximately 470 feet west of the nearest improvements under Alternatives 1, 2, 3, and 5. The existing park is approximately 1,700 feet west of an active railroad (Amtrak and freight) corridor with intervening industrial uses.

Ownership

The existing 20-acre Desert Sands Park is owned and operated by the City of Palmdale. The Palmdale General Plan (City of Palmdale 2003) indicates potential future expansion of this park on 11 acres south of and adjacent to Desert Sands Park. The expanded 31-acre total park will also be operated by the city. As shown on Figure 4-9, the city currently owns only part of the land for the potential future 11-acre park expansion, and that area is not currently developed with recreation uses or available for recreation purposes. Therefore, the expansion area is not subject to protection under Section 4(f).

Usage of Desert Sands Park (Actual/Current)

The play areas include two lighted tennis courts, two lighted softball fields, two lighted volleyball courts, a lighted soccer field, play lots, a group picnic area, an activity building, and concession stand. Parking is available in a designated parking lot with access from 3rd Street E. Pedestrians can access the park facilities from the park frontages along E Avenue P-8 and 3rd Street E.

Dr. Robert C. St. Clair Parkway

Size and Location

Dr. Robert C. St. Clair Parkway, shown on Figure 4-9, is on approximately 8 acres. The linear parkway is west of Sierra Highway between E Avenue Q and E Avenue R, and parts of the parkway are in the project footprint for Alternatives 1, 2, 3, and 5. The entire parkway is adjacent to an active railroad (Amtrak and freight) corridor.

Ownership

Dr. Robert C. St. Clair Parkway is owned and operated by the City of Palmdale.

Usage of Dr. Robert C. St. Clair Parkway (Actual/Current)

This linear parkway includes passive open space consisting of a paved bikeway trail, landscaping, park benches, tables, pedestrian pathways, and lighting. The existing Sierra Highway Bike Path's off-street alignment ends at 6th Street E, approximately 0.4 mile north of Dr. Robert C. St. Clair Parkway. Between 6th Street E and the northern boundary of the parkway, the Sierra Highway Bike Path is an on-street bike lane that transitions to an off-street bike path when it enters Dr. Robert C. St. Clair Parkway. The on-street segment of the Sierra Highway Bike Path is not subject to the requirements for protection under Section 4(f) because it is primarily for transportation and not recreational use. Parking is available in a divided lane on the west side of southbound Sierra Highway along the part of the parkway between E Avenue Q and E Avenue Q-6. Pedestrians can access the parkway facilities from the west side of Sierra Highway.

Hammack Activity Center

Size and Location

The Hammack Activity Center, shown on Figure 4-9, is an approximately 5.5-acre site occupied by a 30,000-square-foot indoor recreation facility with two outdoor roller hockey rinks. The activity center is at 815 E Avenue Q-6 in Palmdale and is adjacent to project improvements under all four B-P Build Alternatives. The activity center and its outdoor facilities are approximately 250 feet east of Sierra Highway and approximately 500 feet east of an active railroad (Amtrak and freight) corridor.

Ownership

The Hammack Activity Center is owned and operated by the City of Palmdale. The Boys and Girls Club of America currently leases 4,000 square feet of the activity center from the city.

Usage of the Hammack Activity Center (Actual/Current)

The year-round activity center includes a 19,000-square-foot gymnasium area, a lounge area, a food court area, and a table game area. The facility contains two outdoor roller hockey rinks totaling 52,000 square feet. In addition, 4,000 square feet of the facility is leased to the Boys and Girls Club of America. Parking is available in a designated parking lot with access from E Avenue Q-6 and 9th Street E. Pedestrians can access the park facilities from adjacent streets along the perimeter of the activity center property.

Poncitlán Square

Size and Location

Poncitlán Square, shown on Figure 4-9, is on approximately 2 acres. The park is at 38315 9th Street E in Palmdale. The park is approximately 115 feet south of the nearest improvements under Alternatives 1, 2, 3, and 5. The park area is approximately 500 feet east of an active railroad (Amtrak and freight) corridor with intervening civic uses.

Ownership

Poncitlán Square is owned and operated by the City of Palmdale.

Usage of Poncitlán Square (Actual/Current)

The park area includes a gazebo, fountain, sidewalks, and benches. Parking is available in a designated parking lot around the perimeter of the park. Pedestrians can access the park facilities from adjacent streets along the perimeter of the park.

Legacy Commons

Size and Location

Legacy Commons, shown on Figure 4-9, is an approximately 4-acre site occupied by an approximately 11,000-square-foot senior activity and recreation facility with adjacent grass areas. This facility is at 930 E Avenue Q-9 in Palmdale and is approximately 150 feet south of the nearest improvements under Alternatives 1, 2, 3, and 5. The activity center property is approximately 800 feet east of an active railroad (Amtrak and freight) corridor with intervening civic and recreational uses.

Ownership

Legacy Commons is owned and operated by the City of Palmdale.

Usage of Legacy Commons (Actual/Current)

The senior activity center includes an auditorium, conference room, dining hall, and patio. The Legacy Lawn adjacent to the activity center features a 2,812-square-foot lawn with walking paths and picnic tables, bocce ball courts, a horseshoe pit, and a croquet lawn. The organized activities at the activity center are specialized for senior citizens. The outdoor areas are open to the public and the activity center is available for special event rentals. Parking is available in two designated parking lots on E Avenue Q-9 and 10th Street E. Pedestrians can access the park facilities from adjacent streets along the perimeter of the park along E Avenue Q-9, 9th Street E, and 10th Street E.

Melville J. Courson Park

Size and Location

Melville J. Courson Park, shown on Figure 4-9, is on approximately 7.5 acres. The park is at 38226 10th Street E in Palmdale and is approximately 550 feet south of the nearest improvements under Alternatives 1, 2, 3, and 5. The park area is adjacent to 10th Street E and approximately 1,500 feet east of an active railroad (Amtrak and freight) corridor with intervening residential and civic center land uses.

Ownership

Melville J. Courson Park is owned and operated by the City of Palmdale.

Usage of Melville J. Courson Park (Actual/Current)

The recreation facilities at this park include a swimming pool and pool building, two lighted basketball courts, a lighted sand volleyball court, two play lots, a spray pool, a field house with restrooms and equipment checkout, a gazebo, and picnic areas. Parking is available in two designated parking lots with access from 10th Street E and from E Avenue Q-12. Pedestrians can access the park facilities from adjacent streets along the perimeter of the park. It is a public park accessible to residential areas to the north, south, and east of the park boundary.

La Paz

Size and Location

La Paz, shown on Figure 4-29 (provided later in this chapter), is on approximately 10.5 acres of land donated to NPS by the National Chavez Center.

Ownership

Approximately 1.9 acres of land was donated to NPS include fee title in the Visitor Center that contains the office of César Chávez and legal aid offices, César Chávez's home, and the Memorial Garden that includes the grave of César Chávez, as well as an easement (approximately 8.6 acres) for the protection of and access to other historically significant buildings, structures, and associated landscapes located adjacent to the fee lands. As shown on Figure 4-29, the Chávez Home is not open to the public and is therefore not considered for protection under Section 4(f).

Usage of La Paz (Actual/Current)

The recreational facilities at this park include Memorial Garden that includes the grave of César Chávez, as well as a visitor center.

Bakersfield Station—F Street (Locally Generated Alternative)

The Section 4(f) resources evaluated in the Fresno to Bakersfield Section Final Supplemental EIS (Authority 2019) that would incur a use under Section 4(f) are also listed in Table 4-4. The F Street (LGA) Section 4(f) use determinations have been reviewed by the public as part of the public comment period on the Draft Supplemental EIR/EIS for the Fresno to Bakersfield Section. Refer to Section 4.2.5, Parks, Recreation, and Open Space Properties Section 4(f) Applicability Analysis, in Chapter 4 of the Fresno to Bakersfield Section Final Supplemental EIS, for further description of the affected environment related to these Section 4(f) resources.

4.5.1.2 Bakersfield Station

Table 4-4 Bakersfield Station Alternatives—Public Parks and Recreation Resources Evaluated under Section 4(f)

Resource Name	Description	Official with Jurisdiction	Distance from Project Footprint
Metropolitan Recreation Center	Location: Bakersfield Size: 50 acres Features: Sam Lynn baseball fields	Kern County, Department of Recreation and Parks	F Street (LGA): 140 feet
Weill Park	Location: Bakersfield Size: 1.92 acres Features: Grassy area and open space	City of Bakersfield, Department of Recreation and Parks	F Street (LGA): 0 feet

Source: California High-Speed Rail Authority, 2014; 2017a
LGA = Locally Generated Alternative

4.5.2 Cultural Resources

For purposes of identifying cultural resources potentially protected under Section 4(f), the RSA is the same as the built resources APE, which is defined in Section 3.17, Cultural Resources. Within the APE, background research and the field survey revealed eight historic properties listed or eligible for listing on the NRHP. These historic properties are shown on Figure 4-3, Figure 4-4, Figure 4-6, Figure 4-7, and Sheets 2 and 3 of Figure 4-8. Table 4-5 describes resources listed in or determined to be eligible for, the NRHP that are located within the APE.

Table 4-5 Properties Listed in, or Determined Eligible for, the National Register of Historic Places Evaluated under Section 4(f)

Property Name	Address	County	Year(s) Built	Current OHP Status Code	Distance from Project Footprint
Big Creek Hydroelectric System Historic District (Magunden Substation; Big Creek East and West Transmission Lines; Vincent Transmission Lines) (Figure 4-3)	North of Edison Highway, east of Fairfax Road (vicinity of Algoto, east of Bakersfield)	Kern	1912–1927	1D (Criteria A and C)	Alternatives 1, 2, 3, and 5: 0 feet (in project footprint)

Property Name	Address	County	Year(s) Built	Current OHP Status Code	Distance from Project Footprint
Keene Fire Station (Figure 4-4)	30356 Woodford-Tehachapi Road, Keene	Kern	1934	3S (Criterion C)	Alternatives 1, 2, 3, and 5: 0 feet (adjacent to footprint) CCNM Design Option: 0 feet (adjacent to footprint) Refined CCNM Design Option: Approximately 0 feet (adjacent to footprint)
La Paz (Figure 4-4)	29700 Woodford-Tehachapi Road, Keene	Kern	1914–2003	1D (Criteria A and B, and Criteria Consideration G ¹)	Alternatives 1, 2, 3, and 5: 0 feet (adjacent to footprint) CCNM Design Option: Approximately 130 feet Refined CCNM Design Option: Approximately 2,800 feet
First Los Angeles Aqueduct (Figure 4-6)	Approximately 1 mile southwest of Tehachapi Willow Springs Road near Cameron Canyon Road	Kern	1908–1913	2D (Criteria A and C)	Alternatives 1, 2, 3, and 5: 0 feet (in project footprint)
Willow Springs Main Race Track (Figure 4-7)	75th Street W (vicinity of Rosamond)	Kern	1953	3S/PHI (Criteria A and C)	Alternatives 1, 2, 3, and 5: Approximately 1,600 feet
Lancaster Post Office (Figure 4-8, Sheet 2)	567 W Lancaster Boulevard, Lancaster	Los Angeles	1941	3S/MPL (Criterion C)	Alternatives 1, 2, and 3: Approximately 380 feet Alternative 5: Approximately 140 feet
Western Hotel/Museum (Figure 4-8, Sheet 2)	557 W Lancaster Boulevard, Lancaster	Los Angeles	circa 1890	3S (Criteria A and C)	Alternatives 1, 2, and 3: Approximately 430 feet Alternative 5: Approximately 130 feet
Denny's Restaurant #30 (Village Grille) (Figure 4-8, Sheet 3)	4403 Sierra Highway, Lancaster	Los Angeles	1960	3S (Criteria A and C)	Alternatives 1, 2, and 3: 0 feet (adjacent to footprint) Alternative 5: 0 feet (in project footprint)

Source: California High-Speed Rail Authority, 2016b

¹ Criterion Consideration G is for properties that have achieved significance in the past 50 years.

California Register of Historical Resources Status Codes:

Code 1D: Contributor to a district or multiple property listing in the NRHP

Code 2D: District determined eligible for the NRHP through the Section 106 process

Code 3S: Appears eligible for listing in the NRHP as an individual property through survey evaluation

MPL = Multiple Property Listing

OHP = Office of Historic Preservation

NRHP = National Register of Historic Places

PHI = CA Point of Historic Interest

4.5.2.1 **Bakersfield to Palmdale Project Section Cultural Resources**

For the purposes of identifying cultural resources potentially protected under Section 4(f), the RSA is the built environment APE and archaeological APE as defined in Section 3.17, Cultural Resources.

Built Environment Historic Properties

Table 4-5 describes resources within the APE that are listed in, or determined eligible for listing for this undertaking in, the NRHP. Historic properties that are determined eligible for the NRHP have received concurrence from the SHPO through the Section 106 process. Brief descriptions of the properties in the APE that are listed or are eligible for listing in the NRHP and are therefore protected under Section 4(f) are provided below:

- **Big Creek Hydroelectric System Historic District (BCHSHD)—Multiple Assessor’s Parcel Numbers (APN) (Substation north of Edison Highway, east of Fairfax Road, Transmission Lines Cross APE):** The BCHSHD consists of 48 contributing buildings and structures, four of which are in the APE: Magunden Substation, Vincent Transmission Line, and Big Creek East and Big Creek West Transmission Lines (Figure 4-3). The APE for this project intersects part of the BCHSHD, which extends from Huntington Lake, northwest of Fresno, south to the Eagle Rock Substation, west of Pasadena. The district is listed for its influential role in the physical development of the state and its hydroelectric generation industry during the early 20th century (Criterion A) and its significance and representative example of early 20th century hydroelectric engineering and development (Criterion C). The substation and transmission lines were built in 1913–14 and 1912–1913, respectively. The Vincent Transmission Line was constructed between 1925 and 1927. This historic district was nominated to the NRHP during the preparation of the *Bakersfield to Palmdale Project Section: Historic Architecture Survey Report* (HASR; Authority 2016a) for the Bakersfield to Palmdale Project Section and was listed on July 26, 2016. The Big Creek East and West Transmission Lines consist of 3,341 original transmission towers. The Vincent Transmission Line consists of 879 original transmission towers (Figure 4-3). Part of the BCHSHD is in the project footprint for Alternatives 1, 2, 3, and 5 in the vicinity of Bakersfield adjacent to and north of Edison Highway between Fairfax Road and Morning Drive, as shown on Figure 4-3.
- **Keene Fire Station (Kern County Fire Station No. 11)—APN 505-040-01 (30356 Woodford-Tehachapi Road in Keene):** This historic property was originally known as Keene Fire Station when established at this site in 1934 (Figure 4-4). The boundary of the historic property is the legal boundary of the parcel. Two buildings on this parcel are eligible for the NRHP under Criterion C (Architecture): a six-room adobe brick fire station designed in the Minimal Traditional style with Spanish Eclectic influences and an associated wood-frame garage. The fire station building is a significant local example of California Conservation Corps adobe brick construction. The buildings appear to be individually eligible for listing in the NRHP through survey evaluation under Criterion C. The rock walls built during the original construction of the station also contribute to the significance of the property, and some of the wall elements are adjacent to Woodford-Tehachapi Road. Keene Fire Station is adjacent to and southwest of the nearest improvements under Alternatives 1, 2, 3, and 5 (Figure 4-4).
- **La Paz—Multiple APNs (29700 Woodford-Tehachapi Road in Keene):** This property (Figure 4-4) is the headquarters of the United Farm Workers (UFW) and was the residence of UFW founder and labor leader César Chávez. In addition to being listed in the NRHP and California Register of Historical Resources (CRHR), the property is designated by the Secretary of the Interior as a National Historic Landmark. NHLs are designated by the Secretary of the Interior under the authority of the Historic Sites Act of 1935, which authorizes the Secretary of the Interior to identify historic and archaeological sites, buildings, and objects that “possess exceptional value as commemorating or illustrating the history of the United States.” This designation affords property special protections and gives the NPS authority to restore, reconstruct, rehabilitate, preserve, and maintain properties of national historical significance. This historic property contains 24 contributing elements on 187 acres. The

historic property is generally defined by the northern and eastern property line that lies 100 feet from the center of the adjacent UPRR/BNSF railroad track. The southern boundary line follows the property line along Tehachapi Creek, and the western boundary follows the property line. The historic property contains all of APNs 505-040-34, 505-040-33, and 505-080-16, and includes parts of APNs 505-080-17 and 505-080-05. The historic property is listed on the NRHP under Criteria A (Historic Events: Headquarters of the UFW) and B (Significant Persons: César Chávez). The property also possesses exceptional importance and meets the standards under NRHP Criterion Consideration G for properties that have achieved significance in the past 50 years. The period of significance is 1970–1984. La Paz is adjacent to and generally south of the nearest improvements under Alternatives 1, 2, 3, and 5 in the vicinity of Keene, as shown on Figure 4-4.

- **First Los Angeles Aqueduct—Multiple APNs:** The segment of the aqueduct evaluated for the project is approximately 1 mile southwest of Tehachapi Willow Springs Road and parallel to Aqueduct Road, and approximately 6 miles north-northwest of Willow Springs (Figure 4-6). The First Los Angeles Aqueduct, west of the communities of Mojave and Rosamond in Kern County, is eligible for the NRHP for the important role it played in the development of the City of Los Angeles during the early 20th century; for its associations with the economics and politics of California water issues (Criterion A); and for embodying distinctive characteristics of a type, period, and method of construction, as well as the work of a master (William Mulholland) (Criterion C). The character-defining features of the First Los Angeles Aqueduct are its alignment through this part of the Mojave Desert and the aqueduct's concrete channel and cover. The desert setting also contributes to the significance of the resource; however, the setting has been altered at many locations where construction of buildings and infrastructure has occurred. The boundary is the footprint of the aqueduct and its parallel access road. The period of significance of the property is 1907–1931. The First Los Angeles Aqueduct is crossed by Alternatives 1, 2, 3, and 5, as shown on Figure 4-6.
- **Willow Springs Main Race Track—APN 252-050-09 (Approximately 5 miles west of Rosamond):** This property, at 3500 75th Street W (north of Rosamond Boulevard and east of 70th Street) in unincorporated Kern County, contains eight racetracks (one of which is a historic property) for the racing of automobiles, karts, and motorcycles (Figure 4-7). As the oldest purpose-built road race track in the state, Willow Springs Main Race Track set the pattern for the development of European-style road racing in California. The race track hosted several precedent-setting races in 1955–1956, including the nation's first professional sports car race on a permanent track and the first all-stock car National Association for Stock Car Racing (NASCAR) race on a road track. The main track is significant under NRHP Criterion A because of its influential role in the development of the sport in California. As the oldest surviving European-style race track in the nation, it is also significant for embodying distinctive characteristics of a type, period, and method of construction and possesses a high degree of design value (Criterion C). Its period of significance extends from 1953, when it was completed, to 1956, when the rival Riverside International Raceway was completed and eventually came to overshadow the Willow Springs facility in influence and importance. The character-defining features of the original track are its course layout, with its distinctive turns and elevation changes, and its open visibility, permitting the entire track to be seen from the spectator areas along the course straightaway. The historic property boundary is limited to the footprint of the main track. Other changes and additions to the larger race track property, including buildings and smaller racing facilities, were built later. Because they do not have historic significance, they are noncontributing elements of the race track property. The footprint for the historic race track is approximately 1,600 feet from the project footprint for Alternatives 1, 2, 3, and 5 in the vicinity of Willow Springs, as shown on Figure 4-7.
- **Lancaster Post Office—APN 3134-011-901 (567 W Lancaster Boulevard in Lancaster):** This property contains one building constructed in 1941 (Figure 4-8, Sheet 2). The post office building is individually significant at the local level under Criterion C as an excellent and transitional example of the Public Works Administration Moderne/Stripped Classical architectural style. The post office is also eligible under Criterion A for the José Moya del Piño

- mural on the (interior) lobby wall because it is an integral part of the building as originally constructed. The character-defining features of this historic property include the Public Works Administration Moderne or Stripped Classical appearance. Other important features include the Art Deco motifs above and below the windows, stylistic detailing on the chimney, the materials and style of windows and doors, a concrete front staircase with historic-period light fixtures, a rear loading dock with a mushroom column-supported shelter and horizontal banding, and historic-era exterior light fixtures. Interior features of importance include historic-period elements in the public lobby area, particularly the mural at its historic location. The building's period of significance is 1941, the year of its completion, and its boundary is defined as the boundary of the legal parcel on which it is located. The Lancaster Post Office is approximately 380 feet from the nearest improvements under Alternatives 1, 2, and 3. Under Alternative 5, this historic property is approximately 140 feet northwest of the nearest project improvements, as shown on Figure 4-8 (Sheet 2).
- **Western Hotel/Museum—APN 3134-011-912 (557 W Lancaster Boulevard in Lancaster):** This historic property contains one building constructed in 1888 (Figure 4-8, Sheet 2). As a result of evaluation for this project, the 19th century wood-frame building has been determined to be individually eligible for listing in the NRHP under Criterion A at the local level as one of Lancaster's oldest buildings, first hotels, and most important community gathering places during the town's formative years. The period of significance under Criterion A extends from the building's date of construction (circa 1888) through the 1960s, when it ceased to operate as a hotel. The property is also significant at the local level under Criterion C as a relatively rare, intact surviving example of Victorian-era architecture in Lancaster. The building's period of significance under Criterion C is its date of construction, which is about 1888. The integrity of setting has been diminished as a result of changes to the composition and character of the adjacent surrounding neighborhood since the period of significance. The boundaries of the historic property are defined as the boundary of the legal parcel on which it is located. The Western Hotel is approximately 430 feet from the nearest improvements under Alternatives 1, 2, and 3. Under Alternative 5, this historic property is approximately 130 feet west and northwest of the nearest project improvements, as shown on Figure 4-8 (Sheet 2).
 - **Denny's Restaurant #30 (Village Grille)—APN 3132-010-018 (44303 Sierra Highway in Lancaster):** This property contains one building currently occupied by the Village Grille restaurant business (Figure 4-8, Sheet 3). The building was constructed in 1960. This building was Number 30 of the first 400 Denny's Restaurants designed by the architectural firm Armet and Davis. The historic property is eligible under Criterion C as a significant local example of a type, period, and method of construction. The building is one of the few remaining examples of Googie architecture in the City of Lancaster. The period of significance is 1960, the year of its construction. The design reflects the tenets of Googie architecture, which represents character-defining features of the property. The covered patio does not date to the period of significance and is a noncontributing feature. The boundary of the historic property is the footprint of the main restaurant building and the adjacent sign. The project footprint for Alternatives 1, 2, and 3 is adjacent to the Denny's Restaurant #30 in Lancaster. The historic property is within the project footprint under Alternative 5, as shown on Figure 4-8 (Sheet 3).

Archaeological Historic Properties

The 49 known archaeological historic properties within the archaeological APE consist of lithic scatters and quarries; bedrock milling sites; temporary prehistoric camps; historical trash scatters and dumps; a historic grave; and historical foundations and associated structural remains. To date, none of these archaeological historic properties have been formally evaluated for their eligibility for listing in the NRHP because of lack of access to perform surveys, and the SHPO has not previously concurred on the eligibility of any of these properties. Pursuant to the Section 106 PA, Stipulation VI.C.1, these 49 archaeological historic properties are considered potentially eligible for listing under NRHP Criterion D. The locations of these archaeological resources are not shown on a figure in this section to protect the resources from vandalism and unauthorized artifact collecting.

Stipulation VI.E of the PA states the following: In accordance with 36 C.F.R. 800.4(b)(2), phased identification may occur in situations where identification of historic properties cannot be completed. In these cases, subsequent MOAs will provide a provision for the development and implementation of a post-review identification and evaluation effort as applicable to the undertaking.

This phased identification approach has been applied to the Bakersfield to Palmdale Project Section because much of the project footprint has not been accessible for archaeological pedestrian surveys. Records searches have found that 49 archaeological resources have been previously identified within the project footprint. None of these sites have been evaluated, and their significance has been presumed to be primarily attributable to the data that can be recovered from them (NRHP Criterion D). The sites will be subject to phased surveys and, if warranted, evaluated. For the purposes of Section 106, these sites are assumed to be eligible (Chapter 3.17, Cultural Resources, of this EIR/EIS) and, as such, to be adversely affected. Additionally, areas determined to be sensitive to archaeological sites through research and geoarchaeological studies have the potential to yield buried resources; these areas will also be subject to phased archaeological surveys.

Should the known sites or any newly discovered archaeological resources be identified during the phased identification efforts or construction monitoring and determined to have the potential to be eligible under Section 106, they will be evaluated to determine if they are valuable for preservation in place (NRHP Criterion A, B, and/or C). If they are not primarily valuable for preservation in place, appropriate data recovery steps will be taken in accordance with the archaeological treatment plan. If any are valuable for preservation in place and the SHPO concurs, an expedited Section 4(f) analysis will be prepared in accordance with 23 C.F.R. Part 774.9(e).

4.5.2.2 *Bakersfield Station*

The historic resources evaluated under the requirements of Section 4(f) in the Fresno to Bakersfield Section Final EIR/EIS (Authority 2014) are listed in Table 4-6. Refer to Section 4.5.2, Cultural Resources, in Chapter 4 of the Fresno to Bakersfield Section Final EIR/EIS, for further description of the affected environment related to these Section 4(f) resources.

Table 4-6 Bakersfield Station Alternatives-Properties Listed in, or Determined or Recommended Eligible for, the National Register of Historic Places Evaluated under Section 4(f)

Property Name	Address	County	Year(s) Built	Current Status Code	HSR Alternative in Which Property is Located in the Area of Potential Effects
Father Garces Statue	30th Street at Chester Avenue	Kern	1939	2S	Bakersfield LGA
San Joaquin Compress and Warehouse Company	1660 E California Avenue	Kern	circa 1920s	2S2	Bakersfield LGA
Folk Victorian-Era House	2509 E California Avenue	Kern	circa 1898	2S	Bakersfield LGA
Republic Supply Company (Golden Empire Gleaners)	1326 30th Street	Kern	1937–1946	3S	Bakersfield LGA
Noriega's	525–531 Sumner Street (also Kern Street)	Kern	1893–1940	3S	Bakersfield LGA
Kern Land Company Warehouse	210 Sumner Street	Kern	1880	3S	Bakersfield LGA

Property Name	Address	County	Year(s) Built	Current Status Code	HSR Alternative in Which Property is Located in the Area of Potential Effects
Amestoy Hotel (Narducci's Restaurant)	622 E 21st Street	Kern	1899	3S	Bakersfield LGA
Fire Station Number Two	716 E 21st Street	Kern	1940	3S	Bakersfield LGA
Southern Pacific Depot	730 Sumner Street	Kern	1889, 1941	3S	Bakersfield LGA
Division of Forestry Office	2731–2738 O Street	Kern	1942–1948	3S	Bakersfield LGA

Source: California High-Speed Rail Authority, 2014; 2017

Code 2S2: Individual property determined eligible for the NRHP through the Section 106 process.

Code 3S: Appears eligible for listing in the NRHP as an individual property through survey evaluation.

HSR = high-speed rail

NRHP = National Register of Historic Places

LGA = Locally Generated Alternative

SR = State Route

Bakersfield Station—F Street (Locally Generated Alternative)

The historic resources evaluated under the requirements of Section 4(f) in the Fresno to Bakersfield Section Final Supplemental EIS (Authority 2019) are also listed in Table 4-6. Refer to Section 4.2.6, Cultural Resources Section 4(f) Applicability Analysis, in Chapter 4 of the Fresno to Bakersfield Section Final Supplemental EIS, for further description of the affected environment related to these Section 4(f) resources.

4.5.3 Resources Evaluated and Determined Not to Be Subject to Protection under Section 4(f)

In addition to the resources described in Sections 4.5.1 and 4.5.2, the park and recreation resources in the RSA listed in Table 4-7 were also evaluated to determine whether they would trigger the requirements for protection under Section 4(f). Those resources were determined not to trigger the requirements for protection under Section 4(f) for the reasons described in the table.

Table 4-7 Park and Recreation Resources Not Subject to Section 4(f) Requirements

Resource	Reason Why the Resource Is Not Subject to Protection under Section 4(f)
Edison Middle School (City of Bakersfield)	The recreation areas at this school are not available for public use outside school hours. Therefore, this resource is not subject to Section 4(f) requirements.
White Wolf-Caliente Creek and White Wolf-Bodfish Road Trails	These trails are on privately owned land. These two hiking trails are part of the Community Hike Program established by the Tejon Ranch Conservancy. Hikes on this trail are open to the public during approximately 15–30 events scheduled each year. Outside of these scheduled events, these trails are not open to the public. Because the trails are on privately owned land, they are not subject to Section 4(f) requirements.
Greenways-Antelope Run (City of Tehachapi)	The planned recreational facilities in the Greenways-Antelope Run are conceptual in nature and are not currently planned. The proposed trails would cross private property and their alignments are not defined. Therefore, because these trails are on privately owned land, these resources are not subject to Section 4(f) requirements.
Planned Challenger Bike Path (City of Palmdale)	This planned bike path was proposed to be an off-street bike path for public use, but it was completed as a Class II on-street bike lane path, which would be considered part of the transportation network. Therefore, this resource is not subject to Section 4(f) requirements.
Planned Tehachapi Boulevard Bike Path (City of Tehachapi)	This planned bike path will be an off-street bike path for public use, but it would be considered part of the transportation network. Therefore, this resource is not subject to Section 4(f) requirements.

Resource	Reason Why the Resource Is Not Subject to Protection under Section 4(f)
Nature and Agriculture—Open Space	This resource is on privately owned land. This area is intended to preserve the natural environment. Large, regional, and community-scale parks are permitted in this area, but areas intersecting the RSA in this land use designation have not been formally adopted for parks or recreational use. Therefore, this resource is not subject to Section 4(f) requirements.
RCSD Potential Recreation Resources	The planned recreational facilities in the RCSD are conceptual in nature and are not currently formally identified for funding. The planned trails would cross private property, and it is unknown who would be owner or operator of the trails. Therefore, because these trails are not formally adopted, the owner/operator is unknown, and public access has not been determined, these recreation resources are not subject to Section 4(f) requirements.
Willow Springs International Motorsports Park	This resource is privately owned and operated. Therefore, the Section 4(f) requirements are not triggered for this resource. However, as described earlier, the Main Race Track at the Willow Springs International Motorsports Park is eligible for the NRHP. As a result, the Main Race Track part at this motorsports park is subject to Section 4(f) protection. The other parts of that property and the other smaller racetracks and buildings on the property are not eligible for the NRHP; therefore, they are not subject to Section 4(f) requirements.
Planned Avenue G Bike Path	This planned bike path will be an off-street bike path for public use, but it would be considered part of the transportation network. Therefore, this resource is not subject to Section 4(f) requirements.
Planned Avenue H Bike Path	This planned bike path will be an off-street bike path for public use, but it would be considered part of the transportation network. Therefore, this resource is not subject to Section 4(f) requirements.
Existing Sierra Highway Bike Path	This existing bike path is an off-street bike path for public use, but it is considered to be part of the transportation network due to its location between the Sierra Highway right-of-way and UPRR right-of-way. The connectivity of the bike path does not demonstrate recreational characteristics or use as defined under Section 4(f). Therefore, this resource is not subject to Section 4(f) requirements.
Planned Sierra Highway Bike Path Extension	This planned bike path will be an off-street bike path for public use, but it would be considered part of the transportation network due to its location between the Sierra Highway right-of-way and UPRR right-of-way. The connectivity of the bike path does not demonstrate recreational characteristics or use as defined under Section 4(f). Therefore, this resource is not subject to Section 4(f) requirements.
Sacred Heart Catholic Church and School	This resource, including the recreation areas, is privately owned and operated. Therefore, this resource is not subject to Section 4(f) requirements.
Life Source International Charter School	The recreation areas at this school are not available for public use outside school hours. Therefore, this resource is not subject to Section 4(f) requirements.
Avenue K-8 Bike Path	This existing bike path is an off-street bike path for public use, but it is considered to be part of the transportation network. Therefore, this resource is not subject to Section 4(f) requirements.
Planned Avenue K-8 Bike Path Bridge	The land to be occupied by this planned bike path bridge is not currently in public ownership. Under Section 4(f), a planned resource must be in public ownership at the time of the NEPA decision. Therefore, this resource is not subject to Section 4(f) requirements.
Planned Avenue L Bike Path	This planned bike path will be an off-street bike path for public use, but it would be considered part of the transportation network. Therefore, this resource is not subject to Section 4(f) requirements.
Amargosa Creek Bike Pathway	This planned bike path will be an off-street bike path for public use, but it would be considered part of the transportation network. Therefore, this resource is not subject to Section 4(f) requirements.

Resource	Reason Why the Resource Is Not Subject to Protection under Section 4(f)
American Indian Little League Baseball Fields	This resource is privately owned and operated. Therefore, this resource is not subject to Section 4(f) requirements.
R. Rex Parris High School	The recreation areas at this school are available for public use on a reservation basis, but the official with jurisdiction (Antelope Valley Union High School District) has stated that the recreation areas at this school are not considered to be of significance for local recreational purposes. Therefore, this resource is not subject to Section 4(f) requirements.

Source: California High-Speed Rail Authority, 2019

NEPA = National Environmental Policy Act

RSA = resource study area

NRHP = National Register of Historic Places

UPRR = Union Pacific Railroad

RCSD = Rosamond Community Services District

4.6 Preliminary Section 4(f) Use Assessment

4.6.1 Public Park and Recreation Resources

Preliminary use assessments for park and recreation resources relative to the HSR alternatives are discussed in this section. Those Section 4(f) resources are shown on Figure 4-2, Figure 4-3, Figure 4-4, Figure 4-5, Figure 4-6, Figure 4-7, Figure 4-8, and Figure 4-9. Resources that would incur a use or that are close enough to an alignment alternative to potentially experience constructive use (proximity) impacts are described in this section.

Although the study area identified Section 4(f) resources within 1,000 feet of the project footprint and 0.5 mile of HMF sites, stations, and support facilities, for the purposes of identifying the potential indirect impacts, this analysis focuses on those resources within 300 feet of the alignments and other facilities for construction impacts. Construction within 300 feet of a park and recreation facility would have the greatest potential for noise impacts, depending on the construction equipment and activity. As described earlier, temporary construction impacts include park access disruptions, noise, dust, air quality, and visual degradation. These are usually localized construction-related impacts that are most likely to occur when recreational resources are within 300 feet of project construction activities and staging areas. Resources more than 300 feet from construction activities are expected to be sufficiently remote to be unaffected by most construction activities. The distance of 300 feet was chosen because it is consistent with the screening distances used to determine indirect impacts resulting from air quality and noise and vibration, as described in Section 3.3, Air Quality and Global Climate Changes; and Section 3.4, Noise and Vibration, respectively.

The following resources would not experience a permanent use or temporary occupancy, and also would not experience a constructive use based on the distance between the resource and the project improvements and the presence of intervening land uses. As a result, no further analysis under Section 4(f) is provided for these resources:

- Ramon Garza Elementary School—Recreation Areas
- Sierra Middle School—Recreation Areas
- Foothill High School—Recreation Areas
- Planned Youth Baseball/Softball Complex
- Antelope Valley High School—Recreation Areas
- American Heroes Park
- Lancaster Alternative and Virtual Academy/University of Antelope Valley (Park View Campus)—Recreation Areas
- Joshua Elementary School—Recreation Areas
- Desert Sands Park
- Melvin J. Courson Park

This draft Section 4(f) statement is being released for comment by the Authority pursuant to 23 U.S.C. 327 and the terms of the NEPA Assignment Memorandum of Agreement (FRA and State of California 2019) assigning to the Authority responsibility for compliance with NEPA and other federal environmental laws, including Section 4(f) (49 U.S.C. 303) and related U.S. Department of Transportation orders and guidance.¹

4.6.1.1 Pacific Crest Trail Assessment

Impacts to Recreational Resource

The alignment of the PCT would be crossed by all four B-P Build Alternatives, as shown on Figure 4-10. Alternatives 1, 2, 3, and 5 would not require the permanent acquisition of any land from the PCT.

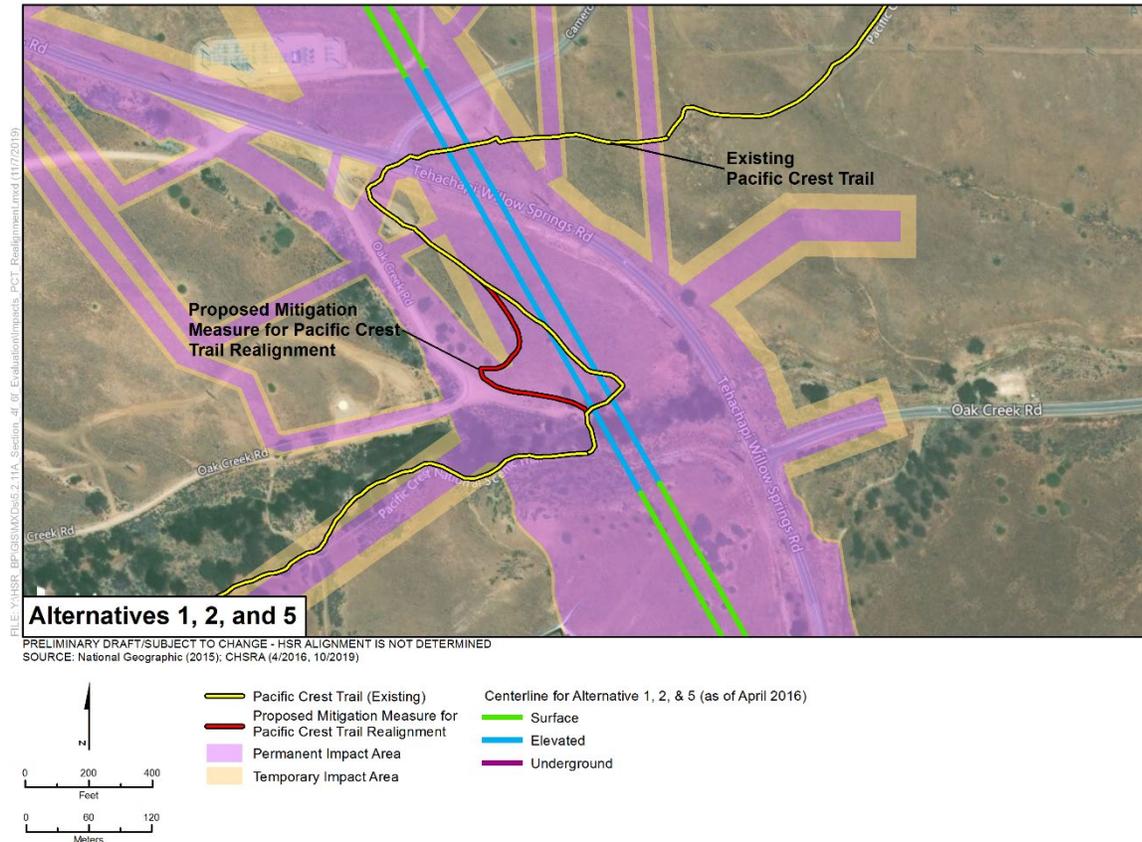


Figure 4-10 Alternatives 1, 2, and 5 Proposed Mitigation Measure for Pacific Crest Trail Realignment

¹ All determinations of a constructive use by the Authority, if any, are preliminary only. Under the NEPA Assignment Memorandum of Understanding, the Authority is required to consult with the FRA on any proposed constructive use determination.

Under Alternatives 1, 2, and 5, the HSR alignment would be immediately adjacent to and in an aerial alignment (1,500-foot-long viaduct) above this National Scenic Trail, crossing the existing trail at three locations (Figure 4-10). The proposed viaduct would span over the trail with a 19.1-foot clearance. The proposed viaduct under Alternatives 1, 2, and 5 would require the installation of columns to support the viaduct structure, which would be outside the existing PCT trail alignment.

Under Alternatives 1, 2, and 5, approximately 845 linear feet of the trail would be realigned, as proposed mitigation, west of the proposed viaduct to allow the trail to cross under the bridge structure at one location (Figure 4-10). This proposed mitigation measure for the PCT realignment would represent a permanent change to the trail and would constitute a permanent use of land, under Section 4(f), from the PCT by the Authority. The Authority, in consultation with the USFS and BLM, would be required to obtain a new easement from the private property owner for the realigned segment of the PCT.

With the proposed mitigation measure for the PCT realignment, the number of trail crossings under the viaduct would be reduced from three crossings (the current alignment) to one crossing (proposed trail realignment). The proposed viaduct crossing, the reduction in the number of crossings under the HSR viaduct, and the trail relocation west of the alignment would result in an improved user experience when considering the coexistence of the trail and HSR facility.

Under Alternative 3, the HSR track would be on embankment with an approximately 500-foot-long short viaduct over the trail and Oak Creek Road. The viaduct would cross the PCT at one location (Figure 4-10) under this alternative. The viaduct would span the trail with a 12-foot clearance and would not result in a permanent use of the PCT. Figure 4-10 shows the crossing over the PCT for Alternative 3.

Under all four B-P Build Alternatives, the proposed viaducts would completely span the existing trail easement and the trail under the viaduct would remain available for use in accordance with the Authority's policy on "Access Control for High-Speed Rail Right-of-Way and Facilities" (Authority 2013).

In addition, the Authority would negotiate and obtain a permanent maintenance easement from the private property owner so that the elevated viaduct and track could be appropriately maintained during operation.

The continuity of the trail across the western U.S. represents the primary feature and attribute that qualify the resource for protection under Section 4(f). The PCT intersects with and crosses existing transportation corridors along its 2,650-mile alignment. The noise levels during operation at the HSR crossings would constitute a severe noise impact (74.2 equivalent continuous sound level measured in A-weighted decibels [dBA L_{eq}]) under the FRA criteria. While noise at the crossing of the PCT would increase compared to existing conditions with operation of HSR trains, the PCT extends along and crosses existing transportation facilities throughout its entire alignment. The existing PCT crossings with roadways and railroads in the western U.S. and Canada also experience noise associated with the operation of those transportation facilities. While operation of the HSR near the PCT would result in increased noise levels, the Section 4(f) resource would still function as it is supposed to. The trail connectivity would be maintained under Alternatives 1, 2, 3, and 5. The features and attributes of the trail that trigger protection under Section 4(f) would not be diminished.

Potential for Use under Section 4(f)

The proposed project would result in temporary occupancy of land at the PCT during construction of the viaduct over the trail under Alternative 3. For the purposes of Section 4(f), such temporary occupancy of a Section 4(f) resource does not constitute use if each of the five conditions listed in 23 C.F.R. 774.13(d) are met (refer to Section 4.1.4.2, Temporary Occupancy, of this chapter).

The construction of the viaduct structures over the PCT for the proposed project would require temporary closures of the PCT with detours around active construction areas. These closures would occur when construction activity in the vicinity of the trail could pose a danger to trail users.

The temporary impact areas for construction of the viaducts over the PCT would meet the five conditions listed in 23 C.F.R. 774.13(d) as follows:

- The duration of construction over the trail would not exceed the overall construction period for Alternative 3, and trail closures would be planned in stages to allow trail users to access the detours around the construction areas. The duration of construction for the viaducts would be substantially less than the time needed to construct the entire project. There would be no change in the ownership of the trail during construction of the improvements.
- The scope of work is minor and would be limited to temporary PCT closures and detours, and construction of the viaduct.
- The construction of the viaduct would not result in any permanent adverse physical impacts to the PCT and would not interfere with the protected activities, features, or attributes of the PCT on either a temporary or permanent basis. The proposed trail detours around the planned closures would ensure connectivity of the trails during construction of the viaduct and HSR facility. Measures PCT-MM #1 and PCT-MM #2, provided later in this chapter, would ensure that the proposed trail detours would reduce the effects of the temporary occupancy of land from the PCT.
- The land temporarily occupied by the temporary impact areas and construction activity would be returned to a condition that is at least as good as that which existed prior to the project at the completion of project construction in the vicinity of the PCT.
- There must be documented agreement of the OWJs over the Section 4(f) resource regarding the above conditions. In accordance with the requirements of Section 4(f), the Authority (project proponent) would seek concurrence from the Pacific Southwest Region of the U.S. Department of Agriculture (the OWJ over the trail) that the four conditions listed above have been met.

The existing PCT alignment through the RSA would remain in its location and alignment under Alternative 3, while Alternatives 1, 2, and 5 and the proposed mitigation measure for the PCT realignment would realign the PCT to cross the proposed viaduct once instead of three times. Under all four B-P Build Alternatives, construction of the viaduct would be planned in stages to allow trail users to access temporary trail detours around the active construction area.

Under Alternatives 1, 2, and 5, 845 linear feet of the trail would be realigned, as proposed mitigation, west of the proposed viaduct to allow the trail to cross under the bridge structure at one location (Figure 4-10). This realignment would represent a permanent change to the trail and would constitute a permanent use of land from the PCT by the Authority.

The context of this recreation resource is a long-distance hiking trail near its intersection with Tehachapi Willow Springs Road and in the vicinity of existing wind farms. Access to the trail would be maintained through the implementation of detour routes during construction. Construction of the B-P Build Alternatives would not prevent or substantially impair public use of the trail.

Potential for De Minimis Impact (Alternatives 1, 2 and 5)

The Authority has made a preliminary determination that Alternatives 1, 2, and 5 would result in a *de minimis* impact based on the permanent use of land of the PCT.

Specifically, the Authority has preliminarily determined that, with the proposed mitigation measure for the PCT realignment, the permanent use at the PCT for the trail realignment (Alternatives 1, 2, and 5) and the maintenance easement (all four B-P Build Alternatives) would constitute a *de minimis* impact because the features and attributes that qualify the resource for protection under Section 4(f) would not be adversely affected by the HSR project. The PCT intersects with and crosses existing transportation corridors along its 2,650-mile alignment, and the continuity of the trail across the western U.S. represents the features and attributes that qualify the resource for protection under Section 4(f). The trail connectivity would be maintained under Alternatives 1, 2,

and 5. Therefore, the Authority has proposed a finding that the B-P Build Alternatives at the PCT would constitute a *de minimis* impact as defined by 49 U.S.C. 303(d).

The Authority has begun consultation with the USFS with regard to the characterization of effects of the project in the context of this Section 4(f) evaluation, consistent with 49 U.S.C. 303(d)(3)(B). As part of public outreach, the Pacific Crest Trail Association is being consulted; its views on a *de minimis* finding will be considered.

4.6.1.2 Whit Carter Park Assessment

Impacts to Recreational Resource

Alternatives 1, 2, and 3 would be adjacent to the existing and planned parts of Whit Carter Park, but no permanent impact areas in those alternatives would extend into the park. Alternatives 1, 2, and 3 would not result in the permanent incorporation of land from this Section 4(f) resource.

The permanent impact area under Alternative 5 would extend into the existing and planned parts of Whit Carter Park. Alternative 5 would result in the permanent incorporation of approximately 6.9 acres of land from the existing and planned parts of this Section 4(f) resource. The part of the park that would be acquired is along the eastern boundary, as shown on Figure 4-8, Sheet 1. This would represent approximately 19.6 percent of the total acreage of this park. Impact avoidance and minimization feature (IAMF) SOCIO-IAMF#2 and Mitigation Measures PP-MM #1, PP-MM#3, and PP-MM#4, provided later in this chapter, would mitigate permanent impacts resulting from acquisition of land from this park. This proposed acquisition would include the existing driveway from Sierra Highway, which is the only vehicular access point to the park. The existing driveway would be relocated to the west about 70 feet, and no reconfiguration to the on-site parking lot would be required.

Potential for Use under Section 4(f)

No temporary impact areas are proposed at Whit Carter Park under Alternatives 1, 2, and 3. Therefore, Alternatives 1, 2, and 3 would not result in the temporary occupancy of this Section 4(f) resource. Noise impacts related to operation of the HSR system would occur under all four B-P Build Alternatives. The park is already subject to freight train and highway noise on a daily basis. The outdoor recreation use is not noise sensitive, and operation of the HSR project would not introduce a new type of noise in this area. As a result, construction and operation of the HSR project would not result in an effect on Whit Carter Park. Therefore, the noise impacts from the HSR system would not result in proximity impacts that would substantially impair the use of the park.

Preliminary Summary of Determinations

Alternatives 1, 2, and 3 would not result in a permanent or constructive use of this Section 4(f) resource. The Authority has made a preliminary determination that Alternative 5 would result in a permanent use of approximately 6.9 acres of Whit Carter Park and temporary occupancy of an additional approximately 1.5 acres of land in the park during construction.

The Authority has begun consultation with the City of Lancaster with regard to the characterization of effects of the project in the context of this Section 4(f) evaluation, consistent with 49 U.S.C. 303(d)(3)(B).

4.6.1.3 Jane Reynolds Park/Webber Pool Assessment

Impacts to Recreational Resource

Jane Reynolds Park/Webber Pool is approximately 290 feet from the nearest permanent project improvements under Alternatives 1, 2, and 3. The park is approximately 50 feet from the nearest permanent improvements under Alternative 5. Therefore, Alternatives 1, 2, 3, and 5 would not result in the direct impacts or permanent incorporation of land from this Section 4(f) resource.

Potential for Use under Section 4(f)

No temporary impact areas are proposed at Jane Reynolds Park/Webber Pool. Therefore, Alternatives 1, 2, 3, and 5 would not result in the temporary occupancy of land from this Section 4(f) resource.

The HSR alignment under all four B-P Build Alternatives would not be visible from the recreation areas at this park due to intervening land uses.

The nearest HSR improvements in the vicinity of Jane Reynolds Park/Webber Pool are roadway improvements. During operation, noise from adjacent vehicular traffic along W Avenue J would be similar to existing conditions. Noise related to operation of the HSR system under all four B-P Build Alternatives would be at a distance of 1,600 feet from the park. The parts of the park that are used for recreation are already subject to freight train noise on a daily basis. As described in Section 3.4, Noise and Vibration, introduction of the HSR operation at this distance from the park would only result in a minor increase in ambient noise levels at the park.

Activities at the park (i.e., swimming and outdoor recreation) are not noise-sensitive; therefore, the minor increase in noise during operation of the B-P Build Alternatives would not substantially impair the protected activities, features, or attributes of the park. Operation of the B-P Build Alternatives would not substantially impair the features of the resource that qualify it for protection under Section 4(f).

Preliminary Summary of Determinations

Based on the analyses described above, the Authority has made a preliminary determination that Alternatives 1, 2, 3, and 5 would not acquire property from the park and the noise impacts from operation of the B-P Build Alternatives would not substantially impair the use of the park. There would be no Section 4(f) permanent or constructive use at this park under the four B-P Build Alternatives. The Authority has begun consultation with the City of Lancaster with regard to the characterization of project effects in the context of this Section 4(f) evaluation, consistent with 49 U.S.C. 303(d)(3)(B).

4.6.1.4 Dr. Robert C. St. Clair Parkway

Impacts to Recreational Resource

Alternatives 1, 2, 3, and 5 would be adjacent to Dr. Robert C. St. Clair Parkway. The Palmdale Station would be west of the alignment and the UPRR right-of-way. Three pedestrian overcrossings would connect the Palmdale Station on the west side of the rail corridor to Dr. Robert C. St. Clair Parkway on the east side of the rail corridor. One additional overcrossing would directly connect to the Station Entry Plaza on the east side of Sierra Highway. The footings for the four overcrossings would be the only improvements in the parkway.

Potential for Use under Section 4(f)

The permanent impact area under Alternatives 1, 2, 3, and 5 would result in the permanent incorporation of a very minor amount of land from the existing 8-acre parkway to accommodate the column footings for the pedestrian overcrossings. The part of the park that would be acquired is along the eastern boundary, as shown on Figure 4-9 and Figure 4-10. This would represent a minimal reduction in the total acreage of this parkway. As discussed in Section 4.8, Measure PP-MM #1, Permanent Acquisition of Property from Publicly Owned Parks under the California Park Preservation Act, and Measure PP-MM #2, Permanent Easement from Parks, Recreation Resources, and/or Trails, would address permanent impacts resulting from acquisition of land from this parkway.

Preliminary Summary of Determinations

The Authority has made a preliminary determination that Alternatives 1, 2, 3, and 5 would result in a *de minimis* impact as a result of the permanent use of land in this park.

The permanent use of land at Dr. Robert C. St. Clair Parkway for the footings for the four pedestrian overcrossings (Alternatives 1, 2, 3, and 5) would constitute a *de minimis* impact because the features and attributes that qualify the resource for protection under Section 4(f) would not be adversely affected by the HSR project. The off-street bikeway trail, pedestrian pathways, picnic tables and benches, and passive open space represent the features and attributes that qualify the resource for protection under Section 4(f). The footings for the four pedestrian overcrossings would not occupy the bikeway trail or pedestrian pathways. The footings would be sited in areas not currently used for picnic or recreation activities. This footing area would occupy a small amount of the total land in the existing parkway. The pedestrian and bikeway trail connectivity would be maintained under Alternatives 1, 2, 3, and 5. Therefore, the permanent effects of the B-P Build Alternatives at Dr. Robert C. St. Clair Parkway would constitute a *de minimis* impact, as defined by 49 U.S.C. 303(d).

The Authority has begun consultation with the City of Palmdale with regard to the characterization of effects of the project in the context of this Section 4(f) evaluation, consistent with 49 U.S.C. 303(d)(3)(B).

4.6.1.5 Hammack Activity Center

Impacts to Recreational Resource

The Hammack Activity Center is adjacent to and outside the limits of the nearest permanent project improvements on E Avenue Q6 under Alternatives 1, 2, 3, and 5. Therefore, Alternatives 1, 2, 3, and 5 would not result in direct impacts or the permanent incorporation of land from this Section 4(f) resource.

Potential for Use under Section 4(f)

No temporary impact areas are proposed at the Hammack Activity Center. Therefore, Alternatives 1, 2, 3, and 5 would not result in the temporary occupancy of land from this Section 4(f) resource.

Noise impacts related to operation of the HSR system would occur under all four B-P Build Alternatives. The outdoor hockey rinks are already subject to freight train and highway noise on a daily basis. The outdoor recreation use is not noise sensitive, and operation of the HSR trains approximately 500 feet west of this activity center would not introduce a new type of noise in this area. As a result, construction and operation of the HSR would not result in an effect on the outdoor hockey rinks at this activity center. Therefore, the noise impacts from the HSR system would not result in proximity impacts that would substantially impair the use of the activity center.

Preliminary Summary of Determinations

The Authority has made a preliminary determination that Alternatives 1, 2, 3, and 5 would not permanently acquire property from the activity center and the noise impacts from the operation of the HSR system would not substantially impair the use of this resource. There would be no permanent or constructive use at this activity center under the four B-P Build Alternatives.

The Authority has begun consultation with the City of Palmdale with regard to the characterization of project effects in the context of this Section 4(f) evaluation, consistent with 49 U.S.C. 303(d)(3)(B).

4.6.1.6 Poncitlán Square

Impacts to Recreational Resource

Poncitlán Square is approximately 115 feet from the nearest permanent project improvements under Alternatives 1, 2, 3, and 5. Therefore, Alternatives 1, 2, 3, and 5 would not result in direct impacts or the permanent incorporation of land from this Section 4(f) resource.

Potential for Use under Section 4(f)

No temporary impact areas are proposed at Poncitlán Square. Therefore, Alternatives 1, 2, 3, and 5 would not result in the temporary occupancy of land from this Section 4(f) resource.

The HSR alignment under all four B-P Build Alternatives would not be visible from the recreation areas at this park due to intervening land uses. The nearest HSR improvements in the vicinity of Poncitlán Square are roadway improvements. During operation, noise from vehicular traffic along 9th Street E would be similar to existing conditions. Noise related to operation of the HSR trains under all four B-P Build Alternatives would be generated at a distance of 700 feet from the park. The park is already subject to freight train noise on a daily basis. As described in Section 3.4, Noise and Vibration, introduction of the HSR would only result in a minor increase in ambient noise levels at this distance between the HSR operations and this resource.

Preliminary Summary of Determinations

The Authority has made a preliminary determination that Alternatives 1, 2, 3, and 5 would not acquire property from this park and the noise impacts from operation of the B-P Build Alternatives would not substantially impair the use of the park. There would be no permanent, temporary, or constructive use of this park under the four B-P Build Alternatives.

The Authority has begun consultation with the City of Palmdale with regard to the characterization of effects of the project in the context of this Section 4(f) evaluation, consistent with 49 U.S.C. 303(d)(3)(B).

4.6.1.7 Legacy Commons

Impacts to Recreational Resource

The Legacy Commons is approximately 150 feet from the nearest permanent project improvements under Alternatives 1, 2, 3, and 5. Therefore, Alternatives 1, 2, 3, and 5 would not result in the direct impacts or permanent incorporation of land from this Section 4(f) resource.

Potential for Use under Section 4(f)

No temporary impact areas are proposed at the Legacy Commons. Therefore, Alternatives 1, 2, 3, and 5 would not result in the temporary occupancy of land from this Section 4(f) resource.

The HSR alignment under all four B-P Build Alternatives would not be visible from the recreation areas at this park due to intervening land uses. The nearest HSR improvements in the vicinity of the Legacy Commons are roadway improvements. During operation, noise from vehicular traffic along 10th Street E would be similar to existing conditions. Noise related to operation of the HSR trains under all four B-P Build Alternatives would be generated at a distance of 1,120 feet from the activity center. The parts of Legacy Commons used for recreation are already subject to freight train noise on a daily basis. As described in Section 3.4, Noise and Vibration, introduction of the HSR operations would only result in a minor increase in ambient noise levels at this distance from this park.

Preliminary Summary of Determinations

The Authority has made a preliminary determination that Alternatives 1, 2, 3, and 5 would not acquire property from this park and the noise impacts from operation of the B-P Build Alternatives would not substantially impair the use of the recreation resource. There would be no permanent, temporary, or constructive uses under the four B-P Build Alternatives.

The Authority has begun consultation with the City of Palmdale with regard to the characterization of effects of the project in the context of this Section 4(f) evaluation, consistent with 49 U.S.C. 303(d)(3)(B).

4.6.1.8 Summary of Preliminary Section 4(f) Use Determinations of Public Park and Recreation Resources

Table 4-8 provides a summary of the Section 4(f) uses of park and recreation resources by the B-P Build Alternatives. In some cases, park and recreation resources are located within the alignment of more than one alternative. The preliminary Authority determinations are included in the table. None of the B-P Build Alternatives proposed are expected to result in the constructive use of any public park or recreation resource.

Table 4-8 Summary of Authority Preliminary Determinations under Section 4(f) at Park and Recreation Resources

Alternative	Preliminary Section 4(f) Use Determinations	Section 4(f) Resource
Alternative 1	<i>De minimis</i>	<ul style="list-style-type: none"> Pacific Crest Trail (proposed mitigation for approximately 845 linear feet of trail realignment and a permanent maintenance easement) Dr. Robert C. St. Clair Parkway (minor amount of land for the pedestrian overcrossing column footings)
Alternative 2	<i>De minimis</i>	<ul style="list-style-type: none"> Pacific Crest Trail (proposed mitigation for approximately 845 linear feet of trail realignment and a permanent maintenance easement) Dr. Robert C. St. Clair Parkway (minor amount of land for the pedestrian overcrossing column footings)
Alternative 3	<i>De minimis</i>	<ul style="list-style-type: none"> Pacific Crest Trail (permanent maintenance easement) Dr. Robert C. St. Clair Parkway (minor amount of land for the pedestrian overcrossing column footings)
Alternative 5	<i>De minimis</i>	<ul style="list-style-type: none"> Pacific Crest Trail (proposed mitigation for approximately 845 linear feet of trail realignment and a permanent maintenance easement) Whit Carter Park (approximately 6.9 acres)
Bakersfield Station—F-B LGA	<i>De minimis</i>	<ul style="list-style-type: none"> Weill Park: Single-column supports and permanent incorporation of a maintenance easement.

Source: California High-Speed Rail Authority, 2017a
 F-B LGA = Fresno to Bakersfield Locally Generated Alternative

4.6.2 Cultural Resources

Section 106 of the NHPA requires federal agencies to consider a project's effect on cultural resources. The results of the Section 106 process determine whether Section 4(f) applies to historic properties. The results of the Section 106 analysis are critical in determining the applicability and outcome of the Section 4(f) evaluation.

One important difference between the two statutes is the way each of them measures impacts on cultural resources. Whereas Section 106 is concerned with “adverse effects,” Section 4(f) is concerned with “use” of protected properties. An adverse effect does not necessarily result in a Section 4(f) use, and a Section 4(f) use does not necessarily result in an adverse effect under Section 106.

If an alternative would permanently incorporate land from the property, this impact would constitute a Section 4(f) use. That use was then evaluated to determine if it would be *de minimis* to the resource. A determination of *de minimis* impact can be made only if the Section 106 process results in a no effect or no adverse effect determination for the historic resource with concurrence of the SHPO.

4.6.2.1 Section 4(f) Analysis of Historic Properties with Direct Adverse Effects under Section 106 of the NHPA

Based on the analyses conducted for cultural resources (Section 3.17), the following NRHP-listed or eligible historic properties would be adversely affected under Section 106 by one or more of the B-P Build Alternatives. These properties have also been determined to incur Section 4(f) uses because these properties would be permanently used by the project.

Built Environment Historic Properties

Big Creek Hydroelectric System Historic District

Effects under Section 106

The construction of the B-P Build Alternatives would result in direct adverse effects to two individual BCHSHD contributors (Big Creek East and West Transmission Lines and the Vincent Transmission Line) and no adverse effect to one BCHSHD contributor (Magunden Substation). The B-P Build Alternatives would include the construction of a 60-foot-high HSR viaduct approximately 300 feet south of the Magunden Substation that would intersect three of the historic contributing transmission lines leading southward from the substation (Figure 4-3). The adverse effects to three of the historic district's 48 contributors are relatively minor when the overall scale of the large utility district is taken into consideration. Specifically, the effects include modifications to (moving and/or replacing) fewer than 1 percent of the transmission towers along the contributing transmission lines, and a visual interruption of the original orientation between the Magunden Substation and the first three transmission towers on each contributing transmission line south of the substation building. The construction of the proposed project would result in direct adverse effects to the BCHSHD under Section 106 as a whole because the project proposes to materially alter elements of the historic district's contributors (transmission towers of the Vincent Transmission Line and Big Creek East and West Transmission Lines) and to interrupt the operational integrity between the Magunden Substation and the contributing transmission lines.

Although Alternatives 1, 2, 3, and 5 would have an adverse effect on the BCHSHD, this historic district would retain the aspects of the integrity that allow it to convey its historic significance.

Standardized Conditions or Treatments Proposed

The following standardized IAMFs and mitigation measures could avoid, minimize, or mitigate adverse effects on this historic district by the B-P Build Alternatives. Refer to Section 4.8, Measures to Minimize Harm, for the full text of each IAMF and mitigation measure.

- CUL-IAMF #2: WEAP¹ Training Session
- CUL-IAMF #7: Built-Environment Monitoring Plan
 - The Built-Environment Monitoring Plan (BEMP) would include periodic field checks during construction of the elements of the historic district property that are within the APE.
- CUL-MM #1: Prepare Archaeological and Built Environment Treatment Plans
 - The Built-Environment Treatment Plan (BETP) would describe the conditions that would be implemented to mitigate adverse effects to this historic district.
- CUL-IAMF#8: Implement Protection and/or Stabilization Measures
 - This commitment to stabilize and protect historic buildings and structures susceptible to damage during construction reduces potential impacts on cultural resources. Temporary stabilization and protection measures would be removed after construction is completed. Properties would be restored to their pre-construction condition.
- CUL-MM #7: Prepare Interpretive or Educational Materials
 - Mitigation treatments may include educational and interpretive opportunities that provide information about the historic significance of the property, such as a web-based educational tool for HSR riders to experience while traveling.

The following types of mitigation measures address the potential effects of the construction and operation of the B-P Build Alternatives on park, recreation, and school play area resources:

- Park & Recreation-Mitigation Measures (PR-MM) address programwide impacts to parks and are standard for the HSR project sections.

¹ Worker Environmental Awareness Program.

- Park Construction-Mitigation Measures (PC-MM) address short-term impacts on parks, recreation areas, and school play areas during construction of the B-P Build Alternatives.
- Park Project-Mitigation Measures (PP-MM) address permanent impacts resulting from project construction and permanent effects resulting from project operation on parks, recreation resources, and school play areas.

Property-Specific Conditions and Treatments Proposed

To avoid and minimize effects, the MOA and BETP would require the Authority to facilitate the development of a feasibility study to explore design options that would preserve the contributing transmission line towers and allow them to retain their functional and operational linkages to other hydroelectric resources. The MOA and BETP are discussed further in Section 3.17, Cultural Resources.

Potential for Use under Section 4(f)

Alternatives 1, 2, 3, and 5 would result in the modification of contributing features to this historic district. While the project modifications to contributors in this historic district would not render the historic district ineligible for inclusion in the NRHP, the contributing elements would be permanently changed. As a result, Alternatives 1, 2, 3, and 5 would result in impacts that would result in a permanent change in the historic district's activities, features, or attributes that qualify the BCHSHD for protection under Section 4(f). This would constitute a permanent use under Section 4(f).

Preliminary Summary of Determinations

The analyses described above support a preliminary Authority determination that Alternatives 1, 2, 3, and 5 would result in a permanent change to two contributors to this historic district, which would constitute a permanent use under Section 4(f).

Denny's Restaurant #30 (Village Grille)

Effects of Alternatives 1, 2, and 3 under Section 106

The construction and operation of Alternatives 1, 2, and 3 would not result in any direct adverse effects to the former Denny's Restaurant at 44303 Sierra Highway (Figure 4-8, Sheet 3). The permanent impact area for Alternatives 1, 2, and 3 would be adjacent to the historic property boundary, but the at-grade HSR rail line would be approximately 175 feet away from this historic building. Construction activities would not require the removal of, the physical destruction of, or damage to this historic property.

The tracks and associated berm would be visible to the east of this historic property. However, a rail line has always been part of the setting of this historic property, and introduction of this new transportation corridor does not diminish the historic integrity of this resource or prevent it from conveying its architectural significance.

Previous technical analyses indicate that the B-P Build Alternatives would not cause vibration-related damage to historic properties, including this property.

The level of anticipated noise from operation of the B-P Build Alternatives would not cause adverse effects to this property because this property does not derive its NRHP significance from being located in a quiet setting. Rather, it was purposely located along a busy transportation corridor to encourage customers from the traveling public.

Alternatives 1, 2, and 3 would result in a finding of No Adverse Effect under Section 106 for the former Denny's Restaurant.

Effects of Alternative 5 under Section 106

The construction of Alternative 5 would result in direct adverse effects to the former Denny's Restaurant at 44303 Sierra Highway (Figure 4-8, Sheet 3). Alternative 5 would construct an at-grade rail line that would intersect the parcel where this historic property is located, and its construction would require demolition of this building and the aspects of integrity that allow it to convey its historic significance.

Standardized Conditions or Treatments Proposed

Implementation of the following standardized IAMFs and mitigation measures could mitigate adverse effects to this historic property under Alternative 5. Refer to Section 4.8, Measures to Minimize Harm, for the full text of each IAMF and mitigation measure.

- CUL-MM #1: Prepare Archaeological and Built-Environment Treatment Plan
 - The BETP for this property would describe the conditions that would be implemented to mitigate adverse effects to this historic property.
- CUL-MM #3: Minimize Adverse Effects through Relocation of Historic Buildings and Structures
 - Relocation treatments may be considered for the building and/or the sign, subject to potential for re-use and/or interpretive value.
- CUL-MM #6: Prepare and Submit Additional Recordation and Documentation
- CUL-MM #7: Prepare Interpretive or Educational Materials
 - Mitigation treatments may include educational opportunities like that under development to provide HSR riders a web-based educational tool to experience while traveling.

Potential for Use under Section 4(f)

Alternatives 1, 2, and 3 would not result in permanent incorporation of land from, or permanent easements or temporary occupancies at, this property. As described above, the project features would not detract from the essential physical features or characteristics of the former Denny's Restaurant that qualify it for inclusion in the NRHP. As a result, Alternatives 1, 2, and 3 would not result in proximity impacts that would result in a substantial impairment of the property's activities, features, or attributes that qualify the former Denny's Restaurant for protection under Section 4(f). Alternatives 1, 2, and 3 would not result in permanent, temporary, or constructive uses of this historic property.

Alternative 5 would result in permanent incorporation of land from this historic property. As described above, the Alternative 5 improvements would result in the demolition of the historic building, which would directly remove the essential physical features and characteristics of the former Denny's Restaurant that qualify it for inclusion in the NRHP.

Preliminary Summary of Determinations

Alternatives 1, 2, and 3 would not result in permanent, temporary, or constructive use of this historic property under Section 4(f). The analyses described above support a preliminary Authority determination that Alternative 5 would result in a permanent change to this historic property, which would constitute a permanent use under Section 4(f).

Archaeological Historic Properties

As discussed earlier, the 49 known archaeological historic properties in the APE are considered primarily significant for data collection, so they are assumed to be eligible for listing in the NRHP under Criterion D. Because those properties are currently considered potentially eligible under Criterion D and do not appear to have primary significance for preservation in place (Criteria A, B, and/or C), they are not subject to the requirements for protection under Section 4(f) and are not analyzed further in this section.

However, if any of those known sites or any newly discovered archaeological historic sites identified during the phased identification efforts or construction monitoring are determined to have the potential to be eligible for the NHP, they will be evaluated under Section 106 at that time to determine if their primary significance is derived from their location, which would make them eligible under Criteria A, B, and/or C. If they are not primarily valuable for preservation in place, appropriate data recovery steps will be taken in accordance with the archaeological treatment plan. If they are valuable for preservation in place and the SHPO concurs, an expedited Section 4(f) evaluation will be prepared in accordance with 23 C.F.R. 774.9 9(e).

4.6.2.2 Section 4(f) Analysis of the National Chavez Center at Nuestra Señora Reina de La Paz with Adverse Effects under Section 106 of the National Historic Preservation Act

No permanent uses or temporary occupancies of land protected under Section 4(f) would occur under Alternatives 1, 2, 3, and 5 at the National Chavez Center at Nuestra Señora Reina de La Paz, the only historic property in the project section incurring an adverse effect under Section 106. A finding of indirect adverse effect under Section 106 does not automatically result in a Section 4(f) use. This historic property was analyzed by the Authority to determine if the B-P Build Alternatives would result in its constructive use. A constructive use occurs when proximity impacts substantially impair the activities, features, or attributes that qualify it for protection under Section 4(f). See Section 4.6.3 for a detailed Section 4(f) analysis for La Paz.

4.6.2.3 Section 4(f) Analysis of Historic Properties with No Adverse Effects under Section 106 of the NHPA

No permanent or temporary uses of land under Section 4(f) would occur under Alternatives 1, 2, 3, and 5 at the historic properties discussed in the following sections. Analyses of the potential for indirect adverse effects on these properties were conducted as part of the Section 106 process, taking into account the activities, features, or attributes that qualify these properties for protection under Section 4(f). A finding of no adverse effect under Section 106 was made for the five historic properties discussed below. Section 4(f) use determinations are based on analyzing the potential proximity impacts on the properties, taking into account the activities, features, or attributes that qualify the properties for protection under Section 4(f). As stated in 23 C.F.R. 774.15(f)(1), the FHWA has determined that a constructive use does not occur when compliance with the requirements of 36 C.F.R. 800.5 for proximity impacts of the proposed action, on a site listed on or eligible for the NRHP, results in an agreement of “no historic properties affected” or “no adverse effect.” Therefore, the resources listed below do not result in proximity impacts that result in substantial impairment to the property’s activities, features, or attributes that qualify the property for protection under Section 4(f) and no constructive use would occur.

- Keene Fire Station
- First Los Angeles Aqueduct
- Willow Springs Main Race Track
- Lancaster Post Office
- Western Hotel/Museum

4.6.2.4 Summary of Preliminary Section 4(f) Determinations of Cultural Resources

Table 4-9 provides a summary of Section 4(f) uses of NRHP-listed or eligible historic properties by Alternatives 1, 2, 3, and 5. In some cases, historic properties are located within the alignment of more than one B-P Build Alternative.

Table 4-9 Summary of Section 4(f) Uses of National Register of Historic Places Listed or Eligible Properties

Alternative	Preliminary Section 4(f) Determinations for Historic Properties	Historic Property
Alternative 1	Permanent Use	Big Creek Hydroelectric System Historic District
Alternative 2	Permanent Use	Big Creek Hydroelectric System Historic District
Alternative 3	Permanent Use	Big Creek Hydroelectric System Historic District
Alternative 5	Permanent Use	Big Creek Hydroelectric System Historic District Denny’s Restaurant #30 (Village Grille)

Source: California High-Speed Rail Authority, 2017

4.6.2.5 Bakersfield Station

Bakersfield Station—F Street (Locally Generated Alternative)

The Section 4(f) use determinations of historic sites from the Fresno to Bakersfield Section Final Supplemental EIS (Authority 2019) are summarized below. Refer to Section 4.3.2.2, Cultural Resources Section 4(f) Use Assessment, in Chapter 4 of the Fresno to Bakersfield Section Final Supplemental EIS for further detail on the Section 4(f) use assessments identified for the F-B LGA.

Based on the determinations in the Fresno to Bakersfield Section Final Supplemental EIR/EIS, there would be no Section 4(f) use of historic sites under the F-B LGA.

4.6.3 Section 4(f) Analysis of La Paz as a Historic Property and Public Park and Recreation Resource

4.6.3.1 Section 4(f) Analysis of La Paz as a Historic Property

Effects under Section 106

The B-P Build Alternatives (Alternatives 1, 2, 3, and 5, not including the CCNM Design Option or the Refined CCNM Design Option) converge as they pass by the La Paz historic property. Consequently the Section 4(f) analysis of this property is the same for all four B-P Build Alternatives. The B-P Build Alternatives would construct an elevated rail line approximately 440 feet from the boundary of the historic property, approximately 1,200 feet from the Villa La Paz Conference Center at the La Paz historic property, which has been designated as a National Historic Landmark (Figure 4-4). The CCNM Design Option would move the HSR centerline to about 830 feet from the historic property boundary. The Refined CCNM Design Option would move the HSR centerline to approximately 2,800 feet from the historic property boundary. The B-P Build Alternatives, including the CCNM Design Option or the Refined CCNM Design Option, would not result in the removal of, the physical destruction of, or damage to any buildings, structures or landscape features that are contributors to the historic property. All work related to construction (i.e., earthwork, staging, and access) would take place outside the historic property boundary. Work that would take place on Three Peaks (on the slopes below the peaks themselves) would not cause an adverse effect because Three Peaks is outside the historic property boundary (36 C.F.R. 800.5[a][2][i], [ii], and [iii]).

Although transportation corridors have been a part of the setting of this historic property throughout its period of significance, the size, scale, and massing of the elevated structures of the B-P Build Alternatives, including the CCNM Design Option, are not consistent with the historic setting and would cause an adverse effect on the historic setting and feeling of this property under Section 106. The Refined CCNM Design Option would result in no adverse effect on the historic setting and feeling of this property under Section 106, as this design option minimizes visual effects at La Paz. Figure 4-11, Figure 4-12, Figure 4-13, Figure 4-14, Figure 4-15, Figure 4-16, Figure 4-17, Figure 4-18, Figure 4-19, Figure 4-20, Figure 4-21, Figure 4-22, Figure 4-23, and Figure 4-24 show existing and proposed views at the historic property.



Figure 4-11 La Paz, View Facing North toward Character-Defining View of Three Peaks from Water Tank, Existing Site



Figure 4-12 La Paz, View Facing North toward Character-Defining View of Three Peaks from Water Tank, Visual Simulation of Alternatives 1, 2, 3, and 5



Figure 4-13 La Paz, View Facing North toward Character-Defining View of Three Peaks from Water Tank, Visual Simulation of CCNM Design Option



Figure 4-14 La Paz, View from Water Tank, Facing Northeast, Existing Site



Figure 4-15 La Paz, View from Water Tank, Facing Northeast, Visual Simulation of Refined CCNM Design Option



Figure 4-16 La Paz, View Facing Northwest toward Character-Defining View along Entrance Road, Existing Site

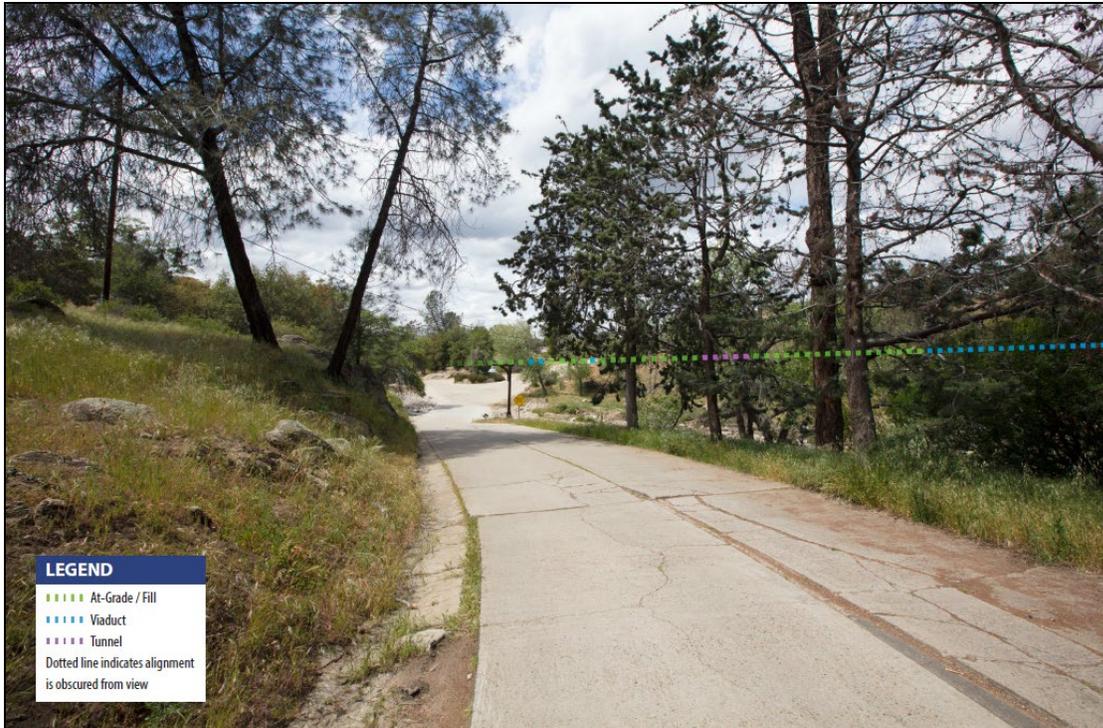


Figure 4-17 La Paz, View Facing Northwest toward Character-Defining View along Entrance Road (Project Not Visible), Visual Simulation of Alternatives 1, 2, 3, and 5



Figure 4-18 La Paz, View Facing Northwest toward Character-Defining View along Entrance Road (Project Not Visible), Visual Simulation CCNM Design Option/Refined CCNM Design Option



Figure 4-19 La Paz, View Facing Northeast from North Unit Conference Room, Existing Site



Figure 4-20 La Paz, View Facing Northeast from North Unit Conference Room, Visual Simulation of Alternatives 1, 2, 3, and 5



Figure 4-21 La Paz, View from Parking Lot, Existing Site



Figure 4-22 La Paz, View from Parking Lot, Visual Simulation of Refined CCNM Design Option



Figure 4-23 La Paz, View from State Route 58, Facing Northeast, Existing Site



Figure 4-24 La Paz, View from State Route 58, Facing Northeast, Visual Simulation of Refined CCNM Design Option

Technical analyses included in Section 3.4, Noise and Vibration, indicate that because of their distance from the property's buildings and structures, the B-P Build Alternatives would not cause vibration-related damage to this historic property and indicates that without sound walls, the B-P Build Alternatives, including the CCNM Design Option, would cause an adverse noise effect to this historic property from the operational noise of the project. A noise reduction measure in the form of a track-side barrier was analyzed at a height of 12 feet and a no impact determination was made for the CCNM Design Option.

The Refined CCNM Design Option includes an approximately 1,700-foot berm that would be located at the same level as the catenary for the track. The berm would be an average of approximately 80 feet in height from the existing ground in order to minimize project noise to a level that is considered to have no effect per FRA guidelines.

For the other B-P Build Alternatives, La Paz would be severely impacted from operational noise associated with the B-P Build Alternatives. In order to reduce noise impacts to La Paz, noise mitigation in the form of a sound barrier along the edge of track would be implemented to reduce noise levels to a no impact classification. The necessary height to meet the desired noise reduction is 12 feet. Because this barrier was incorporated to minimize impacts on a historic property, it is not required to meet the minimum selection criteria for a sound barrier as presented in N&V-MM#3.

With incorporation of the CCNM Design Option and with 12-foot noise barriers placed on or adjacent to the B-P Build Alternatives structures, the cumulative noise level, combining the existing noise levels with the proposed HSR operations, would cause no noise impact at Villa La Paz (61.7 dBA L_{eq}) or at the UFW/Chavez Foundation Headquarters (63.6 dBA L_{eq}) (Authority and FRA 2019). The operational noise would constitute a direct adverse effect under Section 106 because operations would introduce an audible element that would diminish the integrity of the property's significant historic features, specifically its relatively quiet, rural setting.

Standardized Conditions and Treatments Proposed

Implementation of the following standardized IAMFs and mitigation measures could avoid, minimize, or mitigate adverse effects to this NHL. Refer to Section 4.8, Measures to Minimize Harm, for the full text of each IAMF and mitigation measure.

- CUL-IAMF #2: WEAP Training Session
- CUL-IAMF #7: Built-Environment Monitoring Plan
 - The BEMP would describe the properties that would require monitoring, the type of activities or resources that would require full-time monitoring or spot checks, the required number of monitors for each construction activity, and the parameters that would influence the level of effort for monitoring during construction.
- CUL-MM #4: Minimize Adverse Operational Noise Effects
 - To minimize and mitigate noise effects for Alternatives 1, 2, 3, and 5, the Authority would consider design refinements to the tunnel portals that could reduce operational noise at the historic property. The Authority would also consider sound walls on the viaduct to reduce operational noise at the historic property.
- N&V-MM #3: Implement California High-Speed Rail Project Noise Mitigation Guidelines

Property-Specific Conditions and Treatments Proposed

The Authority is working with consulting parties to identify other opportunities to minimize and mitigate the indirect effects. Such options may include design refinements such as:

- Developing a landscape plan
- Establishing vegetative screening
- Restoring natural contouring of cut and fill slopes

- Revegetating graded slopes with native species in a natural pattern
- Replacing or relocating rock outcrops where needed
- Tinting the color of the proposed bridge and other HSR structures visible from La Paz to blend in with the surrounding environment

Ongoing consultation with NPS and the Cesar Chavez Foundation may result in the identification of additional mitigation efforts to address the visual and noise effects of the B-P Build Alternatives on this historic property. Noise barriers are included in the CCNM Design Option.

Potential for Use under Section 4(f) as a Historic Property

Alternatives 1, 2, 3, and 5 and the CCNM Design Option or Refined CCNM Design Option would be located entirely outside the boundary of La Paz and therefore would not result in permanent incorporation of land from, or permanent easements or temporary occupancies at, La Paz. However, with the exception of the Refined CCNM Design Option, these alternatives would all have noise impacts on La Paz; without mitigation, Alternatives 1, 2, 3, and 5 would have visual impacts as well. This section considers whether these noise and/or visual impacts result in a constructive use of this property.

The La Paz property is listed on the NRHP as significant under Criteria A (Historic Events: headquarters of the UFW) and B (Significant Persons: César Chávez) and is designated as a National Historic Landmark (NHL). It is also designated as a national monument (César E. Chávez National Monument). The property includes the Villa La Paz conference center and the UFW/Cesar Chavez Foundation Headquarters. The property's historically significant features include exceptional historical significance at the national level within the areas of agriculture industry, social history, Hispanic heritage, political history, the historic setting and feeling of La Paz, and the on-site view from the northern part of the historic property, looking toward the off-site "Three Peaks". Additional detail regarding the historically significant features at La Paz can be found in Section 3.17, Cultural Resources and the *Bakersfield to Palmdale Project Section Finding of Effect (FOE)* (Authority 2019e) report. The historic property is bordered by the existing freight rail line (UPRR) and adjacent SR 58.

Alternatives 1, 2, 3, and 5

The HSR alignment under Alternatives 1, 2, 3, and 5 would be constructed as a combination of tunnel and elevated (viaduct) sections in the vicinity of this historic property. With these alternatives, the elevated portion of the HSR rail line would be approximately 440 feet from the historic property and approximately 1,200 feet from the Villa La Paz Conference Center. The elevated HSR rail line would be at a greater distance from this historic property than existing adjacent transportation facilities: the UPRR railroad line is directly adjacent to La Paz and SR 58 is approximately 120 feet southwest of La Paz, both of these facilities were in existence during the historic property's period of historic significance. Due to the topography of the site and adjacent areas and screening from existing vegetation, the elevated HSR rail line with these alternative (which is up to 160 feet above the existing ground at its highest point) would not be visible from the Memorial Garden that includes the grave of César Chávez, the Visitor Center that contains the office of César Chávez, or the Helen Chávez home. As stated in Section 3.17, Cultural Resources, the on-site view from the northern part of the historic property, looking toward the off-site "Three Peaks," is a character-defining key view of the historic property. While the introduction of new elements into the character-defining viewshed toward Three Peaks would cause a visual intrusion and a visual adverse effect under Section 106, the new visual elements of Alternatives 1, 2, 3, and 5 would block very little of the view of Three Peaks, because it is relatively low in the viewshed and would not substantially diminish the attributes and features (specifically for Historic Events: Headquarters of the UFW) and Significant Persons: César Chávez) that qualify this historic property for protection under Section 4(f) (Figure 4-11 and Figure 4-12).

This historic property has been subject to freight train and vehicular traffic noise on a daily basis during its entire period of significance. During operation, noise from the HSR trains would be at a

greater distance than the noise generated by the UPRR freight rail line and vehicular traffic on SR 58 adjacent to the historic property. Noise related to operation of the HSR system under Alternatives 1, 2, 3, and 5 would be generated a distance of 440 feet from the historic property boundary. Supplemental existing noise measurement data were gathered at La Paz in 2017. Two specific buildings within 2,500 feet from the centerline of track include Villa La Paz conference center, also referred to as location LT-1, and the UFW/Cesar Chavez Foundation Headquarters, also referred to as location LT-2. The data recorded at La Paz shows that the average of the existing noise levels from 7:00 a.m. and 9:00 a.m. is 60.2 dBA L_{eq} at location LT-1 and 62.9 dBA L_{eq} at location LT-2. Under Alternatives 1, 2, 3, and 5, the train noise levels expected at the same locations are 66.4 dBA L_{eq} and 65.7 dBA L_{eq} , respectively (without noise mitigation). Under Alternatives 1, 2, 3, and 5, the train noise levels expected at locations LT-1 and LT-2, with the incorporation of mitigation (12-foot high sound barrier along the edge of the track), are 61.9 dBA L_{eq} and 63.6 dBA L_{eq} , respectively. Based on this information without a sound barrier, the impact at LT-1 would be classified as a severe impact and the impact at LT-2 would be classified as a moderate impact under the FRA/Federal Transit Administration criteria. Due to the sensitivity of this historic property, noise mitigation in the form of a 12-foot high sound barrier along the edge of the track would be provided to reduce noise levels to a “no impact” classification under the FRA/Federal Transit Administration criteria. This barrier is not required to meet the minimum selection criteria for a sound barrier as presented in N&V-MM#3.

Construction impacts were also considered in evaluating the potential for constructive use of the historic property. Access to La Paz would be maintained during construction. Alternatives 1, 2, 3, and 5 would require construction activities along Woodford-Tehachapi Road, but those construction activities would not affect access to La Paz. Potential short-term construction impacts related to air quality; noise and vibration; and aesthetics and visual quality, would be substantially mitigated based on the mitigation measures provided in Sections 3.3, Air Quality and Global Climate Change; 3.4, Noise and Vibration; 3.15, Parks, Recreation, and Open Space; and 3.16, Aesthetics and Visual Quality. Construction of these alternatives would not prevent or substantially impair access to this Section 4(f) resource because access would be maintained throughout construction, construction activities would be temporary, and the attributes and features that qualify this historic property for protection under Section 4(f) would not be substantially diminished by construction activities.

Preliminary Summary of Determinations

Because Alternatives 1, 2, 3, and 5 would all be located outside of the historic property boundary, there would be no direct use of the historic property under Section 4(f).

Views of the cut areas and the elevated HSR rail line under Alternatives 1, 2, 3, and 5 would not be consistent with the historic setting of La Paz. However, given the distance of the HSR alignment from the historic property, screening from existing vegetation, and the incorporation of mitigation (tinting of the bridge structure) to reduce visual impacts, the attributes and features that qualify this historic property for protection under Section 4(f) (association with historic events and significant persons due to its connection to the agriculture industry, social history, Hispanic heritage, and political history) would not be substantially diminished by views of Alternatives 1, 2, 3, and 5 from this historic property. In addition, noise mitigation in the form of a 12 foot high sound barrier along the edge of the track would be provided to reduce noise levels to a no impact classification.

Based on the analysis presented above, with mitigation, Alternatives 1, 2, 3, and 5, in this area would not result in proximity impacts that would result in a substantial impairment of the property’s activities, features, or attributes that qualify La Paz for protection under Section 4(f) as a historic property. The Authority has made a preliminary determination that Alternatives 1, 2, 3, and 5 would not result in a permanent or constructive use of this historic property under Section 4(f).

CCNM Design Option

Given the importance of this resource, and in response to concerns expressed during the Section 106 consultation process by consulting parties concerning visual and noise-related effects of the

project, the Authority developed the CCNM Design Option, which would shift the alignment to approximately 830 feet east from the historic property boundary (instead of 440 feet) and approximately 1,550 feet from the Villa La Paz Conference Center (instead of 1,200 feet) and would lower the HSR bridge structure to approximately 145 feet above the existing ground (instead of 160 feet). In addition, the CCNM Design Option incorporates tinting the bridge structure to minimize the visual impacts of the project and includes a sound barrier on the bridge structure that would eliminate severe noise impacts of the project.

Although the CCNM Design Option would be approximately 390 feet further east of La Paz and approximately 15 feet lower than the alignment for Alternatives 1, 2, 3, and 5, it would still introduce new elements into the character-defining viewshed toward Three Peaks that would cause a visual intrusion resulting in an adverse visual effect. However, the CCNM Design Option would block very little of the view of the overall Three Peaks landform and would not block any of the view of the most distinctive part of Three Peaks—the peaks for which it was named—because the project elements adjacent to La Paz would be constructed eastward from the base of Three Peaks and would not interfere with the view of the summit peaks as depicted on Figure 4-25. The CCNM Design Option would not be visible from the other character-defining view of the historic property, at the entrance road, because existing topography, trees, and other heavy vegetation would block any view of the project from that vantage point (Figure 4-26, Figure 4-27, and Figure 4-28). The CCNM Design Option would be partially visible in other viewsheds that are not specifically character-defining for this historic property but are part of its general setting. Figure 4-28 shows the CCNM Design Option on the road leading to Villa La Paz. From each of these vantage points, the elevated HSR rail line would be a new visual element that would change the setting and would represent an adverse visual effect because earthwork activities for cut, fill, a tunnel portal, and a viaduct abutment would be partially visible during construction and after completion of the project.



Figure 4-25 La Paz, View Facing Northeast from North Unit Conference Room, Visual Simulation of CCNM Design Option



Figure 4-26 La Paz, Road Leading to Villa La Paz, View Facing North, Existing Site



Figure 4-27 La Paz, Road Leading to Villa La Paz, View Facing North, Visual Simulation of Alternatives 1, 2, 3, and 5



Figure 4-28 La Paz, Road Leading to Villa La Paz, View Facing North, Visual Simulation of CCNM Design Option

Although slight noise increases would exist, the CCNM Design Option would include a sound barrier along the edge of the track, in addition to moving the HSR centerline to about 1,550 feet from the Villa La Paz Conference Center at the La Paz historic property, which would further reduce noise impacts and result in a “no impact” finding under Federal Transit Administration/FRA criteria. The data recorded at La Paz shows that the average of the existing noise levels from 7:00 a.m. and 9:00 a.m. is 60.2 dBA L_{eq} at location LT-1 and 62.9 dBA L_{eq} at location LT-2. Under the CCNM Design Option, the train noise levels expected at the same locations are 61.7 dBA L_{eq} and 63.6 dBA L_{eq} , respectively. While operation of the HSR project near La Paz would result in additional noise within the area of the historic property, the sound barriers included in the CCNM Design Option would reduce the noise levels to “no impact” “under the FRA/Federal Transit Administration criteria. Given the “no impact” finding, the attributes of this property would not be substantially diminished by noise associated with HSR operations under the CCNM Design Option.

In summary, the CCNM Design Option would not result in proximity impacts that would result in a substantial impairment of the property’s activities, features, or attributes that qualify La Paz for protection under Section 4(f)

Preliminary Summary of Determinations

Because the CCNM Design Option would be located outside of the historic property boundary, there would be no direct use of the historic property under Section 4(f).

Views of the cut areas and the elevated HSR rail line under the CCNM Design Option would not be consistent with the historic setting of La Paz. However, given the distance of the HSR alignment from the historic property, screening from existing vegetation, and the incorporation of tinting of the bridge structure into the project design to reduce visual impacts, the attributes and features that qualify this historic property for protection under Section 4(f) (association with historic events and significant persons due to its connection to the agriculture industry, social

history, Hispanic heritage, and political history) would not be substantially diminished by views of the CCNM Design Option from this historic property.

Based on the analysis presented above, the CCNM Design Option, in this area would not result in proximity impacts that would result in a substantial impairment of the property's activities, features, or attributes that qualify La Paz for protection under Section 4(f) as a historic property. The Authority has made a preliminary determination that the CCNM Design Option would not result in a permanent or constructive use of this historic property under Section 4(f).

Refined CCNM Design Option

In response to concerns expressed by consulting parties between June 2017 and February 2019, the Authority has developed 10 design options that either avoid or minimize adverse effects to the NHL. In 2019, the Authority issued the *Design Options Screening Report for the César E. Chávez/Nuestra Señora Reina de la Paz National Historic Landmark* and the *Addendum to the Design Options Screening Report for the César E. Chávez/Nuestra Señora Reina de la Paz National Historic Landmark*, which evaluate 10 potential design options developed to avoid or minimize impacts on La Paz. This process resulted in the Refined CCNM Design Option, which would shift the alignment to approximately 2,800 feet east from the historic property boundary (instead of 440 feet) and would lower the HSR bridge structure to approximately 50 feet above the existing ground (instead of 160 feet). In addition, the Refined CCNM Design Option incorporates a berm located at the same level as the catenary for the track. The berm would be an average of 80 feet in height from the existing ground in order to minimize project noise to a level that is considered to have no effect per FRA guidelines. Additionally, areas of ground disturbance would be recontoured and revegetated to minimize the visual effects associated with the earthwork required to construct the project.

The Refined CCNM Design Option alignment is in a tunnel north of Three Peaks and not visible at all between Three Peaks and La Paz. Therefore, it does not visually impair this historically significant and character-defining viewshed. As the alignment emerges from the tunnel and transitions to an at-grade section with a berm, it is low in the viewsheds east and southeast of La Paz. The introduction of a high-speed train low in the views of mountains and rolling hills, at approximately 0.5 mile from the northeast edge of the NHL, would not change the property's use or physical features that contribute to its primary areas of historic significance, as identified in the NRHP and the NHL nominations. The high-speed train would be 0.51 mile from the closest point of La Paz and 0.91 mile from the water tower. It would be low in the views from La Paz and would not significantly alter the setting of the historic property. The vegetated berm would be barely visible in the distant hills east and southeast of La Paz and only then from only a few locations within the property. This would not diminish the property's significant historic features, nor would it change the character of the use or physical features with La Paz's setting that contribute to its significance.

In summary, the Refined CCNM Design Option would not result in proximity impacts that would result in a substantial impairment of the property's activities, features, or attributes that qualify La Paz for protection under Section 4(f).

Preliminary Summary of Determinations

Because the Refined CCNM Design Option would be located outside the historic property boundary, there would be no direct use of the historic property under Section 4(f).

Introduction of new visual elements into the setting would not adversely affect La Paz's historic integrity of feeling or association. The property's integrity of feeling and association have been assessed as high because the property retains historic integrity of location, design, materials, and setting. The minimal change to the setting introduced by the project would not reduce the integrity of these four integrity considerations. The attributes and features that qualify this historic property for protection under Section 4(f) (association with historic events and significant persons due to its connection to the agriculture industry, social history, Hispanic heritage, and political history) would not be substantially diminished by views of the Refined CCNM Design Option from this historic property.

Based on the analysis presented above, the Refined CCNM Design Option in this area would not result in proximity impacts that would result in a substantial impairment of the property's activities, features, or attributes that qualify La Paz for protection under Section 4(f) as a historic property. The Authority has made a preliminary determination that the Refined CCNM Design Option would not result in a permanent or constructive use of this historic property under Section 4(f).

4.6.3.2 Section 4(f) Analysis of La Paz as a Public Park and Recreation Resource

In addition to its status as a historic property, the La Paz property also functions as a recreational resource as reflected in its status as the César E. Chávez National Monument. La Paz is managed by the NPS, and the NPS owns or holds a permanent easement over portions of land within La Paz (collectively, "NPS-owned lands"). The NPS-owned lands within La Paz are open to the public and function as a historical park; therefore, those portions of the La Paz qualify for protection as a Section 4(f) resource. The Section 4(f)-protected areas within La Paz are shown in Figure 4-29.

The property's recreationally significant features include passive recreational activities at the Memorial Garden that includes the grave of César Chávez, the Visitor Center that contains the office of César Chávez, and the Helen Chávez home (the Helen Chávez home is not open to the public, but the grounds that the home is on are). The passive recreational activities at La Paz offer constructive, restorative, and pleasurable human benefits and foster appreciation and understanding of the area and its historical purpose.

The recreational resources at La Paz are outside the limits of the nearest permanent project improvements under Alternatives 1, 2, 3, and 5 and the CCNM Design Option. Therefore, Alternatives 1, 2, 3, and 5 and the CCNM Design Option would not result in direct impacts or the permanent incorporation of land from this Section 4(f) resource. However, Alternatives 1, 2, 3, and 5 and the CCNM Design Option would have proximity (noise and visual) impacts on this resource. This analysis considers whether these proximity impacts would result in a constructive use of the publicly owned recreational areas within the CCNM.

Potential for Use under Section 4(f) as a Park and Recreation Resource

Alternatives 1, 2, 3, and 5

Alternatives 1, 2, 3, and 5 would not result in permanent incorporation of land from, or permanent easements or temporary occupancies at, this resource. Therefore, this section considers whether the visual and noise effects would result in a constructive use of this property. Due to the topography of the site and adjacent areas and screening from existing vegetation, the elevated HSR rail line with these alternatives (up to 160 feet above the existing ground at its highest point) would not be visible from the Memorial Garden or the Helen Chávez home.

Due to the topography of the site and adjacent areas and screening from existing vegetation, the elevated HSR rail line with these alternatives (up to 160 feet above the existing ground at its highest point) would not be visible from the Memorial Garden, Visitor Center, or the Helen Chávez home. Therefore, there would be no visual effects on the portions of the property that qualify as Section 4(f)-protected recreational resource.

This recreational resource has been subjected to freight train and vehicular traffic noise on a daily basis since it first opened to the public. During operation, noise from the HSR trains would be at a greater distance than the noise generated by the UPRR freight rail line and vehicular traffic on SR 58 adjacent to this resource. Noise related to operation of the HSR system under Alternatives 1, 2, 3, and 5 would be generated a distance of 2,502 feet from the recreational facilities at La Paz. Due to the sensitivity of this resource, noise mitigation in the form of a 12 foot high sound barrier along the edge of the track would be provided to reduce noise levels to a no impact classification. This barrier is not required to meet the minimum selection criteria for a sound barrier as presented in N&V-MM#3. With the sound barrier included, the noise levels within the CCNM boundary would be reduced to "no impact" under the FRA/Federal Transit Administration criteria.

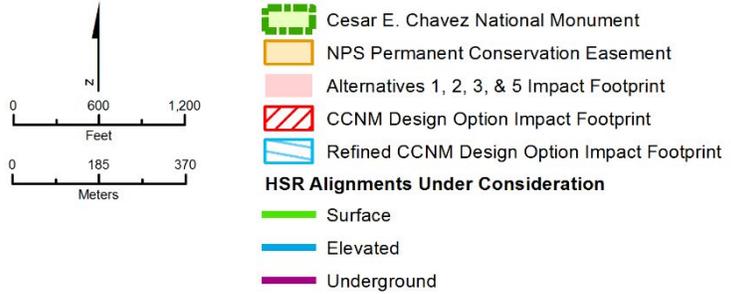
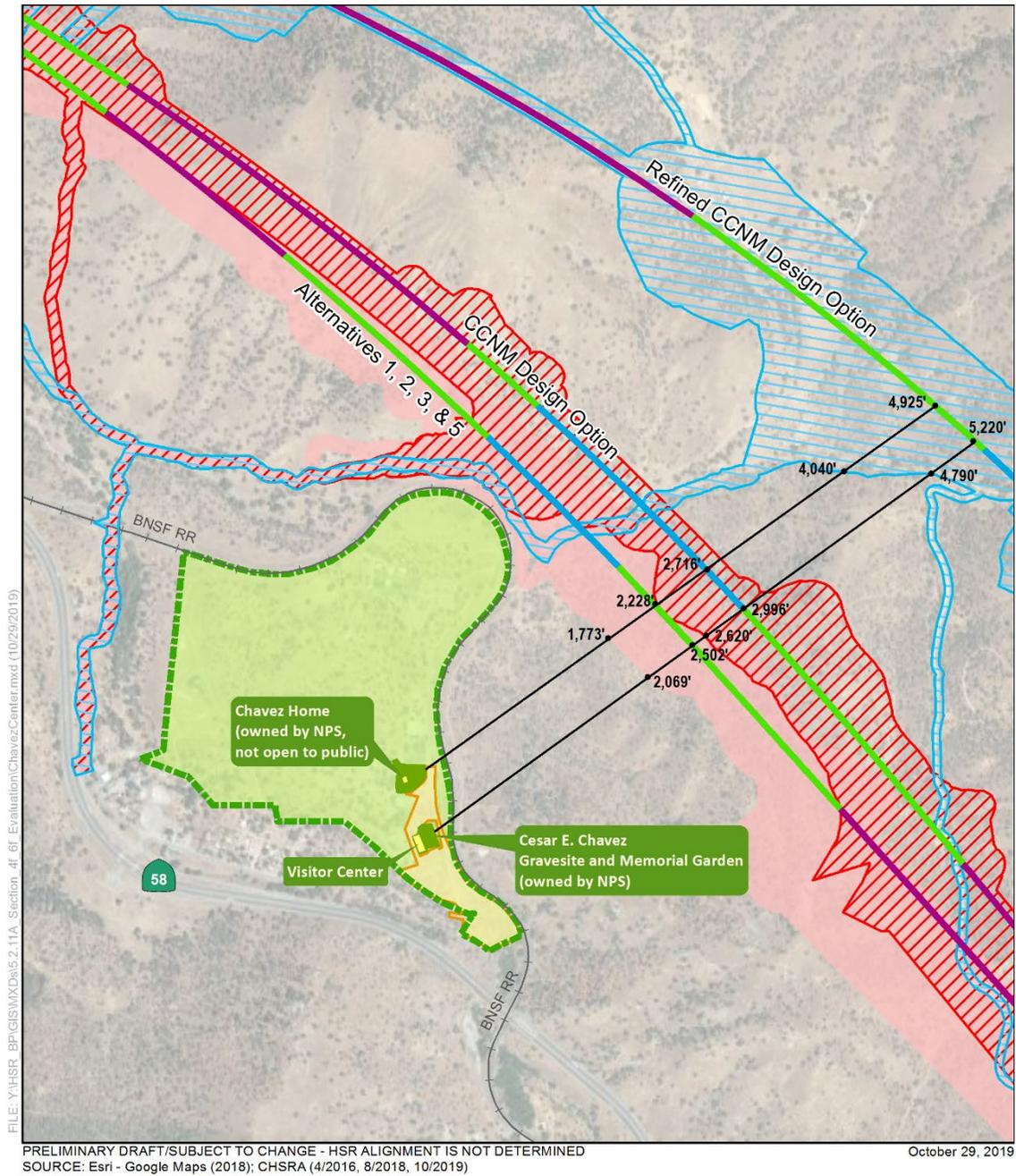


Figure 4-29 Recreational Resources at La Paz

Construction impacts were also considered in evaluating the potential for constructive use of this resource. Access to recreational facilities at La Paz would be maintained during construction. Alternatives 1, 2, 3, and 5 would require construction activities along Woodford-Tehachapi Road, but those construction activities would not affect access to recreational facilities at La Paz. Potential short-term construction impacts related to air quality; noise and vibration; and aesthetics and visual quality, would be substantially mitigated based on the mitigation measures provided in Sections 3.3, Air Quality and Global Climate Change; 3.4, Noise and Vibration; 3.15, Parks, Recreation, and Open Space; and 3.16, Aesthetics and Visual Quality. Construction of these alternatives would not prevent or substantially impair recreational use of this Section 4(f) resource because access would be maintained throughout construction, construction activities would be temporary, and the attributes and features that qualify this recreational resource for protection under Section 4(f) would not be substantially diminished by construction activities.

Preliminary Summary of Determinations

The Authority has made a preliminary determination that Alternatives 1, 2, 3, and 5 would not result in a constructive use of the recreational facilities at La Paz. Due to the topography of the site and adjacent areas and screening from existing vegetation, the elevated HSR rail line with these alternatives (up to 160 feet above the existing ground at its highest point) would not be visible from the Memorial Garden or the Helen Chávez home. In addition, noise mitigation in the form of a 12-foot high sound barrier along the edge of the track would be provided to reduce noise levels to a no impact classification.

Based on the analysis presented above, Alternatives 1, 2, 3, and 5, in this area would not result in substantial impairment of the resources activities, features, or attributes that qualify recreational facilities at La Paz for protection under Section 4(f) as a recreational resource. The Authority has made a preliminary determination that Alternatives 1, 2, 3, and 5, would not result in a permanent or constructive use of this recreational facility under Section 4(f).

CCNM Design Option

Given the importance of this resource, and in response to concerns expressed by consulting parties concerning visual and noise-related effects of the project, the Authority developed the CCNM Design Option, which would shift the alignment to approximately 2,996 feet east from the recreational facilities at La Paz and lower the bridge structure to approximately 145 feet above the existing ground. In addition, the CCNM Design Option incorporates tinting the bridge structure to minimize the visual impacts of the project and adding a sound barrier to the structure that would eliminate severe noise impacts of the project. This section considers whether the visual and noise proximity impacts related to the CCNM Design Option would result in a constructive use of this property as a recreational resource.

Due to the topography of the site and adjacent areas and screening from existing vegetation, the elevated HSR rail line with these alternatives, including the CCNM Design Option would not be visible from the Memorial Garden or the Helen Chávez home. Therefore, there would be no visual effects on the portions of the property that qualify as Section 4(f)-protected recreational resource.

The CCNM Design Option would include a sound barrier along the edge of the track in addition to moving the HSR centerline to about 2,996 feet from the recreational facilities at La Paz, which would further reduce noise impacts. While operation of the HSR project near La Paz would result in additional noise within the area of the recreational facilities, the sound barriers included in the CCNM Design Option would reduce the noise levels to “no impact” under the FRA/Federal Transit Administration criteria.

In summary, the CCNM Design Option would not result in proximity impacts that would result in a substantial impairment of the property’s activities, features, or attributes that qualify the recreational resources at La Paz for protection under Section 4(f).

Preliminary Summary of Determinations

Based on the analysis presented above, the CCNM Design Option, in this area would not result in proximity impacts that would result in a substantial impairment of the property’s activities, features, or attributes that qualify the recreational facilities at La Paz for protection under Section

4(f) as a recreational resource. The Authority has made a preliminary determination that the CCNM Design Option would not result in a permanent or constructive use of this recreational resource under Section 4(f).

Refined CCNM Design Option

In response to concerns expressed by consulting parties between June 2017 and February 2019, the Authority developed 10 design options that either avoid or minimize adverse effects to the NHL. In 2019, the Authority issued the *Design Options Screening Report for the César E. Chávez/Nuestra Señora Reina de la Paz National Historic Landmark* (2019a) and the *Addendum to the Design Options Screening Report for the César E. Chávez/Nuestra Señora Reina de la Paz National Historic Landmark* (2019b), which evaluate 10 potential design options developed to avoid or minimize impacts on La Paz. This process resulted in the Refined CCNM Design Option, which would shift the alignment to approximately 2,800 feet east from the historic property boundary (instead of 440 feet) and would lower the HSR bridge structure to approximately 50 feet above the existing ground (instead of 160 feet). In addition, the Refined CCNM Design Option incorporates a berm located at the same level as the catenary for the track. The berm would be an average of 80 feet in height from the existing ground in order to minimize project noise to a level that is considered to have no effect per FRA guidelines. Additionally, areas of ground disturbance would be recontoured and revegetated to minimize the visual effects associated with the earthwork required to construct the project. This section considers whether the visual and noise proximity impacts related to the Refined CCNM Design Option would result in a constructive use of this property as a recreational resource.

Due to the topography of the site and adjacent areas and screening from existing vegetation, the elevated HSR rail line with these alternatives, including the Refined CCNM Design Option, would not be visible from the Memorial Garden or the Helen Chávez home. Therefore, there would be no visual effects on the portions of the property that qualify as a Section 4(f)-protected recreational resource.

The Refined CCNM Design Option would include a berm located at the same level as the catenary for the track. The berm would reduce project noise to a level that is considered to have no effect per FRA guidelines. While operation of the HSR project near La Paz would result in additional noise within the area of the recreational facilities, the berm included in the Refined CCNM Design Option would reduce the noise levels to “no impact” under the FRA/Federal Transit Administration criteria.

In summary, the Refined CCNM Design Option would not result in proximity impacts that would result in a substantial impairment of the property’s activities, features, or attributes that qualify the recreational resources at La Paz for protection under Section 4(f).

Preliminary Summary of Determinations

Based on the analysis presented above, the Refined CCNM Design Option in this area would not result in proximity impacts that would result in a substantial impairment of the property’s activities, features, or attributes that qualify the recreational facilities at La Paz for protection under Section 4(f) as a recreational resource. The Authority has made a preliminary determination that the Refined CCNM Design Option would not result in a permanent or constructive use of this recreational resource under Section 4(f).

4.7 Avoidance Alternatives

4.7.1 Introduction

Avoidance alternatives must be considered when there is a use of a Section 4(f) resource and a preliminary determination of *de minimis* impact is not made for that use. As shown in Table 4-9 and Table 4-10, the B-P Build Alternatives would result in the permanent use of land from the following resources protected under the requirements of Section 4(f) for which a preliminary determination of *de minimis* impact was not made:

- Big Creek Hydroelectric System Historic District: All B-P Build Alternatives
- Denny’s Restaurant # 30 (Village Grille): Alternative 5
- Whit Carter Park (approximately 6.9 acres): Alternative 5

Specifically, Section 4(f) requires the selection of an alternative that avoids the use of Section 4(f) resources, if that alternative is deemed feasible and prudent.

Table 4-10 Summary of Critical Differentiators Analysis from the Supplemental Alternatives Analysis Report

Critical Differentiator	Alternatives
Constructability	<p>Alternatives 1, 2, 3, and 4 were determined to optimize constructability compared to Alternatives 5, 6, 7, and 8.</p> <p>Alternatives 1 and 2 were determined to minimize capital costs compared to the other B-P Build Alternatives.</p> <p>Alternative 5 was determined to meet the requirements of the City of Lancaster and to avoid the UPRR facilities compared to Alternative 4.</p>
Land Use	<p>Alternatives 1 and 3 were determined to be the most consistent with existing land uses, and Alternative 6 and 8 were determined to be the least consistent with existing land uses.</p>
Disruption to Communities	<p>Alternatives 1 and 2 were determined to minimize potential impacts to residential parcels, and Alternatives 7 and 8 were determined to result in the most impacts to residential parcels.</p> <p>Alternative 8 was determined to minimize potential impacts to commercial and industrial parcels, and Alternatives 1 and 3 would result in the most impacts to commercial and industrial parcels.</p> <p>Alternatives 1, 2, 3, and 4 were determined to be within 100 feet of two more hazardous materials sites than Alternatives 5, 6, 7, and 8.</p>
Potential Section 4(f) and 6(f) Resources	<p>Alternatives 1, 2, 3, and 4 were determined to result in fewer uses of existing and proposed Section 4(f) parks and recreation resources than Alternatives 5, 6, 7, and 8.</p> <p>Alternatives 1, 2, 3, and 4 were determined to result in fewer uses of potential Section 4(f) historic built environment resources.</p> <p>Alternative 4 was determined to result in the use of fewer potential Section 4(f) and 6(f) recreation resources than Alternative 5. However, similar to the other B-P Build Alternatives, Alternative 4 intersects the Pacific Crest Trail, which would require its relocation at that intersection.</p> <p>In consideration of all resources that trigger the requirements for protection under Section 4(f), Alternatives 4 and 8 were determined to result in the most uses of Section 4(f) resources and Alternatives 1 and 5 would result in the fewest uses of Section 4(f) resources.</p>
Biological Resources	<p>Alternatives 1, 2, 5, and 6 were determined to potentially impact 5.8 linear miles of streams and to require 79 stream crossings. Alternatives 3, 4, 7, and 8 would potentially impact 6.3 linear miles of streams and would require 86 stream crossings.</p> <p>The effects of the alternatives on other biological resources evaluated did not vary substantially among the alternatives and, as a result, were not critical differentiators.</p>

Critical Differentiator	Alternatives
Cultural Resources	Alternatives 1 and 2 were determined to result in the fewest potential impacts to cultural resources including archaeological and built environment sites. Alternatives 6, 7, and 8 were determined to result in the most potential impacts to cultural resources.
Community Resources Potentially Significant to Affected Communities	Overall, Alternatives 1, 2, 3, and 4 were determined to result in the least potential impacts on community resources while Alternatives 5, 6, 7, and 8 were determined to result in the most potential impacts on community resources in the community of Edison. Alternative 4 was determined to result in greater impacts to community resources as a result of the viaduct along SR 58, which is not required under Alternative 5.
Noise and Vibration	Alternatives 5, 6, 7, and 8 were determined to potentially impact 15 sensitive noise receptors, and Alternatives 1, 2, 3, and 4 were determined to potentially impact 18 sensitive noise receptors.
Change in Visual and Scenic Resources	Alternatives 1, 2, 3, 5, and 6 were determined to result in the least impacts to views and vistas as a result of proximity of parcels to a viaduct or embankment. Alternatives 4 and 8 would result in the greatest visual impacts to views and vistas.

Source: California High-Speed Rail Authority, 2016a

B-P = Bakersfield to Palmdale Project Section

SR = State Route UPRR = Union Pacific Railroad

4.7.2 Bakersfield to Palmdale Project Section Supplemental Alternatives Analysis

The purpose and need statement of the Bakersfield to Palmdale Project Section EIR/EIS tiers off the approved Program EIR/EIS documents.

The *Bakersfield to Palmdale Project Section Supplemental Alternatives Analysis Report* (Authority 2016b) evaluated a number of alignment alternatives (Alternatives 1 through 8) for the section of the California HSR System between the cities of Bakersfield and Palmdale. Because Section 4(f) requires the selection of an alternative that avoids the use of Section 4(f) resources, the potential use of Section 4(f) resources by the alternatives evaluated in that report was considered a critical differentiator in the evaluation of those alternatives.

The analyses of all the critical differentiators among the alternatives, including Section 4(f) and cultural resources, provided in the *Bakersfield to Palmdale Project Section Supplemental Alternatives Analysis Report* (Authority 2016b), are summarized in Table 4-10. In summary, as shown in Table 4-10, the 2016 alternatives analysis determined that Alternatives 1, 2, 3, and 5 would be generally more constructible (fewer tunnel miles and lower capital costs) and would generally have lower potential impacts to rights-of-way and displacements, potential Section 4(f) resources, cultural resources, and community resources compared to Alternatives 4, 6, 7, and 8. As a result, Alternatives 4, 6, 7, and 8 were not carried forward for evaluation in this EIR/EIS and Alternatives 1, 2, 3, and 5 were carried forward for evaluation in this EIR/EIS. None of the alternatives evaluated in the 2016 alternatives analysis would avoid the use of all Section 4(f) resources. As a result, the alternatives analysis did not result in the identification of an alternative that would avoid all the effects on Section 4(f) resources.

The alternatives analysis for the Bakersfield to Palmdale Project Section concluded that there was no feasible and prudent HSR alternative within the study area that did not result in a use of a Section 4(f) resource. Although the alternatives analysis process considered multiple critical differentiator criteria, the screening emphasized the project objective to maximize the use of existing transportation corridors and available rights-of-way to the extent feasible. The result of this was the carrying forward of the north-south alignment alternatives that follow the existing UPRR corridor. The alternatives evaluation process further resulted in the conclusion that, in accordance with 49 U.S.C. 303(c), there was no feasible and prudent HSR alternative in the study area that, based on multiple factors that are individually not severe, would cumulatively result in conditions rendering the alternative not prudent.

The reason for this finding is as follows:

- All the B-P Build Alternatives were designed to follow existing railroad corridors to the extent allowed by design speeds. Alternatives that did not follow these or other transportation corridors would not be prudent because they would result in substantially increased displacements, greater overall community disruption, greater adverse impacts on natural environment resources, and greater adverse social and economic impacts as summarized in Table 4-10.
- Any alternative that did not follow an existing transportation corridor would not meet the purpose and need of the Bakersfield to Palmdale Project Section because such an alternative would fail to link the major metropolitan areas of the state, deliver predictable and consistent travel times, and relieve capacity constraints of the existing transportation system as increases in intercity travel demand in California occur, in a manner sensitive to and protective of California's unique natural resources.

4.7.3 No Project Alternative

The No Project Alternative would not include the construction of the HSR project or any associated facilities and, therefore, would have no impact on any Section 4(f) or Section 6(f) resources associated with the construction and operation of the HSR. However, there could be impacts to Section 4(f) or Section 6(f) resources as a result of the existing and planned improvements associated with the No Project Alternative. This alternative would not address the purpose and need for the project. This alternative would not meet existing and future travel demand. Current and projected future congestion of the transportation system would continue to result in deteriorating air quality, reduced reliability, and increased travel times under this alternative. The No Project Alternative is feasible because the non-HSR improvements in this alternative could be designed, constructed, and operated. However, because the No Project Alternative does not meet the project purpose and need, it is not prudent and is not discussed further as an avoidance alternative for impacts on Section 4(f) or Section 6(f) resources.

Greater detail on alternatives considered but dismissed is provided in Section 2.3 of this EIR/EIS and in the *Final Program Environmental Impact Report/Environmental Impact Statement for the Proposed California High-Speed Train System* (Authority and FRA 2005), the *Bakersfield to Palmdale Preliminary Alternatives Analysis Report* (Authority 2010a), the *Bakersfield to Palmdale Supplemental Alternatives Analysis Report* (Authority 2010b), the *Bakersfield to Palmdale Section Checkpoint B Summary Report and attachments* (Authority 2011), and the *Bakersfield to Palmdale Project Section Supplemental Alternatives Analysis Report* (Authority 2016b).

4.7.4 Preliminary Individual Resource Avoidance Assessments

4.7.4.1 Big Creek Hydroelectric System Historic District

Alternatives 1, 2, 3, and 5 would cross the BCHSHD and require the modification of up to nine transmission towers on the Big Creek East and West and Vincent Transmission Lines, which are contributors to the BCHSHD. The overall alignment of this historic property is approximately 230 miles of 4,220 transmission towers. Modification of up to nine towers is a minor impact to the resource and, as such, has been considered when assessing avoidance options. In addition, the use of transmission lines would be maintained and the minor alterations, while still considered adverse, are outweighed by the magnitude of harm resulting from other B-P Build Alternatives.

Avoidance of this Section 4(f) resource would require substantial redesign of the HSR facility to the east or west. All four B-P Build Alternatives are proposed in an elevated alignment on a viaduct on the north side of Edison Highway. Although it is possible to design an at-grade avoidance alternative as a matter of sound engineering judgment (i.e., it is feasible), to do so is not prudent because to avoid the resource, it would be necessary to reroute the alignment to the north or south of Edison Highway or realign Edison Highway. An existing rail corridor is north of Edison Highway and would require modification to accommodate the HSR facilities. Modification of the vertical and horizontal alignment of all four B-P Build Alternatives in Edison would also require relocation of both Bakersfield Station alternatives and the respective approaches to those

stations. Because this change in the alignment would require more land acquisition and right-of-way costs, this avoidance alternative would be feasible, but would not be prudent.

To completely avoid crossing the BCHSHD, the alignment of this project section would require rerouting the HSR alignment to travel parallel to the Big Creek East and West Transmission Lines. Therefore, the HSR would need to travel in a north-south direction, rather than its northwest-southeast alignment, to avoid crossing this historic district. This avoidance alternative would be feasible, but would not be prudent because it would not meet the purpose and need of the Bakersfield to Palmdale Project Section in that such an alternative would fail to link the major metropolitan areas of the state.

Changes to this elevated alignment would likely result in adverse effects more severe than those associated with the B-P Build Alternatives because more right-of-way and acquisitions would be required than currently proposed. Therefore, it was determined that there is no prudent and feasible alternative to Alternatives 1, 2, 3, and 5 to avoid a permanent change to the historic district and two contributors in the BCHSHD that would constitute a use under Section 4(f).

4.7.4.2 Whit Carter Park

Whit Carter Park is west of and adjacent to Sierra Highway in the City of Lancaster. Alternatives 1, 2, and 3 would not result in a permanent, temporary, or constructive use of land at Whit Carter Park (Figure 4-8, Sheet 1).

The relocation of Sierra Highway to avoid the UPRR and accommodate the HSR project in Alternative 5 would result in the permanent incorporation of approximately 6.9 acres of land at Whit Carter Park (Figure 4-8, Sheet 1).

Under Alternative 5, avoidance of this Section 4(f) resource would require substantial redesign of the HSR facility to the east from its proposed alignment. In Lancaster, the alignment of Alternative 5 would be shifted to west of the existing UPRR and Metrolink facilities, avoiding the need to relocate them. Although it is possible to avoid this Section 4(f) resource (Alternatives 1, 2, and 3) as a matter of sound engineering judgment (i.e., it is feasible), Alternative 5 was included as an option to avoid impacts related to the realignment of the UPRR and Metrolink facilities required under Alternatives 1, 2, and 3. As noted above, Alternatives 1, 2, and 3 are feasible and prudent avoidance alternatives of Alternative 5.

Changes to the alignment of Alternative 5 would likely result in adverse effects more severe than those associated with the other B-P Build Alternatives because more right-of-way and acquisitions would be required than in Lancaster for Alternatives 1, 2, and 3. Therefore, it was determined that Alternative 5 would result in a permanent incorporation of land at Whit Carter Park that would constitute a use under Section 4(f), but that use could be avoided by Alternatives 1, 2, or 3. Therefore, Alternatives 1, 2, and 3 would be feasible and prudent avoidance alternatives to such use.

4.7.4.3 Denny's Restaurant #30 (Village Grille)

Denny's Restaurant #30 (Village Grille) is west of and adjacent to Sierra Highway in the City of Lancaster. Alternatives 1, 2, and 3 would not require permanent, temporary, or constructive use of land at Denny's Restaurant #30 (Village Grille). The Section 4(f) uses at Denny's Restaurant #30 (Village Grille) under Alternative 5 could be avoided by Alternatives 1, 2, or 3, and there would be no Section 4(f) use of this historic property under those alternatives.

The relocation of Sierra Highway to the west to avoid HSR interference with the UPRR in Alternative 5 would result in the permanent incorporation of land from this entire historic property.

Under Alternative 5, avoidance of this Section 4(f) resource would require substantial redesign of the HSR facility to the east from its proposed alignment. In Lancaster, Alternative 5 would be aligned west of the existing UPRR and Metrolink facilities, avoiding the need to relocate those existing facilities. Although it is possible to avoid this Section 4(f) resource (Alternatives 1, 2, and 3) as a matter of sound engineering judgment (i.e., it is feasible), Alternative 5 was included as an option to avoid impacts related to the realignment of the UPRR and Metrolink facilities required

under Alternatives 1, 2, and 3. As noted above, Alternatives 1, 2, and 3 are feasible avoidance alternatives.

It was determined that Alternative 5 would result in a permanent use of land at Denny’s Restaurant #30 (Village Grille) that would constitute a use under Section 4(f), but that use could be avoided by Alternatives 1, 2, or 3. Therefore, Alternatives 1, 2, and 3 would be feasible and prudent avoidance alternatives to use of this historic structure.

4.7.4.4 Archaeological Historic Properties: Alternatives 1, 2, 3, and 5

As discussed earlier, at this time, the 49 known archaeological historic properties in the APE are considered eligible for listing in the NRHP under Criterion D only. Those properties are currently considered eligible under Criterion D because it is assumed that their primary significance would be for data collection. They are therefore not subject to the requirements for protection under Section 4(f) at this time. As a result, no avoidance alternatives are necessary for Alternatives 1, 2, 3, and 5.

However, as noted earlier, if any of those known sites or any newly discovered archaeological sites identified during the phased identification efforts or construction monitoring are determined to have the potential to be eligible, they will be evaluated at that time to determine if they are eligible for preservation in place (Criteria A, B, and/or C). If they are valuable for preservation in place and the SHPO concurs, an expedited Section 4(f) evaluation will be prepared in accordance with 23 C.F.R. 774.9 9(e).

4.7.4.5 Summary

In summary, it was determined that there are no prudent and feasible alternatives to avoid the use of the following Section 4(f) resources by the B-P Build Alternatives:

- Big Creek Hydroelectric System Historic District

4.8 Measures to Minimize Harm

Measures to minimize harm include measures that were taken during project planning to avoid or minimize impacts, as well as mitigation and enhancement measures included in the B-P Build Alternatives to compensate for unavoidable project impacts. Table 4-11, Table 4-12, and Table 4-13 list the preliminary measures identified by the Authority to minimize harm, as required by 49 U.S.C. 303(c)(2). These measures would be incorporated into the project to address the impacts of the alternative alignments. The Authority is continuing ongoing coordination, as appropriate, with the OWJs over the resources. During the Authority’s consideration of its decision, additional measures may be agreed on to further reduce potential impacts on Section 4(f) resources. Table 4-11, Table 4-12, and Table 4-13 also list the IAMFs that would address impacts on Section 4(f) resources.

Table 4-11 Measures to Minimize Harm for Public Parks and Recreation Resources Evaluated under Section 4(f)

Impacts	Measures to Minimize Harm
PCT (Pacific Southwest Region of the U.S. Department of Agriculture, USFS)	
<p>Temporary construction activities in the vicinity of the trail (Alternatives 3)</p> <p>Noise effects from the operation of the overhead HSR facility (Alternatives 1, 2, 3, and 5)</p> <p>Visual intrusion from operation of the overhead HSR facility (Alternatives 1, 2, 3, and 5)</p> <p>Permanent easement for the facility and facility maintenance access</p>	<p>PCT-MM #1: Temporary and Permanent Effects on the PCT</p> <ul style="list-style-type: none"> ▪ The Authority would continue to work with the USFS and BLM 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 to be incorporated into the final guideway designs. The process would include activities to solicit community input in the affected trail segment. ▪ The Authority would realign approximately 845 linear feet of the 2,650-mile-long trail west of the proposed viaduct to allow the trail to cross under the bridge structure at one location under Alternatives 1, 2, and 5. This proposed realignment is based on consultation to date with the USFS, the BLM, and the Pacific Crest Trail Association and is shown on Figure 3.15-4, Proposed Pacific Crest Trail Realignment. ▪ Use construction Best Management Practices to control dust and noise (Section 3.3, Air Quality and Global Climate Change; Section 3.4, Noise and Vibration) during construction. ▪ Where exposed to trail users, screen stockpiled material and construction excavations through the use of temporary construction barriers and other screens. Restore areas affected by construction to preconstruction conditions immediately after construction. Use native plant materials for revegetation where appropriate. ▪ During construction, the Design/Build Contractor would monitor construction noise to verify compliance with the established noise limits. The contractor would be given the flexibility to meet the FRA construction noise limits in the most efficient and cost-effective manner. Compliance with these limits can be accomplished by either prohibiting certain noise-generating activities during nighttime hours or providing additional noise control measures to meet the noise limits. The following noise control mitigation measures would be implemented as necessary for nighttime and daytime construction: <ul style="list-style-type: none"> - Install a temporary construction site sound barrier near a noise source. - Locate stationary construction equipment as far as possible from noise-sensitive sites. - Use low-noise-emission equipment. - Implement noise-deadening measures for truck loading and operations. - Monitor and maintain equipment to meet noise limits. - Line or cover storage bins, conveyors, and chutes with sound-deadening material. - Use acoustic enclosures, shields, or shrouds for equipment and facilities. - Use high-grade engine exhaust silencers and engine-casing sound insulation. - Minimize the use of generators to power equipment. - Limit the use of public address systems. - Grade surface irregularities on construction sites. - Use moveable sound barriers at the source of the construction activity. - Limit or avoid certain noisy activities during nighttime hours. - To mitigate noise related to pile driving, the use of an auger to install the piles instead of a pile driver would reduce noise levels substantially. If pile driving is necessary, limit the time of day that the activity can occur. - In the procurement of an HSR vehicle technology, the Authority would require

Impacts	Measures to Minimize Harm
	<p>bidders to meet the federal regulations (40 C.F.R. 201.12/13) at the time of procurement for locomotives (currently a 90 dB standard) for cars operating at speeds greater than 45 miles per hour.</p> <ul style="list-style-type: none"> ▪ Coordinate with the private property owner, the USFS, and the BLM regarding compensation for the maintenance easement to access the HSR facility and the areas under the viaduct during operation of the HSR Project. ▪ Work with the USFS and BLM to prepare final design documents that minimize the visual impacts of the HSR facilities on PCT users. This could include landscaping or other design features. ▪ Use sound-attenuating measures along the guideway to minimize noise during operation of the HSR Project. ▪ Make the area under the viaduct accessible for equestrian use during operation of the HSR Project. <p>PCT-MM #2 Temporary Trail Closures and Detours on the Pacific Crest Trail</p> <ul style="list-style-type: none"> ▪ The trail shall remain open to hikers and equestrian users during construction by providing detours to maintain connectivity if construction requires temporary closures with collaboration between the USFS, BLM, and Authority. Provide clear signage and direction for alternative access routes and access points, and coordinate with local groups and jurisdictions using a variety of media to communicate the construction schedule and anticipated closures and detours. <ul style="list-style-type: none"> – During final design, the Authority’s project engineer would require the design-build contractor to develop a Trail Facilities Plan addressing the short-term project impacts on the segment of the PCT within the construction limits of the project. That plan would address: <ul style="list-style-type: none"> ▪ Identification of trail segments that would be closed temporarily and detoured during construction ▪ Preparing a public awareness and notification plan ▪ Temporarily closing trails during construction ▪ Developing and implementing detours for the temporarily closed trail segment ▪ Phasing of temporary trail closures to allow for effective detours to maintain connectivity of the facility around the construction areas ▪ Coordinating the trail closures and detours with the USFS and BLM ▪ Criteria for identifying detour routes and facilities ▪ Information signing for closures and detours ▪ Maintaining signing for closures and detours throughout the closure period and replacing lost or damaged signing ▪ Restoring trail segments to their original or better condition at the completion of project construction ▪ Prior to any temporary closures of the PCT, the Authority’s project engineer would require the design-build contractor to coordinate with the USFS and BLM directors, or their representatives, to review the location of and need for each temporary trail closure. The Authority’s project engineer would require the design-build contractor to develop detours for each closure in consultation with the USFS and BLM directors or their representatives. Prior to and during construction activities that would require the temporary closure of the trail, the Authority’s project engineer would require the design-build contractor to comply with and implement the procedures in the Trail Facilities Plan, described above, for the affected PCT segment. ▪ Signing for Trail Detours and Closures. The Authority’s project engineer would require the design-build contractor to develop detour signs, in consultation with the USFS and BLM, notifying trail users of the upcoming temporary facility closure and

Impacts	Measures to Minimize Harm
	<p>directing the trail users to the temporary detour routes with estimated time frames. Appropriate directional and informational signage would be provided by the project design-build contractor prior to each closure and far enough in advance of the closure so trail users would not have to backtrack to get to the detour routes.</p> <ul style="list-style-type: none"> ▪ Contact Information at Trail Detours. The Authority's project engineer would require the design-build contractor to provide detour signing that includes contact information for the Authority's project engineer and the design-build contractor, and that informs trail users to contact the project engineer and/or the design-build contractor with questions or concerns regarding upcoming or active temporary trail closures. ▪ Restoration of Impacted Trail Segments. The Authority's project engineer would require the design-build contractor to return trail segments closed temporarily during construction to their original, or better, condition after completion of construction, prior to their return to the control of the USFS and BLM. After project construction, the Authority's project engineer would require the design-build contractor to document that access to and connectivity of the affected trails were restored. <ul style="list-style-type: none"> – Compliance with the Trails Facilities Plan. Compliance with the Trails Facilities Plan would be documented in the environmental commitments record with text, photographs, maps, and correspondence, as appropriate. <p>PP-MM #2: Permanent Easement from Parks, Recreation Resources, and/or Trails If a permanent easement (for the facility and facility maintenance access) is required across a park, recreation resource, and/or trail, the Authority would consult with the property owner from which the Authority requires that permanent easement of property regarding the specific conditions of acquisition, use of, and compensation for, or replacement or enhancement of, the park or recreation resource within the easement area.</p>
Whit Carter Park (City of Lancaster) and Dr. Robert C. St. Clair Parkway (City of Palmdale)	
<p>Temporary construction activities in parks or at recreation resources</p> <ul style="list-style-type: none"> ▪ Whit Carter Park (Alternative 5) ▪ Dr. Robert C. St. Clair Parkway (Alternatives 1, 2, 3, and 5) 	<p>LU-IAMF #1: Restoration of Land Used Temporarily During Construction Prior to any ground disturbing activities at the site of land to be used temporarily during construction, the Contractor shall prepare a restoration plan addressing specific actions, sequence of implementation, parties responsible for implementation and successful achievement of restoration for temporary impacts. Before beginning construction use of land, the Contractor shall submit the restoration plan to the Authority for review and obtain Authority approval. The restoration plan shall include time-stamped photo documentation of the pre-construction conditions of all temporary staging areas. All construction access, mobilization, material laydown, and staging areas would be returned to a condition equal to the pre-construction staging condition. This requirement is included in the design-build construction contract requirements.</p> <p>PC-MM #1: Temporary Use of Land from Park, Recreation, or School Play Areas During Construction:</p> <ul style="list-style-type: none"> ▪ Temporary Impact Areas. During final design, the Authority's project engineer would evaluate all proposed temporary impact areas in parks, recreation resources, and school play areas, and would identify opportunities to further reduce the sizes of those temporary impact areas. All temporary impact areas in parks, recreation resources, and school play areas shown on the project plans and specifications would include notes that the design-build contractor cannot increase the size of any of those areas without consultation with and approval by the project engineer. ▪ Temporary Impact Areas. During final design, the Authority's project engineer would consult with the affected jurisdictions and property owners to discuss the temporary impact areas needed for construction of Alternative 1, 2, 3, or 5 and to determine the appropriate level of compensation for the use of land from park, recreation, or school play areas for the temporary impact areas. It is anticipated that

Impacts	Measures to Minimize Harm
	<p>the compensation would be payments for the temporary use of land from those resources for the period of time that land is used for temporary impact areas during project construction.</p> <ul style="list-style-type: none"> ▪ Access Restrictions at Temporary Impact Areas. The Authority’s project engineer would require the design-build contractor to fence and gate all land in parks, recreation facilities, and school play areas used for temporary impact areas. The temporary impact areas would be appropriately signed to restrict access to those areas by park and recreation resource patrons and users of school play areas. The Authority’s project engineer would require the design-build contractor to maintain the fencing throughout the time period each temporary impact area is used and to remove the fencing only after all construction activity in an area is completed, the temporary impact area is no longer needed, and the land is ready to be returned to the property owner. ▪ Signing of Fenced Temporary Impact Areas. The Authority’s project engineer would require the design-build contractor to provide signing at each temporary impact area explaining why the area is fenced and access to the temporary impact area is restricted, the anticipated completion date of the use of the land for the temporary impact area, and contact information (for both the Authority’s project engineer and the design-build contractor) for the public to solicit further information regarding the temporary impact area and the project. ▪ Modifications to Recreation Uses. In the event a temporary impact area requires the temporary use of land at a park, recreation resource, or school play area that is used for recreation purposes, the Authority’s project engineer would consult with the property owner/operator (1) on whether the property owner/operator wants those recreation uses replaced temporarily or permanently elsewhere on the property, and (2) if temporary or permanent replacement of those recreation uses is desired on modifications that could be made to the remaining recreation area on the property to temporarily or permanently replace the recreation uses displaced by the temporary impact area. Any modifications to recreation areas outside the limits of a temporary impact area would be constructed/implemented prior to fencing and use of the temporary impact area.
<p>Permanent Park or Recreation Resource Acquisition</p> <ul style="list-style-type: none"> ▪ Whit Carter Park (Alternative 5) ▪ Dr. Robert C. St. Clair Parkway (Alternatives 1, 2, 3, and 5) 	<p>SOCIO-IAMF #2: Compliance with Uniform Relocation Assistance and Real Property Acquisition Policies Act</p> <p>The Authority must comply with the Uniform Relocation Assistance and Real Property Acquisition Policies Act, as amended (Uniform Act). The provisions of the Uniform Act, a federally mandated program, would apply to all acquisitions of real property or displacements of persons resulting from this federally assisted project. It was created to provide for fair and equitable treatment of all affected persons. Additionally, the Fifth Amendment of the U.S. Constitution provides that private property may not be taken for a public use without payment of “just compensation.”</p> <p>The Uniform Act requires that the owning agency provide notification to all affected property owners of the agency’s intent to acquire an interest in their property. This notification includes a written offer letter of just compensation. A right-of-way specialist is assigned to each property owner to assist him or her through the acquisition process. The Uniform Act also provides benefits to displaced individuals to assist them financially and with advisory services related to relocating their residence or business operation. Benefits are available to both owner occupants and tenants of either residential or business properties.</p> <p>The Uniform Act requires provision of relocation benefits to all eligible persons regardless of race, color, religion, sex, or national origin. Benefits to which eligible owners or tenants may be entitled are determined on an individual basis and explained in detail by an assigned right-of-way specialist.</p> <p>The California Relocation Assistance Act essentially mirrors the Uniform Act and also</p>

Impacts	Measures to Minimize Harm
	<p>provides for consistent and fair treatment of property owners. However, because the project would receive federal funding, the Uniform Act takes precedence. Owners of private property have federal and state constitutional guarantees that their property would not be acquired or damaged for public use unless owners first receive just compensation. Just compensation is measured by the “fair market value,” where the property value is considered to be the highest price that would be negotiated on the date of valuation. The value must be agreed upon by a seller who is willing, not obliged to sell, but under no particular or urgent necessity and by a buyer who is ready, willing, and able to buy but under no particular necessity. Both the owner and the buyer must deal with the other with the full knowledge of all the uses and purposes for which the property is reasonably adaptable and available (Code of Civil Procedure Section 1263.320a).</p> <p>More detailed information about how the Authority plans to comply with the Uniform Act and the California Relocation Assistance Act is provided in the following three detailed relocation assistance documents modeled after Caltrans versions:</p> <ul style="list-style-type: none"> ▪ Your Rights and Benefits as a Displacee under the Uniform Relocation Assistance Program (Residential) ▪ Your Rights and Benefits as a Displacee under the Uniform Relocation Assistance Program (Mobile Home) ▪ Your Rights and Benefits as a Displaced Business, Farm, or Nonprofit Organization under the Uniform Relocation Assistance Program <p>PP-MM #1: Permanent Acquisition of Property from Publicly Owned Parks Under the California Park Preservation Act:</p> <p>Per Public Resources Code Division 5, Chapter 2.5, Section 5401 of the California Park Preservation Act, the Authority would provide compensation or land, or both, for all permanent acquisitions of property for HSR improvements from publicly owned parks, consistent with the requirements of the California Park Preservation Act of 1971. The California Park Preservation Act requires that the compensation or land, or both, for the taking of the park land and facilities be equal to one of the following:</p> <ul style="list-style-type: none"> ▪ The cost of acquiring substitute park land of comparable characteristics, substantially equal size, and condition ▪ Substitute park land of comparable characteristics, substantially equal size, and condition ▪ Any combination of substitute park land and compensation in an amount sufficient to provide substitute park land of comparable characteristics, substantially equal size, and condition <p>During the right-of-way acquisition process, the Authority would consult with the public agency with jurisdiction over any publically owned park from which the Authority requires permanent acquisition of property regarding the specific conditions of acquisition and compensation for, or replacement or enhancement of, other park property for the land that would be acquired.</p>
<p>Permanent Park or Recreation Resource Acquisition</p> <ul style="list-style-type: none"> ▪ Whit Carter Park (Alternative 5) 	<p>PP-MM #3: Permanent Changes to Access to Parks and/or, Recreation Resources</p> <p>If permanent changes to vehicular, bicycle, or pedestrian access to a park or recreation resource is required, the Authority would consult with the property owner regarding the specific conditions of the changes to access and compensation for, or replacement or enhancement of, the access driveways or parking areas at the recreation resource.</p> <p>PP-MM #4: Permanent Acquisition of Property from Land Planned for Recreational Uses</p> <p>For planned recreation resources, final design of the B-P Build Alternatives would continue to minimize right-of-way impacts at planned parks and recreational resources. The Authority would continue to work with the relevant jurisdictions on the establishment of appropriate compensation and relocation/realignment of a resource or additional property to accommodate the displaced planned park and recreational uses as a result</p>

Impacts	Measures to Minimize Harm
	of the HSR project. Mitigation may include preparing a plan for designing planned recreation uses to be compatible with the HSR facility.

Authority = California High-Speed Rail Authority
 BLM = Bureau of Land Management
 C.F.R. = Code of Federal Regulations
 HSR = high-speed rail
 IAMF = impact avoidance and minimization feature
 PCT = Pacific Crest Trail
 PRC = Public Resources Code
 Uniform Act = Uniform Relocation Assistance and Real Property Acquisition Act
 USFS = U.S. Forest Service

Table 4-12 Measures to Minimize Harm for Built Environment Historic Properties Evaluated under Section 4(f)

Properties	Measures to Minimize Harm
Historic Properties (SHPO)	
BCHSHD (Alternatives 1, 2, 3, and 5)	<p>CUL-IAMF#1: Geospatial Data Layer and Archaeological Sensitivity Map The obligation to use geospatial data layering on construction drawings reduces potential impacts on cultural resources by identifying the locations of known archaeological resources and built historic resources in relation to the construction footprint. This allows for appropriate cultural resource management implementation as construction proceeds. This construction management tool provides additional assurance that construction activities would not inadvertently result in greater impacts than disclosed in environmental documents, MOAs, and archaeological and built environment treatment plans. As the design progresses, the data layer may need to be expanded.</p> <p>CUL-IAMF #2: WEAP Training Session Prior to construction (any ground disturbing activity) construction contractor personnel who work on site would attend a Worker Environmental Awareness Program (WEAP) training session provided by the Contractor. The WEAP would include cultural resources awareness training performed by the Contractor’s archaeologist who meets the Secretary of the Interior’s Professional Qualifications Standards provided in 36 C.F.R. Part 61. The Contractor would develop instructional materials and a fact sheet for distribution to the construction crews, and submit the materials, as well as qualifications of the personnel providing the training, to the Authority for approval at least 15 days prior to being permitted on-site access. The training would address measures required to avoid or protect built historic resources, educate crews on artifacts and archaeological features they may encounter and the mandatory procedures to follow should potential cultural resources be exposed during construction. Translation services shall be provided by the contractor for non-English speaking participants. The training sessions shall be given prior to the initiation of any ground disturbance activities and repeated on an annual basis. Additionally, new construction crewmembers shall attend an initial WEAP training session prior to working on site.</p> <p>On completion of the WEAP training, construction crews would sign a form stating that they attended the training, understood the information presented, and would comply with the WEAP requirements. The Contractor’s archaeologist would submit the signed WEAP training forms to the Mitigation Manager on a monthly basis. On an annual basis, the Contractor would provide the Authority with a letter indicating that regular WEAP training has been implemented and would provide at least one PowerPoint annually of the WEAP training. On a monthly basis, the Contractors archaeologist would provide updates and synopsis of the training to workers during the daily safety ("tailgate") meeting. Construction crews would be informed during the WEAP training that, to the extent possible, travel within the marked project site would be restricted to established roadbeds.</p>

Properties	Measures to Minimize Harm
	<p>CUL-IAMF #7: Built-Environment Monitoring Plan</p> <p>Prior to construction (any ground disturbing activities within 1,000 feet of a historic property or resource) the Contractor shall prepare a Built Environment Monitoring Plan (BEMP). Draft and final BEMP's would be prepared describing the properties that would require monitoring, the type of activities or resources that would require full-time monitoring or spot checks, the required number of monitors for each construction activity, and the parameters that would influence the level of effort for monitoring. Maximum vibration level thresholds may be established in the Plan for Protection of Historic Resources and Repair of Inadvertent Damage the monitoring of which would be included in this monitoring plan. The BETP would outline the process for corrective action should the protection measures prove ineffective. Consultation procedures would also be defined in the BETP. The Contractor shall develop both the draft and final plans in coordination with the Authority, and shall be submitted to the SHPO for review and approval. The plan would be implemented prior to any ground-disturbing activities within 1,000 feet of properties identified as requiring monitoring, as specified in the BETP.</p> <p>CUL-IAMF#8: Implement Protection and/or Stabilization Measures</p> <p>This commitment to stabilize and protect historic buildings and structures susceptible to damage during construction reduces potential impacts on cultural resources. Temporary stabilization and protection measures would be removed after construction is completed. Properties would be restored to their pre-construction condition.</p> <p>CUL-MM #7: Prepare Interpretive or Educational Materials</p> <p>The Authority-prepared MOA and BETP would identify historic properties and historical resources that would be subject to historic interpretation or preparation of educational materials. Interpretive and educational materials would address the significance of the properties that would be affected by the project. Interpretive or educational materials could include, but are not limited to: brochures, videos, websites, study guides, teaching guides, articles or reports for general publication, commemorative plaques, or exhibits. The agreed-upon method of interpretation would be specified in the BETP for each property, resulting from consultation with the SHPO, MOA signatories and concurring parties. The contractor would be responsible for assembling the appropriate interdisciplinary team to fulfill the mitigation. The required professionals and their qualifications would be specified in the BETP.</p> <p>In the preparation of the interpretive or educational materials, the contractor's team would utilize previous research included in the environmental technical documents, images, narrative history, drawings, or other material produced for the mitigation described above. The interpretive or educational materials should be made available to the public in physical or digital formats, at local libraries, historical societies, or public buildings, as specified in the BETP.</p> <p>CUL-MM #1: Mitigate Adverse Effects to Archaeological and Built Environment Resources Identified During Phased Identification. Comply with the Stipulations Regarding the Treatment of Archaeological and Historic Built Resources in the Programmatic Agreement (PA) and Memorandum of Agreement (MOA)</p> <p>Once parcels are accessible and surveys have been completed, including consultation as stipulated in the MOA, additional archaeological and built environment resources may be identified. For newly identified eligible properties that will be adversely affected, the following process will be followed, which is presented in detail in the Built Environment Treatment Plan (BETP) and Archaeological Treatment Plan (ATP):</p> <ul style="list-style-type: none"> ▪ The Authority will consult with the MOA signatories and concurring parties to determine the preferred treatment of the properties/resources and appropriate mitigation measures. ▪ For California Register of Historical Resources (CRHR)-eligible archaeological resources, the Authority shall determine if these resources can feasibly be preserved in place, or if data recovery is necessary. The methods of preservation in place shall

Properties	Measures to Minimize Harm
	<p>be considered in the order of priority provided in CEQA Guidelines § 15126.4(b)(3). If data recovery is the only feasible treatment the Authority shall adopt a data recovery plan as required under CEQA Guidelines § 15126.4(b)(3)(C).</p> <ul style="list-style-type: none"> ▪ Should data recovery be necessary, the Contractor's PI, in consultation with the MOA signatories and consulting parties, will prepare a data recovery plan for approval from the Authority and in consultation with the MOA signatories. Upon approval, the Contractor's PI will implement the plan. <p>For archaeological resources the Authority shall also determine if the resource is a unique archaeological site under CEQA. If the resource is not an historical resource but is an archaeological site the resource shall be treated as required in California Public Resources Code 21083.2 by following protection, data recovery, and/or other appropriate steps outlined in the ATP. The review and approval requirements for these documents are outlined in the ATP.</p> <p>For historic built resources, the Contractor's PI will amend the BETP to include the treatment and mitigation measures identified by the Authority in consultation with the MOA signatories and concurring parties. The Contractor's PI will implement the treatment and mitigation measures accordingly.</p>
<p>Denny's Restaurant #30 (Village Grille) (Alternatives 1, 2, 3, and 5)</p>	<p>CUL-MM#1: Mitigate Adverse Effects to Archaeological and Built Environment Resources Identified During Phased Identification. Comply with the Stipulations Regarding the Treatment of Archaeological and Historic Built Resources in the Programmatic Agreement (PA) and Memorandum of Agreement (MOA)</p> <p>Once parcels are accessible and surveys have been completed, including consultation as stipulated in the MOA, additional archaeological may be identified. Unless design advances during the design-build phase require the APE to be modified, all built resources surveys were completed for the Bakersfield to Palmdale Project Section. For newly identified eligible properties that would be adversely affected, the following process would be followed, which would be presented in detail in the BETP and ATP:</p> <ul style="list-style-type: none"> ▪ The Authority would consult with the MOA signatories and concurring parties to determine the preferred treatment of the properties/resources and appropriate mitigation measures. ▪ For CRHR-eligible archaeological resources, the Authority shall determine if these resources can feasibly be preserved in place, or if data recovery is necessary. The methods of preservation in place shall be considered in the order of priority provided in CEQA Guidelines § 15126.4(b)(3). If data recovery is the only feasible treatment the Authority shall adopt a data recovery plan as required under CEQA Guidelines § 15126.4(b)(3)(C). ▪ Should data recovery be necessary, the Contractor's Principal Investigator (PI), in consultation with the MOA signatories and consulting parties, would prepare a data recovery plan, for approval from the Authority and in consultation with the MOA signatories. Upon approval, the Contractor's PI would implement the plan. ▪ For archaeological resources the Authority shall also determine if the resource is a unique archaeological site under CEQA. If the resource is not a historical resource but is an archaeological site, the resource shall be treated as required in California Public Resources Code 21083.2 by following protection, data recovery, and/or other appropriate steps outlined in the ATP. The review and approval requirements for these documents would be outlined in the ATP. ▪ For historic built resources, the Contractor's PI would amend the BETP to include the treatment and mitigation measures identified by the Authority in consultation with the MOA signatories and concurring parties. The Contractor's PI would implement the treatment and mitigation measures accordingly.

Properties	Measures to Minimize Harm
	<p>CUL-MM #3: Minimize Adverse Effects through Relocation of Historic Buildings and Structures</p> <p>The Authority-prepared Memorandum of Agreement (MOA) and Built Environment Treatment Plan (BETP) may identify historic properties/historical resources for relocation to avoid their destruction and minimize direct adverse effects resulting from physical damage or alteration. The development of plans for relocation and the implementation of relocation would take place before construction is undertaken within 1000 feet of the properties. The relocation of the historic properties/historical resources would be specified in the BETP by the Authority or the Contractor's PI, depending on when the location is identified, and take into account the historic site and layout (i.e., the orientation of the buildings to the cardinal directions) and their potential re-use. The contractor's qualified architectural historian, along with an interdisciplinary team of professionals as appropriate, would prepare a relocation plan that would provide for protection and stabilization of the buildings or structures before, during, and after the move, as well as measures to address inadvertent damage. The plan would be subject to review and approval by the Authority, in consultation with the MOA signatories and concurring parties. The relocation would be implemented according to the plan. As the design progresses, additional properties may be determined by the Authority as requiring this mitigation.</p> <p>CUL-MM#5: Minimize Adverse Operational Noise Effects</p> <p>The MOA and BETP would identify the historic properties/historical resources that would be subject to treatment to minimize the adverse effects caused by the operational noise of the HSR. The manner in which each property that is subject to this mitigation would be treated would be developed in consultation with the landowner or land-owning agencies and the Authority, and specified in the BETP. The Contractor is responsible for the planning and implementation of the noise abatement mitigation identified in the BETP. All plans would be approved by the Authority in consultation with the MOA signatories prior to their implementation. Should a noise wall be selected as mitigation, the Contractor shall evaluate additional effects to the historic property. If the Authority finds the effects to be adverse in consultation with the MOA signatories and concurring parties, the Authority would develop additional mitigation measures in consultation with the signatories of the MOA. If additional effects are determined to be adverse, mitigation measures would be determined in consultation with the SHPO and MOA signatories and concurring parties and carried out by the Contractor. As the design progresses, additional properties may be determined by the Authority as requiring this mitigation.</p> <p>CUL-MM #6: Prepare and Submit Additional Recordation and Documentation</p> <p>The Authority-prepared MOA and BETP would identify specific historical resources that would be physically altered, damaged, relocated, or destroyed by the project and require documentation. This documentation may consist of preparation of updated recordation forms (Department of Parks and Recreation [DPR] 523), or may be consistent with the Historic American Building Survey (HABS), the Historic American Engineering Record (HAER), or the Historic American Landscape Survey (HALS) programs; a Historic Structure Report; or other recordation methods stipulated in the MOA and described in the BETP. The specific mitigation for each property would be determined in consultation with the MOA signatories and concurring parties. The BETP would detail the appropriate type and level of recordation for each property. The recordation undertaken by this treatment would focus on the aspect of integrity that would be affected by the project for each historic property subject to this treatment. For example, historic properties in an urban setting that would experience an adverse visual effect would be photographed to capture exterior and contextual views; interior spaces would not be subject to recordation if they would not be affected. The appropriate method of documentation would be specified in the BETP for each property, resulting from consultation with the SHPO, MOA signatories and concurring parties. Such documentation would follow the appropriate guidance for the recordation format and program selected. Copies of the documentation</p>

Properties	Measures to Minimize Harm
	<p>would be provided to the consulting parties and offered to the appropriate local governments, historical societies and agencies, or other public repositories, such as libraries, as specified in the BETP. The documentation would also be offered in printed and electronic form to any repository or organization to which the SHPO, the Authority, and the local agency with jurisdiction over the property, through consultation, may agree. The electronic copy of the documentation may also be placed on an agency or organization's website. As the design progresses, additional properties may be determined by the Authority as requiring documentation.</p> <p>In general, photography should capture views of the historic property from multiple views, and could include reproduction of historic images, architectural and/or engineering drawings as well. All fieldwork necessary for photographic documentation, architectural or engineering drawings, and/or digital recordation through geographic information or global positioning systems (geographic information system [GIS] and global positioning system [GPS], respectively) shall be completed by the Contractor and approved by the Authority and SHPO before project construction begins. The written data would include a historic narrative for the historic property that would utilize existing inventory, evaluation, and/or nomination documents to the extent possible.</p> <p>This kind of documentation would require the contractor to engage an interdisciplinary team to adequately complete this mitigation. The team would likely be required to include, at a minimum, an architectural historian, and/or a historian, and a photographer. Other team members may include a landscape architect and/or computer-aided design and drafting (CADD) technician. The BETP shall detail the required personnel and qualification standards for these preparers; the Authority shall submit the documentation to the SHPO for review and comment. If the documentation is to follow the HABS/HAER/HALS program, consultation by the Authority with NPS would be required. The final documentation would be prepared by the Contractor's qualified team, be approved by NPS, and submitted to the Library of Congress by the Authority. The BETP shall identify the distribution of printed and electronic copies of the photo documentation, as well as permanent archival disposition of the record, if applicable.</p> <p>CUL-MM #7: Prepare Interpretive or Educational Materials Refer to the description of this mitigation measure above.</p>
<p>La Paz (Alternatives 1, 2, 3, and 5)</p>	<p>CUL-IAMF #2: WEAP Training Session Refer to the description of this mitigation measure above.</p> <p>CUL-IAMF #7: Built-Environment Monitoring Plan Refer to the description of this mitigation measure above.</p> <p>CUL-MM #5: Minimize Adverse Operational Noise Effects The Authority-prepared MOA and BETP would identify the historic properties/historical resources that would be subject to treatment to minimize the indirect adverse effects caused by the operational noise of the HSR. The manner in which each property that is subject to this mitigation would be treated would be in consultation with the landowner or land-owning agencies and the Authority, and specified in the BETP. The Contractor is responsible for the planning and implementation of the noise abatement mitigation identified in the BETP. All plans would be approved by the Authority and signatories to the MOA prior to their implementation. Should a noise wall be selected, additional effects to the historic property may need to be evaluated by the Contractor and determined in consultation with the Authority, SHPO and the signatories of the MOA. If additional effects are determined to be adverse, mitigation measures would be determined in consultation with the SHPO and MOA signatories and concurring parties and carried out by the Contractor. As the design progresses, additional properties may be determined by the Authority as requiring this mitigation.</p> <p>CUL-MM #7: Prepare Interpretive or Educational Materials Refer to the description of this mitigation measure above.</p>

Properties	Measures to Minimize Harm
	<p>N&V-MM#3: Implement California High-Speed Rail Project Noise Mitigation Guidelines</p> <p>Various options exist to address the potentially severe noise effects from high-speed train operations. The Authority has developed Noise Mitigation Guidelines for the statewide HSR system that sets forth three categories of mitigation measures to reduce or offset severe noise impacts from HSR operations: sound barriers, sound insulation, and noise easements. The Guidelines also set forth an implementation approach that considers multiple factors for determining the reasonableness of sound barriers as mitigation for severe noise impacts, including structural and seismic safety, cost, number of affected receptors, and effectiveness. Sound barrier mitigation would be designed to reduce the exterior noise level from HSR operations from severe to moderate, according to the provisions of the FRA noise and vibration manual (FRA 2012).</p>
Keene Fire Station (Alternatives 1, 2, 3, and 5)	<p>CUL-IAMF #2: WEAP Training Session</p> <p>Refer to the description of this mitigation measure above.</p> <p>CUL-IAMF #6: Pre-Construction Conditions Assessment, Plan for Protection of Historic Built Resources, and Repair of Inadvertent Damage</p> <p>Prior to Construction (any ground disturbing activities that are within 1,000 feet of a historic built property) the Contractor may be required to assess the condition of construction-adjacent historic properties, and prepare a Plan for the Protection of Historic Built Resources and Repair of Inadvertent Damage. The MOA and BETP would stipulate for which properties the plan is to be prepared. MOA signatories and consulting parties may comment on the adequacy of the assessments. Protection measures would be developed in consultation with the landowner or land-owning agencies as well as the SHPO and the MOA signatories and consulting parties, as required by the Programmatic Agreement. As the design progresses, additional properties may be identified by the Authority as requiring this plan. The plan shall record existing conditions in order to (1) establish a baseline against which to compare the property's post-project condition, (2) to identify structural deficiencies that make the property vulnerable to project construction related damage, such as vibration, and (3) to identify stabilization or other measures required to avoid or minimize inadvertent adverse effects. The plan would be further described in the BETP and be prepared by an interdisciplinary team, including (but not limited to) as appropriate, an architectural historian, architect, photographer, structural engineer, and acoustical engineer. Ambient conditions would be used to identify buildings that are sensitive receptors to construction-related vibration and require vibration monitoring during construction activities. Additional protective measures may be required if the property is vacant during construction.</p> <p>The plan content shall be outlined in the BETP and is to be completed and approved by the Authority, with protective measures implemented before construction begins within 1,000 feet of the subject building. The plan shall describe the protocols for documenting inadvertent damage (should it occur), as well as notification, coordination, and reporting to the SHPO, MOA signatories, and the owner of the historic property. The plan shall direct that inadvertent damage to historic properties shall be repaired in accordance with the Secretary of the Interior's Standards for the Treatment of Historic Properties (U.S. Department of the Interior 1995). The plan shall be developed in coordination with the Authority, and shall be submitted to the SHPO for review and approval. Protective plans would be required for buildings that would be moved as part of the project mitigation, including stabilization before, during, and after relocation; protection during temporary storage; and relocation to a new site, followed by rehabilitation.</p> <p>CUL-IAMF #7: Built-Environment Monitoring Plan</p> <p>Refer to the description of this mitigation measure above.</p> <p>CUL-IAMF #8: Implement Protection and/or Stabilization Measures</p> <p>Implement the plan described in the Plan for Protection of Historic Resources and Repair</p>

Properties	Measures to Minimize Harm
	<p>of Inadvertent Damage and in the BETP. Such protection measures would include, but would not be limited to, vibration monitoring of construction in the vicinity of historic properties; cordoning off of resources from construction activities (e.g., traffic, equipment storage, personnel); shielding of resources from dust or debris; and stabilization of buildings adjacent to construction. Temporary stabilization and protection measures would be removed after construction is complete, and the historic properties would be restored to their pre-construction condition. For buildings that would be moved, treatment would include stabilization before, during, and after relocation; protection during temporary storage; and relocation to a new site, followed by rehabilitation.</p>
<p>First Los Angeles Aqueduct (Alternatives 1, 2, 3, and 5)</p>	<p>CUL-IAMF #2: WEAP Training Session Refer to the description of this mitigation measure above.</p> <p>CUL-IAMF #6: Pre-Construction Conditions Assessment, Plan for Protection of Historic Built Resources, and Repair of Inadvertent Damage Refer to the description of this mitigation measure above.</p> <p>CUL-IAMF #7: Built-Environment Monitoring Plan Refer to the description of this mitigation measure above.</p> <p>CUL-IAMF #8: Implement Protection and/or Stabilization Measures Refer to the description of this mitigation measure above.</p>

Authority = California High-Speed Rail Authority
 ATP = Archaeological Treatment Plan
 BCHSHD = Big Creek Hydroelectric System Historic District
 BETP = Built Environment Treatment Plan
 BLM = Bureau of Land Management
 BMP = best management practice
 Cal. Public Res. Code = California Public Resources Code
 CEQA = California Environmental Quality Act
 C.F.R. = Code of Federal Regulations
 CRHR = California Register of Historical Resources
 dB = decibel(s)
 DPR = Department of Parks and Recreation
 GIS = geographic information system
 GPS = Global Positioning System
 HABS = Historic American Building Survey
 HAER = Historic American Engineering Record
 HALS = Historic American Landscape Survey
 HSR = high-speed rail
 in/sec = inch(es) per second
 MMEP = Mitigation Monitoring and Enforcement Plan
 MOA = memorandum of agreement
 NPS = National Park Service
 PA = programmatic agreement
 PCT = Pacific Crest Trail
 ppv = peak particle velocity
 RSA = resource study area
 SOI = Secretary of the Interior
 SHPO = State Historic Preservation Officer
 U.S. = United States
 Uniform Act = Uniform Relocation Assistance and Real Property Acquisition Policies Act
 USFS = U.S. Forest Service

Table 4-13 Measures to Minimize Harm for Archaeological Historic Properties

Impact(s)	Measures to Minimize Harm
Archaeological Historic Properties (SHPO)	
<p>An archaeological historic property is located within the APE that would be adversely affected by the project, or have the potential to be damaged by construction activities. Known archaeological historic properties located within the APE are considered eligible for listing in the NRHP under Criterion D only. Those properties are currently considered eligible under Criterion D because it is assumed their primary significance would be for data collection.</p>	<p>CUL-IAMF #1: Geospatial Data Layer and Archaeological Sensitivity Map Prior to construction (any ground disturbing activities) and staging of materials and equipment the Contractor's archaeologist or geoarchaeologist shall prepare a geospatial data layer identifying the locations of all known archaeological resources and built historic resources that require avoidance or protection, and areas of archaeological sensitivity that require monitoring within the area of potential effect (APE). The Contractor's archaeologist, who meets the Secretary of the Interior's Professional Qualifications Standards provided in 36 Code of Federal Regulations (C.F.R.) Part 61, is to use, as appropriate, a combination of the following: known locations of archaeological sites and built historic properties, tribal consultation, landforms, depositional processes, distance to water, mapping provided in the Archaeological Treatment Plan, or historic mapping. This mapping is to be updated as the design progresses if it results in an expansion of the area of ground disturbance/APE, including temporary construction easements and new laydown and access areas. This mapping would be used to develop an archaeological monitoring plan to be prepared by the Contractor's archaeologist, and upon approval by the Authority, implemented by the Contractor's archaeologist. When design is sufficiently advanced, a geospatial data layer would be produced by the Contractor overlaying the locations of all known archaeological resources and built historic resources within the APE, for which avoidance measures are necessary, and all archaeologically sensitive areas, for which monitoring is required.</p> <p>CUL-IAMF #2: WEAP Training Session Refer to the description of this mitigation measure in Table 4-13.</p> <p>CUL-IAMF #3: Pre-construction Cultural Resource Surveys Prior to construction (any ground disturbing activities in areas not yet surveyed) and the staging of materials and equipment the Contractor shall conduct pre-construction cultural resource surveys. Resulting from lack of legal access, much of the construction footprint may not have been surveyed. Once parcels are accessible the Contractor would have archaeologists or architectural historians, as appropriate, who meet the Secretary of the Interior professional qualification standards survey and complete reporting in appropriate document for archaeology and / or built resources, in accordance with documentation requirements stipulated in the Programmatic Agreement. Identified resources shall be evaluated for the NRHP and the CRHR. The qualified archaeologist or architectural historian, as appropriate, would assess the potential to affect to historic properties (NRHP) by applying the effects criteria in 36 C.F.R. Part 800.5(a)(1), and the potential of significant impacts to historical resources (CRHR) by applying the criteria in California Environmental Quality Act (CEQA) Guidelines 15064.5(b). Should the Authority determine, in consultation with the and SHPO, that any newly identified historic properties or historical resources would be adversely affected, the Built Environment Treatment Plan or Archeological Treatment Plan, as appropriate, would be amended, to document mitigation measures agreed upon by the MOA signatories. The schedule of these surveys would be dependent on the timing of obtaining legal access to the properties and may be driven by the need to complete construction-related activities, e.g., geotechnical borings, laydown yards, etc. Prior to beginning surveys, updated records searches may be required by the Authority, depending on the length of the passage of time, to validate that accurate information was obtained regarding previous inventory and evaluation efforts. The Contractor's archaeologist, in consultation with the Authority, would determine if an</p>

Impact(s)	Measures to Minimize Harm
	<p>updated records search is required. If an updated records search is necessary, the search shall be performed by the Contractor’s archaeologist.</p> <p>CUL-IAMF #4: Relocation of Project Features when Possible Changing the rail alignment to avoid newly discovered sites is likely infeasible; however, access areas and laydown sites may be relocated should their proposed location be found to be on archaeological sites or have the potential to affect historic built resources in the vicinity. The contractor would delineate all avoidance and protection measures for identified archaeological and built resources on construction drawings.</p> <p>CUL-IAMF #5: Archaeological Monitoring Plan and Implementation Prior to construction the Contractor’s professionally qualified archaeologist, as defined in the Section 106 PA, would prepare a monitoring plan based on the results of geospatial data layer and archaeological sensitivity map. The plan is to be reviewed and approved by the Authority prior to any ground-disturbing activities. During construction (any ground disturbing activities) or staging of materials or equipment, the Contractor would be responsible for implementing the monitoring plan and providing archaeological and tribal monitoring of ground-disturbing construction activities with a potential to affect archaeological remains in areas identified as archaeologically sensitive in the ATP. The Contractor shall obtain Authority approval of all persons providing archaeological or tribal monitoring.</p> <p>CUL-MM #1: Mitigate Adverse Effects to Archaeological and Built Environment Resources Identified During Phased Identification. Comply with the Stipulations Regarding the Treatment of Archaeological and Historic Built Resources in the Programmatic Agreement (PA) and Memorandum of Agreement (MOA) Once parcels are accessible and surveys have been completed, including consultation as stipulated in the MOA, additional archaeological and built environment resources may be identified. For newly identified eligible properties that will be adversely affected, the following process will be followed, which is presented in detail in the Built Environment Treatment Plan (BETP) and Archaeological Treatment Plan (ATP):</p> <ul style="list-style-type: none"> ▪ The Authority will consult with the MOA signatories and concurring parties to determine the preferred treatment of the properties/resources and appropriate mitigation measures. ▪ For California Register of Historical Resources (CRHR)-eligible archaeological resources, the Authority shall determine if these resources can feasibly be preserved in place, or if data recovery is necessary. The methods of preservation in place shall be considered in the order of priority provided in CEQA Guidelines § 15126.4(b)(3). If data recovery is the only feasible treatment the Authority shall adopt a data recovery plan as required under CEQA Guidelines § 15126.4(b)(3)(C). ▪ Should data recovery be necessary, the Contractor’s PI, in consultation with the MOA signatories and consulting parties, will prepare a data recovery plan for approval from the Authority and in consultation with the MOA signatories. Upon approval, the Contractor’s PI will implement the plan. ▪ For archaeological resources the Authority shall also determine if the resource is a unique archaeological site under CEQA. If the resource is not an historical resource but is an archaeological site the resource shall be treated as required in California Public Resources Code 21083.2 by following protection, data recovery, and/or other appropriate steps outlined in the ATP. The review and approval requirements for these documents are outlined in the ATP.

Impact(s)	Measures to Minimize Harm
	<p>For historic built resources, the Contractor's PI will amend the BETP to include the treatment and mitigation measures identified by the Authority in consultation with the MOA signatories and concurring parties. The Contractor's PI will implement the treatment and mitigation measures accordingly.</p> <p>CUL-MM #2: Halt Work in the Event of an Archaeological Discovery and Comply with the PA, MOA, ATP, and all State and Federal Laws, as applicable</p> <p>During construction (any ground disturbing activities) should there be an unanticipated discovery, the Contractor shall follow the procedures for unanticipated discoveries as stipulated in the PA, and to be stipulated in the MOA and associated ATP. The procedures must also be consistent with the following: the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation (48 FR 44716-42), as amended (National Park Service); and Guidelines for the Implementation of CEQA, as amended (Title 14 CCR Chapter 3, Article 9, Sections 15120-15132). Should the discovery include human remains, the Contractor, and the Authority shall comply with federal and state regulations and guidelines regarding the treatment of human remains, including relevant sections of Native American Graves Protection and Repatriation Act (NAGPRA) (§3(c)(d)); California Health and Safety Code, Section 8010 et seq.; and CPRC Section 5097.98; and consult with the Native American Heritage Commission, tribal groups, and the SHPO.</p> <p>In the event of an unanticipated archaeological discovery, the contractor would cease work in the immediate vicinity of the find, based on the direction of the archaeological monitor or the apparent location of cultural resources if no monitor is present. If no qualified archaeologist is present, no work can commence until it is approved by the qualified archaeologist in accordance with the MOA, ATP, and monitoring plan. The contractor's qualified archaeologist would assess the potential significance of the find and make recommendations for further evaluation and treatment as necessary. These steps may include evaluation for the CRHR and NRHP and necessary treatment to resolve significant effects if the resource is a historical resource or historic property. If, after documentation is reviewed and approved by the Authority and the SHPO concurs that the resource is eligible for the NRHP, or the Authority determines it is eligible for the CRHR, preservation in place shall be considered by the Authority in the order of priority provided in CEQA Guidelines § 15126.4(b)(3) and in consultation with the signatories and consulting parties to the MOA. If data recovery is the only feasible mitigation the contractor's PI shall prepare a data recovery plan as required under CEQA Guidelines § 15126.4(b)(3)(C), the MOA, and ATP, for the Authority's approval.</p> <p>If human remains are discovered on state-owned or private lands the contractor shall contact the relevant County Coroner to allow the Coroner to determine if an investigation regarding the cause of death is required. If no investigation is required and the remains are of Native American origin the Authority shall contact the Native American Heritage Commission to identify the most likely descendant (MLD). The MLD shall be empowered to reinter the remains with appropriate dignity. If the MLD fails to make a recommendation the remains shall be reinterred in a location not subject to further disturbance and the location shall be recorded with the Native American Heritage Commission and relevant information center of the California Historical Resources Information System.</p> <p>If human remains are part of an archaeological site, the Authority and contractor shall, in consultation with the MLD and other consulting parties, consider preservation in place as the first option, in the order of priority called for in CEQA Guidelines Section 15126.4(b)(3).</p> <p>In consultation with the relevant Native American Tribes, the Authority may conduct scientific analysis on the human remains if called for under a data recovery plan</p>

Impact(s)	Measures to Minimize Harm
	<p>and amenable to all consulting parties. The Authority would work with the MLD, to satisfy the requirements of California Public Resources Code Section 5097.98. Performance tracking of this mitigation measure would be based on successful implementation and approval of the documentation by the SHPO and appropriate consulting parties.</p> <p>CUL-MM #12: Archaeological Testing Before Project Construction</p> <p>As the design-build phase of the project moves forward, Extended Phase I and NRHP evaluation testing may be conducted at archaeological historic properties described in this FOE and at archaeological historic properties identified in the APE during future survey efforts completed for the project, consistent with the Section 106 PA (Stipulation VI.E) as access to the sites is received. These excavations would be done to determine the extent, density, and NRHP eligibility of archaeological deposits in the APE. This testing would be done at the request of, and in coordination with, the SHPO, the Authority, and tribal consulting parties. This measure would ensure that adverse effects on archaeological historic properties would be avoided to the extent possible through project redesign or other avoidance measures, including establishment of temporary Environmentally Sensitive Areas (ESA) during construction.</p> <p>CUL-MM #13: Project Redesign</p> <p>Once the spatial limits of an archaeological historic property have been established, project impacts would be reviewed and the project designs in that specific location would be examined to see if it would be possible to avoid the resource. For example, if a site is unearthed during construction, an avoidance option may be to bridge that location rather than constructing an at-grade alignment. If complete avoidance is not possible, minimization of impacts would be analyzed and design changes implemented to the extent possible to avoid unnecessary impacts on the archaeological site. For example, if a site is unearthed, efforts should be made to see if the project could be shifted to only affect a small portion of the site, rather than crossing through the center. Mitigation of the remaining impacts on the property would be required.</p> <p>Project re-design can be costly and time-consuming, and may not be prudent or feasible in certain locations due to engineering as well as environmental factors. However, avoidance and minimization should be explored as a first stop in all cases.</p> <p>CUL-MM #14: Intentional Site Burial for Preservation In-Place</p> <p>If project engineering concludes that avoidance is not feasible, a process to determine whether the site can be preserved through intentional site burial would be considered. When complete avoidance is not possible, preservation in-place is the preferred form of mitigation, pursuant to Public Resources Code 15126.4(b)(3)(A). To intentionally bury a site, it is necessary to conduct test excavations to determine the vertical and horizontal extent of the identified resources. In addition to the formal delineation of the site boundaries, an archaeologist should prepare and implement a design plan to dictate the conditions of the intentional site burial according to the recommendations discussed in the National Park Service Technical Brief Number 5, <i>Intentional Site Burial: A Technique to Protect Against Natural or Mechanical Loss</i> (Thorne 1989). Among the requirements of an effective capping, the mechanical process of burying the site must be designed in a manner that would ensure that the site matrix is protected during the placement process and during the operation of the HST. The ATP would provide the necessary guidance for determining under what conditions intentional site burial is appropriate and how preservation in place is to be successfully achieved. The Authority and FRA would seek input from tribal consulting parties in the evaluation and implementation of this mitigation measure.</p>

Impact(s)	Measures to Minimize Harm
	<p>CUL-MM #15: Archaeological Data Recovery Program</p> <p>If through consultation or NRHP evaluation testing it is determined that an archaeological historic property is present in the APE that could be adversely affected by the project and that the site cannot be completely avoided, implementation of an Archaeological Data Recovery Plan (ADRP) would be required. The ATP would contain the broad programmatic steps that would be taken in the event that a data recovery investigation is required. The ADRP would identify the scientific/historical research questions that are applicable to the resource(s), the data classes the resource(s) is expected to possess, and how the expected data classes would address the applicable research questions. All significant cultural materials recovered would be, as necessary and according to the ADRP, subject to scientific analysis, professional museum curation, and documentation according to current professional standards as determined in the project's MOA and ATP. The Authority would seek input from the consulting parties in the evaluation and implementation of this mitigation measure.</p> <p>Section 4(f)-MM #1: Expedited Section 4(f) Evaluation</p> <p>If an archaeological historic property is discovered during the phased identification efforts or during construction monitoring, it would be evaluated by a professional archeologist to assess whether it has the potential to be eligible for the NRHP including identification of the criterion/criteria under which it would be eligible. If a site is determined to be eligible primarily for preservation in place (criteria A, B, and/or C), the Authority would require the design/build contractor to prepare an expedited Section 4(f) evaluation to assess what effects the HSR project would have on that property and whether those effects would constitute a permanent use, temporary use, or constructive use of that property. If the HSR project would not result in any permanent use or temporary occupancy, that determination would be documented for the project record. If the project would result in a permanent or constructive use of the historic property, the evaluation would identify whether that use can be avoided or minimized. If the use cannot be avoided, the design/build contractor would be required to implement the applicable IAMFs and measures identified in the EIR/EIS and in the expedited Section 4(f) evaluation to minimize the project effects on that property.</p>

<p>Authority = California High-Speed Rail Authority ATP = Archaeological Treatment Plan BETP = Built Environment Treatment Plan BLM = Bureau of Land Management BMP = best management practice Cal. Public Res. Code = California Public Resources Code dB = decibel(s) DPR = Department of Parks and Recreation EIR = Environmental Impact Report EIS = Environmental Impact Statement GIS = geographic information system GPS = Global Positioning System HABS = Historic American Building Survey HAER = Historic American Engineering Record HALS = Historic American Landscape Survey HSR = high-speed rail</p>	<p>IAMF = impact avoidance and minimization feature in/sec = inch(es) per second MMEP = Mitigation Monitoring and Enforcement Plan MOA = memorandum of agreement NPS = National Park Service NRHP = National Register of Historic Places PA = programmatic agreement PCT = Pacific Crest Trail ppv = peak particle velocity RSA = resource study area SOI = Secretary of the Interior SHPO = State Historic Preservation Officer U.S. = United States Uniform Act = Uniform Relocation Assistance and Real Property Acquisition Policies Act USFS = U.S. Forest Service WEAP = Worker Environmental Awareness Program</p>
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Table 4-11, Table 4-12, and Table 4-13 include measures specifically addressing potential effects on resources protected under Section 4(f). These tables also include mitigation measures and IAMFs identified elsewhere in this EIR/EIS that address other effects on those properties that do not constitute a use of a property under Section 4(f).

An MOA under development for the Bakersfield to Palmdale Project Section will include provisions for phased identification of archaeological resources because of limited access to perform pedestrian archaeological surveys. The MOA will also address the treatment of adverse

effects on the built environment from the proposed HSR alignment. In consultation with MOA signatories and consulting parties, the MOA will stipulate which treatment measures would be applied to which cultural resources and that the treatments would be described in the BETP. The BETP would define the process by which these treatment measures would be applied to each identified resource. Proposed measures to minimize harm for historic properties are listed in Table 4-12 and Table 4-13. As described, the project includes all possible planning to minimize harm to Section 4(f) resources resulting from use, as required by 49 U.S.C. § 303(c)(2).

General measures that would minimize harm to all potentially affected Section 4(f) recreation resources and historic properties as a result of air quality, noise, or visual intrusion are listed in Section 3.3, Air Quality and Global Climate Change; Section 3.4, Noise and Vibration; Section 3.15, Parks, Recreation, and Open Space; Section 3.16, Aesthetics and Visual Quality; and Section 3.17, Cultural Resources. While these measures would apply to all discussed Section 4(f) resources, they are not repeated in Table 4-11, Table 4-12, and Table 4-13.

4.9 Preliminary Section 4(f) Least-Harm Analysis

When there is no feasible and prudent avoidance alternative that avoids all Section 4(f) resources, the Authority must approve the alternative that causes the least overall harm to Section 4(f) resources, taking into consideration the preservation purpose of the statute. The Authority considers the following seven factors to ascertain which alternative that uses Section 4(f) resources would cause the overall least harm:

- Ability to mitigate adverse impacts on each Section 4(f) resource (including any measures that result in benefits to the resource)
- Relative severity of the remaining harm, after mitigation, to the protected activities, attributes, or features that qualify each Section 4(f) resource for protection
- Relative significance of each Section 4(f) resource
- Views of the official(s) with jurisdiction over each Section 4(f) resource
- Degree to which each alternative meets the purpose and need for the project
- After reasonable mitigation, the magnitude of any adverse impacts on resources not protected by Section 4(f)
- Substantial differences in costs among the alternatives

The first four factors are related to the net harm that each alternative would cause to the Section 4(f) resource, and the remaining three factors take into account concerns with the alternatives that are not specific to Section 4(f).

4.9.1 Least-Harm Analysis for Alternatives 1, 2, 3, and 5

As discussed in the previous sections, some or all of the B-P Build Alternatives would result in the permanent use of the following Section 4(f) resources:

- Big Creek Hydroelectric System Historic District
- Whit Carter Park
- Denny's Restaurant #30 (Village Grille)

As discussed in Section 4.7, Avoidance Alternatives, there are no feasible and prudent alternatives to the use of Section 4(f) resources for all four B-P Build Alternatives. Because each of the B-P Build Alternatives would result in a Section 4(f) use, the Authority has completed the following least-harm analysis. Table 4-14 provides a least-harm analysis using the seven least-harm analysis factors regarding the effects of the B-P Build Alternatives on those resources. Section 4(f) resources that would have a finding of *de minimis* impact are not subject to analysis to determine if avoidance alternatives are feasible and prudent, as outlined in C.F.R. 774.3(b).

All of the B-P Build Alternatives affect the NRHP-listed BCHSHD, but Alternative 5 would also require permanent use of part of Whit Carter Park and all of the Denny's Restaurant #30 (Village Grille). Adverse impacts on other environmental resources not protected by Section 4(f) vary depending on the resource area, as shown in Table 4-14.

Table 4-14 Preliminary Least-Harm Analysis

Least Harm Factor	Section 4(f) Resource	Alternative 1	Alternative 2	Alternative 3	Alternative 5
Section 4(f) resources incurring a use	Big Creek Hydroelectric System Historic District	Permanent use of historic resource			
	Whit Carter Park	No use	No use	No use	Approximately 6.9-acre permanent use
	Denny's Restaurant #30 (Village Grille)	No use	No use	No use	Permanent change in historic resource
Factor 1: "The ability to mitigate adverse impacts on each Section 4(f) resource (including any measures that result in benefits to the property)"	Big Creek Hydroelectric System Historic District	CUL-IAMF#1: Geospatial Data Layer and Archaeological Sensitivity Map CUL-IAMF #2: WEAP Training Session CUL-IAMF #7: Built-Environment Monitoring Plan CUL-MM #1: Comply with the Stipulations Regarding the Treatment of Archaeological and Historic Built Resources in the Programmatic Agreement (PA) and Memorandum of Agreement (MOA) CUL-MM #8: Prepare Interpretive or Educational Materials Property-Specific Conditions and Treatments Proposed To avoid and minimize effects, the MOA and BETP would require the Authority to facilitate the development of a feasibility study to explore design options that would preserve the contributing transmission line towers and allow them to retain their functional and operational linkages to other hydroelectric resources.	CUL-IAMF#1: Geospatial Data Layer and Archaeological Sensitivity Map CUL-IAMF #2: WEAP Training Session CUL-IAMF #7: Built-Environment Monitoring Plan CUL-MM #1: Comply with the Stipulations Regarding the Treatment of Archaeological and Historic Built Resources in the Programmatic Agreement (PA) and Memorandum of Agreement (MOA) CUL-MM #8: Prepare Interpretive or Educational Materials Property-Specific Conditions and Treatments Proposed To avoid and minimize effects, the MOA and BETP would require the Authority to facilitate the development of a feasibility study to explore design options that would preserve the contributing transmission line towers and allow them to retain their functional and operational linkages to other hydroelectric resources.	CUL-IAMF#1: Geospatial Data Layer and Archaeological Sensitivity Map CUL-IAMF #2: WEAP Training Session CUL-IAMF #7: Built-Environment Monitoring Plan CUL-MM #1: Comply with the Stipulations Regarding the Treatment of Archaeological and Historic Built Resources in the Programmatic Agreement (PA) and Memorandum of Agreement (MOA) CUL-MM #8: Prepare Interpretive or Educational Materials Property-Specific Conditions and Treatments Proposed To avoid and minimize effects, the MOA and BETP would require the Authority to facilitate the development of a feasibility study to explore design options that would preserve the contributing transmission line towers and allow them to retain their functional and operational linkages to other hydroelectric resources.	CUL-IAMF#1: Geospatial Data Layer and Archaeological Sensitivity Map CUL-IAMF #2: WEAP Training Session CUL-IAMF #7: Built-Environment Monitoring Plan CUL-MM #1: Comply with the Stipulations Regarding the Treatment of Archaeological and Historic Built Resources in the Programmatic Agreement (PA) and Memorandum of Agreement (MOA) CUL-MM #8: Prepare Interpretive or Educational Materials Property-Specific Conditions and Treatments Proposed To avoid and minimize effects, the MOA and BETP would require the Authority to facilitate the development of a feasibility study to explore design options that would preserve the contributing transmission line towers and allow them to retain their functional and operational linkages to other hydroelectric resources.

Least Harm Factor	Section 4(f) Resource	Alternative 1	Alternative 2	Alternative 3	Alternative 5
Factor 1: "The ability to mitigate adverse impacts on each Section 4(f) resource (including any measures that result in benefits to the property)" (Continued from previous page)	Whit Carter Park	No mitigation required	No mitigation required	No mitigation required	Compensation for the acquisition of land from this resource
	Denny's Restaurant #30 (Village Grille)	No mitigation required	No mitigation required	No mitigation required	CUL-MM #5: Minimize Adverse Effects through Relocation of Historic Buildings and Structures CUL-MM #7: Prepare and Submit Additional Recordation and Documentation CUL-MM #8: Prepare Interpretive or Educational Materials
Factor 2: "The relative severity of the remaining harm, after mitigation, to the protected activities, attributes, or features that qualify each Section 4(f) resource for protection."	Big Creek Hydroelectric System Historic District	Minor: Change to nine elements (transmission towers) on contributing transmission lines that extend approximately 230 miles in the historic district. The nine contributing transmission lines include approximately 4,220 original transmission towers. The transmission lines would have the ability to function after modification to the transmission towers.	Minor: Change to nine elements (transmission towers) on contributing transmission lines that extend approximately 230 miles in the historic district. The nine contributing transmission lines include approximately 4,220 original transmission towers. The transmission lines would have the ability to function after modification to the transmission towers.	Minor: Change to nine elements (transmission towers) on contributing transmission lines that extend approximately 230 miles in the historic district. The nine contributing transmission lines include approximately 4,220 original transmission towers. The transmission lines would have the ability to function after modification to the transmission towers.	Minor: Change to nine elements (transmission towers) on contributing transmission lines that extend approximately 230 miles in the historic district. The nine contributing transmission lines include approximately 4,220 original transmission towers. The transmission lines would have the ability to function after modification to the transmission towers.
	Whit Carter Park	Not Applicable	Not Applicable	Not Applicable	Minor: The park would have the ability to function as a public park after construction and during operation of the HSR project.
	Denny's Restaurant #30 (Village Grille)	Not Applicable	Not Applicable	Not Applicable	Major: No measures possible to reduce the severity of the remaining harm.

Least Harm Factor	Section 4(f) Resource	Alternative 1	Alternative 2	Alternative 3	Alternative 5
Factor 3: The relative significance of each Section 4(f) resource	Big Creek Hydroelectric System Historic District	Significant: Listed on the NRHP, the district as a whole is significant; however, less than 1 percent of towers will be removed and the resource will remain eligible, despite impacts resulting from the B-P Build Alternative.	Significant: The district as a whole is significant; however, less than 1 percent of towers will be removed and the resource will remain eligible, despite impacts resulting from the B-P Build Alternative.	Significant: The district as a whole is significant; however, less than 1 percent of towers will be removed and the resource will remain eligible, despite impacts resulting from the B-P Build Alternative.	Significant: The district as a whole is significant; however, less than 1 percent of towers will be removed and the resource will remain eligible, despite impacts resulting from the B-P Build Alternative.
	Whit Carter Park	Significant	Significant	Significant	Significant
	Denny's Restaurant #30 (Village Grille)	Moderately significant	Moderately significant	Moderately significant	Moderately significant
Factor 4: "The views of the official(s) with jurisdiction over each Section 4(f) resource"	Big Creek Hydroelectric System Historic District	Consultation would be conducted with the officials with jurisdiction over each impacted Section 4(f) resource.			
	Whit Carter Park				
	Denny's Restaurant #30 (Village Grille)				
Factor 5: "The degree to which each alternative meets the purpose and need for the project."	–	All the B-P Build Alternatives meet the purpose and need for the project.			
Factor 6: "After reasonable mitigation, the magnitude of any adverse impacts on properties not protected by Section 4(f)."	–	Wetlands impacts: No adverse effects on jurisdictional waters after mitigation	Wetlands impacts: Same as Alternative 1	Wetlands impacts: Same as Alternative 1	Wetlands impacts: Same as Alternative 1
		Other waters of the U.S.: No adverse effects on other waters of the U.S. after mitigation	Other waters of the U.S.: Same as Alternative 1	Other waters of the U.S.: Same as Alternative 1	Other waters of the U.S.: Same as Alternative 1
		Permanent impacts to special-status plant species: No adverse effects after mitigation	Permanent impacts to special-status plant species: Same as Alternative 1	Permanent impacts to special-status plant species: Same as Alternative 1	Permanent impacts to special-status plant species: Same as Alternative 1

Least Harm Factor	Section 4(f) Resource	Alternative 1	Alternative 2	Alternative 3	Alternative 5
Factor 6: "After reasonable mitigation, the magnitude of any adverse impacts on properties not protected by Section 4(f)." (Continued from previous page)	-	Permanent impacts to special-status wildlife species: No adverse effects after mitigation	Permanent impacts to special-status wildlife species: Same as Alternative 1	Permanent impacts to special-status wildlife species: Same as Alternative 1	Permanent impacts to special-status wildlife species: Same as Alternative 1
		Transportation and traffic (number of permanent road closures): 43	Transportation and traffic (number of permanent road closures): Same as Alternative 1	Transportation and traffic (number of permanent road closures): 42	Transportation and traffic (number of permanent road closures): Same as Alternative 1
		Noise (number of severe operational noise impacts to sensitive receivers): Residential: 2,034 Nonresidential: 6	Noise (number of severe operational noise impacts to sensitive receivers): Residential: 1,991 Nonresidential: 6	Noise (number of severe operational noise impacts to sensitive receivers): Same as Alternative 1	Noise (number of severe operational noise impacts to sensitive receivers): Residential: 2,080 Nonresidential: 6
		Permanent conversion of Important Farmland to nonagricultural use, including Important Farmland under Williamson Act contracts or zoned for agricultural use: <ul style="list-style-type: none"> ▪ 708 acres converted for project construction and an additional 54 acres from parcel severance: <ul style="list-style-type: none"> - 141 acres are under Williamson Act contracts - 674 acres are zoned for agricultural use 	Permanent conversion of Important Farmland to nonagricultural use, including Important Farmland under Williamson Act contracts or zoned for agricultural use: <ul style="list-style-type: none"> ▪ 737 acres converted for project construction and an additional 43 acres converted from parcel severance: <ul style="list-style-type: none"> - 145 acres are under Williamson Act contracts - 721 acres are zoned for agricultural use 	Permanent conversion of Important Farmland to nonagricultural use, including Important Farmland under Williamson Act contracts or zoned for agricultural use: <ul style="list-style-type: none"> ▪ 706 acres converted for project construction and an additional 54 acres converted from parcel severance. <ul style="list-style-type: none"> - 141 acres are under Williamson Act contracts - 671 acres are zoned for agricultural use 	Permanent conversion of Important Farmland to nonagricultural use, including Important Farmland under Williamson Act contracts or zoned for agricultural use: Same as Alternative 1

Least Harm Factor	Section 4(f) Resource	Alternative 1	Alternative 2	Alternative 3	Alternative 5
Factor 6: “After reasonable mitigation, the magnitude of any adverse impacts on properties not protected by Section 4(f).” (Continued from previous page)	–	Community facilities affected: Displacement of Lancaster Community Homeless Shelter in Lancaster Estimated number of displaced de-facto affordable housing in motels in Lancaster and Palmdale: 8 motels (155 rooms)	Community facilities affected: Same as Alternative 1	Community facilities affected: Same as Alternative 1	Community facilities affected: Displacement of Los Angeles County Sheriff’s Station in Lancaster Displacement of Lancaster Metrolink Station Resources Center in Lancaster Displacement of University of Antelope Valley in Lancaster Displacement of Iglesia de Cristo (church) in Lancaster Displacement of affordable housing units at the Laurel Crest Apartments in Lancaster Estimated number of displaced de-facto affordable housing in motels in Lancaster and Palmdale: 11 motels (527 rooms)
		Number of Displaced Businesses: 309	Number of Displaced Businesses: 312	Number of Displaced Businesses: 310	Number of Displaced Businesses: 284
		Number of Displaced Residential Units: 319	Number of Displaced Residential Units: Same as Alternative 1	Number of Displaced Residential Units: 320	Number of Displaced Residential Units: 336
Factor 7: “Substantial differences in costs among the alternatives.”	–	\$12.6 billion (\$0.3 billion less than Alternative 3)	\$12.6 billion (\$0.3 billion less than Alternative 3)	\$12.9 billion (\$0.3 billion more than Alternatives 1, 2, and 5)	\$12.6 billion (\$0.3 billion less than Alternative 3)

4.9.1.1 Net Harm to Section 4(f) Resources

Factors 1 through 4 in Table 4-14 consider the net harm that each B-P Build Alternative would cause to Section 4(f) resources. Alternative 5 would result in the greatest net harm to Section 4(f) resources because, unlike Alternatives 1, 2, and 3, it requires permanent acquisition of land from Whit Carter Park and the demolition the Denny's Restaurant #30 (Village Grille). Whit Carter Park is a public park that has existing recreation uses and a planned expansion. Denny's Restaurant #30 (Village Grille) is a historic property eligible for the NRHP for its architecture. Under Alternative 5, mitigation that provides compensation and/or parkland replacement would reduce the overall harm to Whit Carter Park. Mitigation for the Denny's Restaurant #30 (Village Grille) would include the potential for relocation of the building, subject to potential for re-use and/or interpretive value, recordation and documentation, and preparation of interpretive or educational materials. Although mitigation is proposed, including relocation of the restaurant, the mitigation would not reduce the overall harm to the Denny's Restaurant #30 (Village Grille).

Under all four B-P Build Alternatives, the NRHP-listed BCHSHD would be adversely affected. Two to nine transmission towers in that Historic District would be modified to allow the HSR trains to pass under those transmission lines. The property extends approximately 230 miles on 4,220 original transmission towers. However, the removal of less than 1 percent of towers would be a minimal impact to the overall district shown on Figure 4-3. The BCHSHD is listed in the NRHP for its influential role in the physical development of the states, its hydroelectric generation industry during the early 20th century, and its representative example of 20th century hydroelectric engineering and development. Appropriate mitigation would be implemented, and a BETP and interpretive or educational materials would be prepared, in consultation with the SHPO and property owner, for the impacted transmission towers to address measures to mitigate adverse effects caused by the HSR project. The BCHSHD would have the ability to function after modification to the transmission towers.

After considering the first four factors in Table 4-14, Alternatives 1, 2, and 3 would result in fewer overall impacts to resources protected by Section 4(f) because they would not result in the permanent use of Whit Carter Park or the removal of the Denny's Restaurant #30 (Village Grille) that would occur under Alternative 5.

4.9.1.2 Impacts on Environmental Resources Other Than Section 4(f) Uses

The Authority also considered factors other than the potential impacts to resources protected by Section 4(f). As shown in Table 4-14, while all the B-P Build Alternatives are consistent with the project's purpose and need, each would result in different comparative impacts to the other resource areas. Under many environmental topics, the B-P Build Alternatives would have similar effects after mitigation. For example, after mitigation, all four B-P Build Alternatives would not result in impacts to wetlands, other waters of the U.S., or special-status plant and wildlife species. In addition, the number of permanent road closures does not differ substantially among the four B-P Build Alternatives.

Other environmental topics would experience greater differences in impacts among the B-P Build Alternatives. For example, Alternative 2 would have the lowest number of severe operational noise impacts to sensitive receivers (1,991 severe residential noise impacts and 6 severe nonresidential noise impacts). Similarly, Alternatives 1, 3, and 5 would result in less permanent conversion of Important Farmland to nonagricultural use than Alternative 2, including Important Farmland under Williamson Act contracts or zoned for agricultural use. Alternative 2 would permanently convert approximately 30 acres more Important Farmland to nonagricultural use. The differences between agricultural and noise impacts under the B-P Build Alternatives are minor when considering the scope and length of the project.

With respect to other factors like displacements, Alternatives 1, 2, and 3 would result in fewer residential displacements than Alternative 5, but the range of impacts among the B-P Build Alternatives is approximately 16 residential units. Alternatives 1, 2, and 3 would result in fewer displacements of key community facilities in Lancaster and Palmdale than Alternative 5. In contrast, Alternative 5 would have 25 to 28 fewer business displacements than Alternatives 1, 2, and 3.

Based on this information, while each of the B-P Build Alternatives would cause impacts to resources not protected by Section 4(f), those impacts resulting from Alternatives 1, 2, and 3 do not outweigh the additional adverse impacts to resources protected by Section 4(f) that would result from Alternative 5.

Project cost may be considered after consideration of adverse impacts to resources not protected by Section 4(f). As shown in Table 4-14, there is not a substantial difference in costs among the B-P Build Alternatives that would outweigh the impacts of each alternative.

Based on the analysis in Table 4-14, Alternatives 1, 2, and 3 would result in the least overall harm to Section 4(f) resources, taking into consideration the preservation purpose of the statute and the effects of Alternative 5 on Section 4(f) resources.