3.17 Cultural Resources

This section describes the regulatory setting and affected environment related to cultural resources for the Bakersfield to Palmdale Project Section (B-P) and discusses the potential environmental consequences and impacts of the California High-Speed Rail (HSR) Project on cultural resources.

Cultural Resources

Recognition of the importance of historic and archaeological resources is a priority for the federal government, as indicated by the numerous statutes and regulations that address these resources. Federal regulations require that the project identify and consider environmental impacts of this federal action, including impacts to cultural resources. Additionally, this analysis considers the proposed project's effects, as defined by Section 106 of the National Historic Preservation Act, on cultural resources that are listed, or eligible for listing, in the National Register of Historic Places.

Summary of Results

Research, survey, and evaluation of cultural resources were conducted for the No Project Alternative and Alternatives 1, 2, 3, and 5, including the César E. Chávez National Monument Design Option (CCNM Design Option), the Refined CCNM Design Option, and the portion of the Fresno to Bakersfield Locally Generated Alternative (F-B LGA) alignment from the intersection of 34th Street and L Street to Oswell Street.[1] Chapter 2, Alternatives Considered, provides a detailed description of these alternatives. In general, the No Project Alternative includes transit service and facilities inside the Bakersfield to Palmdale Project Section, as well as existing and committed (funded) transportation improvements.

This section finds that, within the Bakersfield to Palmdale Project Section, there are 57 cultural resources considered historic properties for the purposes of the National Historic Preservation Act (NHPA) and the National Environmental Policy Act of 1969 (NEPA), which are also considered historical resources for the purposes of the California Environmental Quality Act (CEQA). These cultural resources consist of 8 historic architectural built resources (or built resources) and 49 archaeological resources (52 archaeological resources with the Refined CCNM Design Option). As a whole, impacts would occur to built resources and archaeological resources under the implementation of all of the B-P Build Alternatives (Alternatives 1, 2, 3, and 5). However, the impacts to cultural resources do differ between the B-P Build Alternatives. Impacts to archaeological and built resources were analyzed both for NEPA, through the Section 106 process of the NHPA, and for the purposes of CEQA. As pertains to the discussion under NEPA and the NHPA, *historic property* is the term of note which can be broadly defined as any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places (NRHP), as maintained by the U.S. Secretary of the Interior. For discussions involving CEQA, the term used is *historical resources*, which can be broadly defined as an object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant. Complete definitions of the terms *historic property* and *historical resource* can be found in Section 3.17.2, *Laws, Regulations, and Orders,* of this document.

The *Programmatic Agreement Among the FRA, the Advisory Council on Historic Preservation, the SHPO, and the Authority regarding Compliance with Section 106 of the NHPA, as it Pertains to the California High-Speed Train Project* (Section 106 PA) was executed in 2011.

In accordance with the procedures established in the Section 106 Programmatic Agreement (PA), the Federal Railroad Administration (FRA) and the California High-Speed Rail Authority (Authority) have determined that adverse effects to built properties would occur should any of the B-P Build Alternatives be selected; effects determinations to archaeological resources would be

[1] The portion of the F-B LGA alignment from the intersection of 34th Street and L Street to Oswell Street is analyzed and considered as part of the HSR Bakersfield to Palmdale Project Section under all of the Alternatives. The F-B LGA Final Supplemental EIR (Authority 2018) approved the F-B LGA alignment from the City of Shafter through the Bakersfield F Street Station; however, the portion of the F-B LGA alignment from the intersection of 34th Street and L Street to Oswell Street has not been approved. As such, the approval of this portion of the alignment may occur through approval of the Bakersfield to Palmdale Project Section.

determined following a phased evaluation process. Alternatives 1 and 2 would each follow a phased evaluation process for a total of 47 potentially eligible archaeological properties; Alternatives 3 and 5 would each follow a phased evaluation process for a total of 46 potentially eligible archaeological properties. Concerning historic architectural (or built) properties, all four B-P Build Alternatives (Alternatives 1, 2, 3, and 5) would result in direct adverse effects to the Big Creek Hydroelectric System Historic District. Alternatives 1, 2, 3, and 5, including the CCNM Design Option, would also each result in direct adverse effects to the Nuestra Señora Reina de La Paz National Historic Landmark/César E. Chávez National Monument (La Paz). In June 2018, the Authority presented a minimization option (the CCNM Design Option) to the Advisory Council on Historic Preservation, the NPS, the State Historic Preservation Officer (SHPO), the Chavez Foundation, and the FRA, and described the constraints of constructing an alignment that would completely avoid adverse effects. Specific changes related to the CCNM Design Option and the Refined CCNM Design Option include a greater distance from La Paz, a soundwall along the proposed viaduct, and tinting of the soundwall to make it blend better with the surrounding landscape. Additionally, the implementation of Alternative 5 would also result in the demolition of the Denny's Restaurant No. 30 historic property. In September 2018, the Authority circulated to consulting parties a package of materials regarding the CCNM, including a memorandum documenting the Authority's analysis of alignments that would fully avoid effects to the CCNM; that memorandum explained why those alignments were not being advanced for further study. In November 2018, the Authority circulated to consulting parties a draft Findings of Effect (FOE) report for the Bakersfield to Palmdale Project Section, which referenced the September 2018 avoidance memorandum and noted that consulting is ongoing regarding avoidance options. In their comments on the FOE report, several consulting parties, including the National Park Service, requested additional analysis of avoidance alternatives for the CCNM. In response to those comments, the Authority undertook further analysis of potential avoidance alignments for the CCNM as part of the Section 106 consultation process. In October 2019, the Authority developed design options to minimize effects to the La Paz property in response to coordination and comments from consulting parties, selecting a Refined CCNM Design Option, because it accomplishes the most avoidance and minimization of effects.

Impacts to cultural resources as analyzed under CEQA include substantial adverse changes to historical resources under each of the B-P Build Alternatives. Implementation of Alternatives 1 and 2 would result in substantial adverse changes to a total of 47 archaeological resources; Alternatives 3 and 5 would each result in substantial adverse changes to 46 archaeological resources. However, in general, these adverse changes to archaeological resources could be minimized and mitigated to less than significant levels under any of the B-P Build Alternatives. Regarding historic architectural (or built) resources, the implementation of Alternatives 1, 2, or 3, including the CCNM Design Option and the Refined CCNM Design Option, would result in substantial adverse changes to one built historical resource (the Big Creek Hydroelectric System Historic District) and would result in substantial adverse visual changes to one built historical resource (La Paz). The implementation of Alternative 5 would also result in the demolition of Denny's Restaurant No. 30. The substantial adverse changes to the Big Creek Hydroelectric System Historic District could be mitigated and minimized to less than significant levels; however, substantial adverse changes to the César E. Chávez National Monument would result in a finding of significant and unavoidable under CEQA. Alternative 5 would result in significant and unavoidable adverse changes under CEQA even after minimization efforts and mitigation measures are applied, because the Denny's Restaurant No. 30 historical resource would be demolished under Alternative 5.

In addition to the 57 cultural resources considered in this section, several historic properties and/or historical resources occur within the Bakersfield to Palmdale Project Section between the Bakersfield Station and Oswell Street; however, these cultural resources are not analyzed within this section and are instead incorporated by reference. Those additional resources are analyzed by separate environmental documentation. For information regarding those resources, refer to the *Fresno to Bakersfield Section Final EIR/EIS* (Authority and FRA 2014), the *Fresno to Bakersfield Section Draft Supplemental EIR/EIS* (Authority and FRA 2017), *Fresno to Bakersfield Section*

Final Supplemental EIR (Authority 2018), and the *Bakersfield F Street Station Alignment Alternative Historic Architectural Survey Report* (Authority 2016a).

A detailed explanation and analysis of both archaeological and built historical resources under CEQA and historic properties under the NHPA (Section 106) is included later in this section and relates to both Section 106 and CEQA findings analysis (Section 3.17.9, NEPA Impact Summary for Comparison of Alternatives).

3.17.1 Introduction

This section describes known and potential impacts on cultural resources that would result from implementation of the California HSR Bakersfield to Palmdale Project Section. Cultural resources include prehistoric- and historic-era archaeological resources, architectural/built-environment resources, and traditional cultural properties (TCP) that are listed in or found eligible for listing in the NRHP and/or the California Register of Historical Resources (CRHR). Pre-contact archaeological sites are places where Native Americans lived or carried out activities during the prehistoric period (as late as A.D. 1769), and may contain artifacts, cultural features, subsistence remains, and human burials. Historic-era archaeological sites are post-European contact sites that may include remains of early settlements—features such as wells, privies, and foundations—that have the potential to address relevant research questions for the region. Historic architectural/built-environment resources include buildings, structures, objects, landscapes, districts, and linear features. TCPs are places important to Native Americans or other living communities or ethnic groups. While the *Fresno to Bakersfield Section Final Supplemental EIR/EIS* for the LGA, which is referenced above, includes a TCP, there are no other TCPs in the Bakersfield to Palmdale Project Section. This section identifies cultural resources, assesses potential effects of the Bakersfield to Palmdale Project Section on cultural resources, and identifies mitigation measures to reduce or eliminate effects on those resources in the study area (the area in which impacts may occur).

This section begins by describing the regulatory framework governing cultural resources in the context of high-speed rail construction and operation, followed by an overview of the methods used to identify the types of cultural resources in the study area or area of potential effect (APE). The types of resources occurring in the project vicinity are then described, along with a description of the area's sensitivity to previously unidentified archaeological resources. Finally, the anticipated effects or impacts of the Bakersfield to Palmdale Project Section on cultural resources are evaluated, followed by the identification of mitigation that would be implemented to avoid or lessen those effects or impacts.

Studies conducted in the preparation of this section followed those prescribed by Section 106 of the NHPA, as amended, which requires that effects on historic properties be taken into consideration in any federal undertaking. ("Undertaking" is the Section 106 term for "project". For consistency, "project" will be used throughout this section.) These studies include the results of background literature and records research, pedestrian field surveys, and consultations with the Native American community, the SHPO, other interested parties, and local, state, or federal agencies to date. The results of these studies, as well as the *Bakersfield to Palmdale Project Section: Supplemental Alternatives Analysis Report* (Authority 2016e), and the anticipated project effects are described here.

The implementing regulations for Section 106, 36 Code of Federal Regulations (C.F.R.) § 800.14, allow for programmatic alternatives to the implementation of Section 106 if the review of the undertaking is governed by a federal agency program alternative established under 36 C.F.R § 800.14. Accordingly, the FRA and the Authority consulted with the SHPO and the Advisory Council on Historic Preservation in the drafting of an agreement identifying programmatic alternatives for conduction Section 106 for the state-wide HSR program. The *Programmatic Agreement among the FRA, the ACHP, the SHPO, and the Authority regarding Compliance with Section 106 of the NHPA, as it Pertains to the California High-Speed Train Project* was executed in 2011 (PA). While the studies conducted primarily follow the Section 106 process as well as industry standards, programmatic alternatives as agreed upon in the PA, and pursuant to 36 C.F.R. § 800.14, include the exemption of certain properties deemed to have little or no potential

to be eligible for the NRHP, streamlined documentation of significantly altered resources that have reached 50 years of age, a requirement to prepare a memorandum of agreement (MOA) for each project section that adversely affects, or has the potential to affect historic properties, and a requirement to prepare treatment plans – one for built historic properties and one for archaeological properties – that tier off the MOA.

Five other resource sections in this Bakersfield to Palmdale Project Section Draft Environmental Impact Report/Environmental Impact Statement (EIR/EIS) also provide additional information related to cultural resources:

- Section 3.4, Noise and Vibration—Impacts of implementing the Bakersfield to Palmdale Section Project Section alternatives on cultural resources resulting from damage caused by vibration and disturbance caused by noise.
- Section 3.10, Hazardous Materials and Wastes—Impacts of implementing the Bakersfield to Palmdale Section resulting from hazardous materials on land uses more prone to specific contamination concerns, such as historical land use.
- Section 3.12, Socioeconomics, Communities, and Environmental Justice—Impacts of implementing the Bakersfield to Palmdale Section Project alternatives resulting from station locations in close proximity to historical buildings and facilities.
- Section 3.15, Parks, Recreation, and Open Space – Impacts of implementing the Bakersfield to Palmdale Section Project alternatives on recreational facilities and parks.
- Section 3.16, Aesthetics and Visual Resources—Impacts of implementing the Bakersfield to Palmdale Section Project Section alternatives on the visual context and setting of historic properties that contribute to its historic significance.
- Section 4, Section 4(f) and Section 6(f) Evaluations—Impacts of implementing the Bakersfield to Palmdale Section alternatives on historic properties that may be subject to 4(f) use and, consequently, least harm analysis.

3.17.2 Laws, Regulations, and Orders

The primary applicable federal and state laws and regulations protecting cultural resources are Section 106 of the NHPA, as amended, NEPA, Section 4(f) of the Department of Transportation Act of 1966, CEQA, and California Public Resources Code (Cal. Public Res. Code) Sections 5024.1 and 21084.1. These and other federal and state laws and regulations that pertain to cultural resources are described below, as are regional and local planning guidance and ordinances.

California and federal laws exempt from disclosure information regarding the location of Native American archaeological and other culturally sensitive sites. Therefore, the locations of such sites are not included in this section. Specifically, the California Public Records Act exempts from public disclosure the records of Native American graves, cemeteries, sacred places, features, and objects described in Sections 5097.9 and 5097.933 of the Cal. Public Res. Code (Government Code § 6254, subd.[r]). The act also exempts from public disclosure records that relate to archaeological site information and reports maintained by or in the possession of the California Department of Parks and Recreation, the State Historical Resources Commission, the California State Lands Commission, the Native American Heritage Commission (NAHC), other state agencies, or local agencies, including the records that agencies obtain through a consultation process with a California Native American tribe (Government Code § 6254.10). In addition, CEQA Guidelines prohibit inclusion of information about the location of archaeological sites and Sacred Lands in an EIR (CEQA Guidelines § 15120, subd. [d]). Federal law also exempts from disclosure information pertaining to sensitive cultural resource information (U.S. Code [U.S.C.] Title 54, § 307103).

3.17.2.1 Federal

NEPA

NEPA, as amended, establishes the federal policy of protecting important historic, cultural, and natural aspects of our national heritage during federal project planning. All federal or federally assisted projects requiring action pursuant to Section 102 of NEPA must take into account the effects on cultural resources. According to the NEPA regulations, in considering whether an action may "significantly affect the quality of the human environment," an agency must consider, among other things, unique characteristics of the geographic area (e.g., proximity to historic or cultural resources) (40 C.F.R. § 1508.27[b][3]) and the degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the NRHP.

NEPA regulations also require that, to the fullest extent possible, agencies prepare draft EISs concurrently with and integrated with environmental impact analyses and related surveys and studies required by the NHPA. When Section 106 of the NHPA and NEPA are integrated, project impacts that cause adverse effects under Section 106 are described in the EIS.

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

The 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 (SOI) 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.

36 Code of Federal Regulations Part 800, Implementing Regulations for Section 106 of the National Historic Preservation Act

Section 106 of the NHPA requires that effects on historic properties be taken into consideration in any federal project. The process has four steps: (1) initiating the Section 106 process, which includes identifying and initiating consultation with Native American tribes, local governments, and other interested parties; (2) identifying historic properties; (3) assessing adverse effects; and (4) delineating stipulations by which to resolve adverse effects in an agreement document. The implementing regulations for Section 106 are at 36 C.F.R. Part 800.

To be in compliance with the act, federal agencies must identify and evaluate NRHP eligibility of properties within the area of potential effect and evaluate the effect of the undertaking on eligible properties. The area of potential effect is defined as the area in which eligible properties may be affected by the undertaking, including direct effects (such as destruction of the property) and indirect effects (such as those effects that are later in time or farther removed in distance but are still reasonably foreseeable).

Section 106 affords the Advisory Council on Historic Preservation and the SHPO, as well as other consulting parties, a reasonable opportunity to comment on any project that would adversely affect historic properties. SHPOs administer the national historic preservation program at the state level, review NRHP nominations, maintain data on historic properties that have been identified but not yet nominated, and consult with federal agencies during Section 106 review.

National Register of Historic Places

The NRHP eligibility criteria (36 C.F.R. Section 60.4) was used to evaluate the historic significance of resources within the project's APE. The criteria for evaluation are as follows:

a. [Properties] that are associated with events that have made a significant contribution to the broad patterns of our history; or

b. [Properties] that are associated with the lives of persons significant to our past; or

c. [Properties] that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master; or that possess high artistic values; or that represent a significant and distinguishable entity whose components may lack individual distinction; or

d. [Properties] that have yielded, or may be likely to yield, information important in prehistory or history.

In addition to being significant under one or more of these criteria, NRHP eligibility (as well as CRHR eligibility [see below]) requires that a resource retain sufficient integrity to convey its significance. Integrity is evaluated through consideration of characteristics that existed during a resource's period of significance. Integrity is evaluated with regard to the retention of seven aspects:

- **Location**—The place where the resource was constructed
- **Design**—The combination of elements that create the form, plans, space, structure, and style of the resource
- **Setting**—The physical environment of the resource, including the landscape and spatial relationship of the buildings
- **Materials**—The physical elements that were combined or deposited during a particular period of time and in a particular pattern of configuration to form the resource
- **Workmanship**—The physical evidence of the crafts of a particular culture or people during any given period of history
- **Feeling**—The resource's expression of the aesthetic or historic sense of a particular period of time
- **Association**—The direct link between an important historic event or person and a resource

Section 101(d)(6)(A) of the NHPA allows properties of traditional religious and cultural importance to a Native American tribe to be determined eligible for NRHP inclusion. In addition, a broader range of TCPs are also considered and may be determined eligible for or listed in the NRHP. TCPs are places that may be eligible because of their association with cultural practices or beliefs of living communities that (a) are rooted in that community's history, and (b) are important in maintaining the continuing cultural identity of the community. In the NRHP programs, "culture" is understood to mean the traditions, beliefs, practices, customary ways of life, arts, crafts, and social institutions of any community, be it an Indian tribe, a local ethnic group, or the nation as a whole.

The HSR program-wide approach to Section 106 has been defined in the PA among the FRA, the Advisory Council on Historic Preservation, the SHPO, and the Authority regarding Compliance with Section 106 of the NHPA, as it pertains to the California HSR Project (Authority 2011c). The PA provides an overall framework for conducting this project's Section 106 process, including guidance for establishing the APE, interested party and tribal consultation, survey, and evaluation and the PA outlines the approach for the treatment of historic properties, including guidance on developing MOAs and treatment plans (archaeological and built resources) to address the resolution of adverse effects for each section of the project.

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.

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

Section 4(f) of the Department of Transportation Act (49 U.S.C. § 303)

Section 4(f) of the Department of Transportation Act of 1966, codified in federal law at 49 U.S.C. 303, prohibits use of a publicly owned park, recreation area, wildlife or waterfowl refuge, or publicly or privately owned historic site of national, state, or local significance listed in or determined eligible for listing in the NRHP for a transportation project unless the Secretary of Transportation has determined that there is no feasible and prudent alternative to such use and the project includes all possible planning to minimize harm to the property resulting in such use, or makes a finding of *de minimis* impact as further described below.

"Use" in Section 4(f) is when the transportation project requires a physical taking or other direct control of the land for the purposes of a project. 4(f) use also includes adverse nonphysical impacts or "constructive use" when impacts substantially impair or diminish the activities, features, or attributes of the resources that contribute to its significance. The federal transportation agency can determine that the project impacts on a 4(f) protected property is "*de minimis*," or subject to a minor use, without having to make a finding that there are no prudent and feasible avoidance alternatives. A determination of a *de minimis* impact to a Section 4(f) historic property is when there is a Section 106 finding of no adverse effect on a historic property.

Federal Railroad Administration Procedures for Considering Environmental Impacts (64 Federal Register 28545)

These FRA procedures state that an EIS should consider possible impacts on locations of historic, archaeological, architectural, or cultural significance.

Archaeological and Historic Preservation Act (16 U.S.C. §§ 469 to 469(c)-2)

This act provides for preserving significant historic or archaeological data that may otherwise be irreparably lost or destroyed by construction of a project by a federal agency or under a federally licensed activity or program. This includes relics and specimens.

American Antiquities Act (16 U.S. Code §§ 431 to 433)

The American Antiquities Act was enacted with the primary goal of protecting cultural resources in the U.S. As such, it prohibits appropriation, excavation, injury, or destruction of "any historic or prehistoric ruin or monument, or any object of antiquity" located on lands owned or controlled by the federal government. The act also established penalties for such actions and sets forth a permit requirement for collection of antiquities on federally owned lands.

American Indian Religious Freedom Act (42 U.S. Code § 1996)

The American Indian Religious Freedom Act protects and preserves the traditional religious rights and cultural practices of American Indians, Eskimos, Aleuts, and Native Hawaiians. The act

requires policies of all governmental agencies to respect the free exercise of native religion and to accommodate access to and use of religious sites to the extent that the use is practicable and is not inconsistent with an agency's essential functions. If a place of religious importance to American Indians may be affected by a project, the American Indian Religious Freedom Act promotes consultation with Indian religious practitioners, which may be coordinated with Section 106 consultation.

Archaeological Resources Protection Act (16 U.S. Code 470)

This statute was enacted to secure, for the present and future benefit of the American people, the protection of archaeological resources and sites which are on federally owned lands and Indian lands. It was also enacted to foster increased cooperation and exchange of information between governmental authorities, the professional archaeological community, and private individuals (Sec. 2(4)(b)).

Native American Grave Protection and Repatriation Act (25 U.S. Code 3001–3013)

The Native American Grave Protection and Repatriation Act describes the rights of Native American lineal descendants, Indian tribes, and Native Hawaiian organizations with respect to the treatment, repatriation, and disposition of Native American human remains, funerary objects, sacred objects, and objects of cultural patrimony, referred to collectively in the statutes as cultural items, with which they can show a relationship of lineal descent or cultural affiliation. One purpose of the statute is to provide greater protection for Native American burial sites and more careful control over the removal of Native American human remains, funerary objects, sacred objects, and items of cultural patrimony on federal lands.

Presidential Memorandum, Government-to-Government Relations with Native American Tribal Governments, April 29, 1994

Directed to the heads of executive departments and agencies, this memorandum outlines the principles that are to be followed in interactions with the governments of federally recognized Native American tribes. The memorandum includes provisions for government-to-government relations and consultation, and requires assessment of the impact of federal government plans, projects, programs, and activities on tribal trust resources and assurance that tribal government rights and concerns are considered during the development of such plans, projects, programs, and activities.

Executive Order 13175, Consultation with Indian Tribal Governments

This order establishes regular and meaningful consultation and collaboration with tribal officials in the development of federal policies that have tribal implications to strengthen the government-to-government relationships with Indian tribes and to reduce the imposition of unfunded mandates upon Indian tribes. The order sets forth guiding principles for government-to-government relations with Indian tribes, along with criteria for formulating and implementing policies that have tribal implications.

U.S. Department of Transportation Tribal Consultation Plan (Order 5301.1)

In response to Executive Order 13175, this plan states that as an executive agency, the U.S. Department of Transportation has a responsibility to, and is committed to working with, Indian tribal governments in a unique relationship, respecting tribal sovereignty and self-determination. The plan identifies specific goals, including establishing direct contact with Indian tribal governments at reservations and tribal communities and seeking tribal government representation in meetings, conferences, summits, advisory committees, and review boards concerning issues with tribal implications.

3.17.2.2 State

CEQA, Public Resources Code Section 21083.2 and CEQA Guidelines California Code of Regulations, Title 14, § 15064.5

CEQA requires the lead agency to consider the effects of a project on historical resources. CEQA Guidelines Section 15064.5 provides specific guidance for determining the significance of impacts on historical resources (CEQA Guidelines § 15064.5(b)), and unique archaeological resources (CEQA Guidelines § 15064.5(b) and Cal. Public Res. Code § 21083.2). Under CEQA, these resources are called "historical resources" whether they are of historic or prehistoric age. CEQA Public Resources Code Section 21084.1 defines historical resources as those listed, or eligible for listing, in the CRHR, or those listed in the historical register of a local jurisdiction (county or city) unless the preponderance of the evidence demonstrates that the resource is not historically or culturally significant. "Historic properties" listed in, or determined eligible for listing in the NRHP that are located in California are considered historical resources for the purposes of CEQA and are also listed in the CRHR. The CRHR criteria for listing such resources are based on, and are very similar to, the NRHP criteria. CEQA Cal. Public Res. Code Section 21083.2 and CEQA Guidelines Section 15064.5(c) provide further definitions and guidance for archaeological sites and their treatment.

Different legal rules apply to the two different categories of cultural resources, though the two categories sometimes overlap where a "unique archaeological resource" also qualifies as an "historical resource." In such an instance, the more stringent rules for the protection of archaeological resources that are historical resources apply.

Section 15064.5 also prescribes a process and procedures for addressing the existence of, or probable likelihood, of Native American human remains, as well as the unexpected discovery of any human remains during implementation of a project. This includes consultations with appropriate Native American tribes.

Guidelines for the implementation of CEQA define procedures, types of activities, persons, and public agencies required to comply with CEQA. Section 15064.5(b) prescribes that project effects that would "cause a substantial adverse change in the significance of an historical resource" are significant effects on the environment. Substantial adverse changes include physical changes to both the historical resource and its immediate surroundings.

Section 15126.4(a)(1) states that an EIR shall describe feasible measures which could minimize significant adverse impacts. Section 15126.5(b) describes mitigation measures related to impacts on historical resources.

California Register of Historical Resources (California Public Resources Code § 5024.1 and 14 California Code of Regulations § 4850)

Cal. Public Res. Code Section 5024.1 establishes the CRHR. The register lists all California properties considered to be significant historical resources. The CRHR also includes all properties listed or determined eligible for listing in the NRHP, including properties evaluated and determined eligible under Section 106. The criteria for listing in the CRHR, criteria 1–4, are similar to those of the NRHP:

- **Criterion 1:** Resources associated with important events that have made a significant contribution to the broad patterns of our history
- **Criterion 2:** Resources associated with the lives of persons important to our past
- **Criterion 3:** Resources that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master
- **Criterion 4:** Resources that have yielded, or may be likely to yield, information important in prehistory or history

The CRHR regulations govern the nomination of resources to the CRHR (14 California Code of Regulations § 4850). The regulations set forth the criteria for eligibility as well as guidelines for assessing historical integrity and resources that have special considerations.

California Native American Graves Protection and Repatriation Act (California Health and Safety Code § 8010 et seq.)

The California Native American Graves Protection and Repatriation Act establishes a state repatriation policy that is consistent with, and facilitates implementation of, the federal Native American Graves Protection and Repatriation Act. The act strives to ensure that all California Native American human remains and cultural items are treated with dignity and respect, and asserts the state's intent to provide mechanisms for aiding California Native American tribes, including nonfederally recognized tribes, in repatriating remains.

3.17.2.3 Regional and Local Regulatory Framework

The Bakersfield to Palmdale Project Section of the California HSR System traverses several local government jurisdictions, including Kern and Los Angeles Counties; the Cities of Bakersfield, Arvin, Tehachapi, Lancaster, and Palmdale; the communities of Edison and Mojave; and the census-designated places of Golden Hills, Keene, and Rosamond.[2]

Local jurisdictions (counties and cities) have implemented policies and ordinances to preserve or protect cultural resources. All of the cities and counties affected by the Bakersfield to Palmdale Project Section, and the majority of smaller communities, have some form of policy or objective that recognizes the importance of preserving cultural resources. The Cities of Bakersfield, Arvin, and Lancaster have adopted ordinances that give their respective historic preservation commissions or planning commissions jurisdiction to review the alteration or demolition of a cultural resource or property within a historic district. Los Angeles County also has development requirements for special management zones or historic districts. The majority of the policies and planning objectives are broad goals for the community. The regional and local plans and policies addressing cultural resources that were identified and considered in the preparation of this analysis are summarized in Table 3.17-1.

Table 3.17-1 Regional and Local Plans and Policies

City or County	Title of Plan/Policy
Kern County	
Kern County (Community of Edison)	Kern County General Plan, Land Use, Open Space, and Conservation Element, General Provisions, Section 1.10.3, Policy 25, Implementation Measures K through O (County of Kern Planning Department 2009)
Kern County	Kern County Municipal Code, Title 17, Sections 17.48.06 and 17.48.370, Buildings and Construction; and Title 19, Sections 19.44.030 and 19.64.130, Zoning (County of Kern 2016)
City of Bakersfield	
City of Bakersfield	Metropolitan Bakersfield General Plan (unincorporated planning area), Land Use Element, Policies 5, 7, 27, 72, and 104 through 107 (City of Bakersfield 2007)
City of Bakersfield	City of Bakersfield Municipal Code, Title 15, Article II, Chapter 15.72, Historical Preservation (City of Bakersfield 2016)

[2] A census-designated place is a concentration of population identified by the U.S. Census Bureau for statistical purposes. Census-designated places are delineated for each decennial census as the statistical counterparts of incorporated places (e.g., cities, towns, and villages). Census-designated places are populated areas that lack a separate municipal government but otherwise physically resemble incorporated places.

City or County	Title of Plan/Policy
Community of Golden Hills	
Community of Golden Hills	Golden Hills Specific Plan, Land Use, Open Space, and Conservation Element, Section V., Resource Policy 5 (Kern County Department of Planning and Development Services 1986
Community of Keene, Community of Golden Hills	Greater Tehachapi Area Specific and Community Plan (2010)
Community of Rosamond	
Community of Rosamond	Rosamond Specific Plan (2008), Land Use Element, Sections 1 through III (Kern County Department of Planning and Development Services 2008)
City of Tehachapi	
City of Tehachapi	City of Tehachapi General Plan, Natural Resources Element, Chapter 2.1EE, Objectives 1 and 2, Policies NR40 through NR44; Civic Health and Culture Element, Chapter 2.1G, Objective 6, Policies CH20 through CH 25; and Town Form Element, Chapter 2.1A, Objective 5, Policies TF17 and TF18, and Objective 8, Policy TG29 (City of Tehachapi 2012)
City of Tehachapi	City of Tehachapi Municipal Code, Sections 13.24.010 and 15.12.230 (City of Tehachapi 2016)
City of Tehachapi	Greater Tehachapi Area Specific and Community Plan (2010), 3.3.4 Conservation and Open Space Element, Goal COS.7, Policy COS.30 (Kern County Planning and Community Development Department 2010)
Los Angeles County	
Los Angeles County	Los Angeles County General Plan, Conservation and Natural Resources Element, Goal C/NR 14, Policies 14.1, 14.2, 14.4, 14.5, and 14.6 (Los Angeles County Department of Regional Planning 2015)
Los Angeles County	Los Angeles County General Plan, Parks and Recreation Element, Goal P/R 5, Policies 5.1, 5.2, 5.3, and 5.4 (Los Angeles County Department of Regional Planning 2015)
Los Angeles County	Los Angeles County General Plan, Land Use Element (Los Angeles County Department of Regional Planning 2015)
Los Angeles County	Los Angeles County Code of Ordinances, Sections 22.44.1570, 22.44.3000, and 22.52.2700 (County of Los Angeles 2016)
City of Lancaster	
City of Lancaster	City of Lancaster General Plan, Plan for the Natural Environment, Specific Action 3.4.1(e); Plan for Active Living, Goal 12, Objective 12.1, Policy 12.1.1, Specific Actions 12.1.1(a), 12.1.1(b), 12.1.1(c), 12.1.1(d), and 12.1.1(e); and Policy 19.3.4, Specific Action 19.3.4 (City of Lancaster 2009) Plan for Physical Development, Policy 20.1.1 (City of Lancaster, 2009)
City of Lancaster	City of Lancaster Code of Ordinances, 17.40.160 and 17.40.200 (City of Lancaster 2016)
City of Palmdale	
City of Palmdale	City of Palmdale General Plan, Environmental Resources Element, Goal ER7, Objective ER7.1, Policies ER7.1.3, 7.1.4, 7.1.5, and 7.1.8; and Public Services Element, Goal PS7, Objective PS7.1, Policy PS7.1.1 (City of Palmdale Planning Department 1993)
City of Palmdale	City of Palmdale Municipal Code, Title 15, Chapter 15.28, and Title 14 Chapter 14.05.030 (City of Palmdale 2016)

Sources: County of Kern, 1986, 2008, 2009, 2010, 2016b; City of Bakersfield, 2007, 2016; City of Tehachapi, 2012, 2016; County of Los Angeles, 2015, 2016; City of Lancaster, 2009, 2016; City of Palmdale, 1993, 2016
OS = Open Space

3.17.3 Regional and Local Policy Analysis

Section 3.1.3.3, Regional and Local Policy Analysis, describes state and regional policies supporting the California HSR System. Because the HSR project is a project of the Authority in its capacity as a state agency and representative of a federal agency, the project is neither subject to the jurisdiction of local governments nor is it required to be consistent with local plans. The Council on Environmental Quality and Authority regulations, however, require the discussion of any inconsistency or conflict of a proposed action with regional or local plans and laws. Where inconsistencies or conflicts exist, the Council on Environmental Quality and the Authority require a description of the extent of reconciliation and the reason for proceeding if full reconciliation is not feasible (40 C.F.R. Part 1506.2(d) and 64 *Federal Register* 28545, 14(n)(15)). CEQA Guidelines also require that an EIR discuss the inconsistencies between the proposed project and applicable general plans, specific plans, and regional plans (CEQA Guidelines § 15125(d)).

Because the HSR project is a state and federal government project, it is not subject to local government jurisdictional issues of land use. Consequently, a city or county is not "an agency with jurisdiction over the project" as described in Appendix G of the CEQA Guidelines.

Although the EIR/EIS describes the HSR project's inconsistency with local plans in order to provide a context for the project, any inconsistency with a local plan is not considered an environmental impact. The discussion regarding the Bakersfield to Palmdale Project Section's consistency with local policies, goals, and objectives for protecting cultural resources is included to provide the local planning context. Generally, the local policies relevant to the Bakersfield to Palmdale Project Section promote historic preservation. Should any historic resources require efforts to mitigate direct or indirect effects, the individual community would be invited to participate in the development of the MOAs describing the agreed-upon treatment of such historic properties. Table 3.17-2 lists the local jurisdictions and planning documents applicable to the Bakersfield to Palmdale Project Section and states the project section's compatibility with each (refer to Appendix 2-H for the full policy consistency analysis). Only incompatible policies, goals or objectives are described below, whereas policies, goals and objectives that are compatible or not applicable are withheld from the table below.

Table 3.17-2 Regional and Local Policy Consistency Analysis Summary

Policy/Goal/Objective	Alternatives	Consistency
Kern County General Plan (2009), Land Use, Open Space, and Conservation Element		
General Provisions, Section 1.10.3, Policy 25: Promote the preservation of cultural and historic resources that constitute a heritage value to residents and visitors.	All B-P Build Alternatives	Inconsistent. The Bakersfield to Palmdale Project Section would affect cultural and historic resources. Therefore, the project is inconsistent with the county's policy of promoting preservation.
City of Bakersfield Municipal Code		
Title 15, Chapter 15.72: The Historic Preservation Commission must approve alteration or demolition of a designated cultural resource or of property within a historic district to ensure that it would not adversely affect the special character or special historical, architectural or aesthetic interest of the structure and its neighboring structures and surroundings.	All B-P Build Alternatives	Inconsistent. While the city is not an agency with jurisdiction over the project, the city would be consulted during the public review process.

Policy/Goal/Objective	Alternatives	Consistency
Mojave Specific Plan (2003), Housing and Community Development Element		
Objective 7.2: Preserve and expand historical and community resources in Mojave.	All B-P Build Alternatives	Inconsistent. If the Project Section would result in the loss of historical resources in Mojave, this is not consistent with the objective of preserving and expanding cultural and historic resources in Mojave.
Los Angeles County General Plan (2015), Conservation and Natural Resources Element		
Goal C/NR 14: Protect historic, cultural, and paleontological resources.	All B-P Build Alternatives	Inconsistent. The Project Section would result in the loss of cultural and historic resources. This is not consistent with the policy calling for the protection of cultural and historic resources.
City of Lancaster General Plan (2009), Plan for Active Living		
Objective 12.1: Identify and preserve and/or restore those features of cultural, historical, or architectural significance.	All B-P Build Alternatives	Inconsistent. The Project Section would result in the loss of features of cultural, historic, or architectural interest. This is not consistent with the policy calling for the preservation of features of cultural, historic, or architectural significance.
Policy 12.1.1: Preserve features and sites of significant historical and cultural value consistent with their intrinsic and scientific values.	All B-P Build Alternatives	Inconsistent. The Bakersfield to Palmdale Project Section would result in the loss of features of cultural, historic, or architectural interest. This is not consistent with the policy calling for the preservation of features and sites of significant historical and cultural value.
Policy 19.3.4: Preserve and protect important areas of historic and cultural interest that serve as visible reminders of the City's social and architectural history.	All B-P Build Alternatives	Inconsistent. The Bakersfield to Palmdale Project Section would result in the loss of areas of historic and cultural interest. This is not consistent with the policy calling for the preservation of areas that serve as visible reminders of the city's social and architectural history.
Specific Action 19.3.4: Through the development review process, apply Community Design guidelines that incorporate site-sensitive building design techniques into developments that shall integrate harmoniously into the community to preserve areas of historic and cultural interest.	All B-P Build Alternatives	Inconsistent. Although the city is not an agency with jurisdiction over the project and would not have the authority to dictate requirements to ensure compatibility with specific community design guidelines, the city will be consulted as part of the public review process.

B-P = Bakersfield to Palmdale Project Section

3.17.4 Coordination of Section 106 Process with NEPA and CEQA Compliance

The Advisory Council on Historic Preservation advises federal agencies to coordinate compliance with Section 106 of the NHPA and the procedures in the regulations implementing Section 106, with steps taken to meet the requirements of NEPA so they can meet the purposes and requirements of both statutes in a timely and efficient manner. When NEPA review and Section 106 are integrated, ways to avoid, minimize, or mitigate adverse effects while identifying alternatives and preparing NEPA documentation can be assessed. Similarly, both the CEQA Guidelines and NEPA regulations encourage the preparation of joint documents as a way to avoid duplication and delay and to coordinate measures to avoid, minimize, or mitigate impacts to historic resources.

A PA was executed in July 2011 to govern the implementation of the requirements of Section 106 of the NHPA for the California HSR System. A PA is a document that records the terms and

conditions agreed upon to resolve the potential adverse effects of a complex project in accordance with 36 C.F.R § 800.14(b). The signatories of the PA include the Authority, the FRA, the Advisory Council on Historic Preservation, and the SHPO. The Surface Transportation Board and the U.S. Army Corps of Engineers have subsequently been invited to become signatories.

The Section 106 PA provides an overall framework for how the Authority will achieve compliance with Section 106, and includes stipulations regarding the identification, evaluation, and treatment of historic properties; delineation of the APE; consultations with tribal governments, local agencies, and interested parties; and standards for technical documentation[3]. Measures to avoid, minimize, and mitigate impacts are binding commitments documented in the EIR/EIS, and are in compliance with Section 106 and the PA, as documented in the MOA. Some specific CEQA and NEPA requirements diverge from the Section 106 process; these exceptions are addressed in Section 3.17.5.4 of this chapter.

3.17.4.1 Section 106 Technical Studies Prepared for the Project

The primary applicable federal and state laws and regulations protecting cultural resources are Section 106 of the NHPA, as amended, NEPA, CEQA, and Cal. Public Res. Code Sections 5024.1 and 21084.1. Section 106 requires that effects on historic properties be taken into consideration in any federal undertaking. These effects are described in this section, 3.17, *Cultural Resources*, with further detail provided in the following technical reports. Information on the precise location of any archaeological site or archaeologically sensitive area is typically not divulged to the general public in order to protect those resources and in conformance with professional standards and practice. Table 3.17-3 provides a list of technical documents that inform this analysis; however, any of the following technical reports that have a footnote are confidential and will not be distributed to the public. For information on how to access and review technical reports, please refer to the Authority's website at www.hsr.ca.gov.

Table 3.17-3 Section 106 Technical Reports and Concurrence

Report Title	Date	SHPO Concurrence
Bakersfield to Palmdale Project Section Archaeological Survey Report (ASR)[1]	January 2017	January 2017
Bakersfield to Palmdale Project Section Historic Architectural Survey Report (HASR)	January 2017	February 16, 2017
Bakersfield to Palmdale Project Section, Historic Architectural Section 106 Finding of Effect (FOE)	December 2019	[pending]
Memorandum of Agreement (MOA)	[pending]	[pending]

[1] This document is confidential and not available for public release.
SHPO = State Historic Preservation Officer

The above-listed reports document the FRA's compliance with Section 106 of the NHPA. In general, the ASR documents research efforts, known archaeological sites, newly discovered archaeological sites if any are identified, and consultation efforts with Native American tribes. The HASR documents research efforts, known historic built resources, newly identified historic built resources, and consultation efforts with historical interest groups and local agencies. The FOE documents how the Bakersfield to Palmdale Project Section would affect historic properties, both archaeological and built. These documents inform the findings described in this section.

Also, a subsection of the Bakersfield to Palmdale Project Section has been addressed in other EIR/EIS documents, the findings of which are incorporated by reference herein. This subsection is at the north end, near each of the Bakersfield station alternative locations: Bakersfield Station—F Street (LGA). The remainder of the Bakersfield to Palmdale Project Section addressed

[3] The Authority is updating the PA to reflect the NEPA assignment.

in this section extends from Oswell Street in Bakersfield to the Palmdale Station, and is referred to as the Oswell Street to Palmdale Station study area. While resources within all three subsections are included in subsequent tallies and listed in tables, only those resources within the Oswell Street to Palmdale Station study area undergo detailed analysis in this EIR/EIS section.

The limits of the Bakersfield Station—F Street (LGA) subsection extend from the Bakersfield Cotton Warehouse Driveway in the north to Oswell Street in the south. Since the approved 2014 Record of Decision (ROD), the Authority and the City of Bakersfield agreed to consider an alternate station location at F Street. This alternative was evaluated through a Supplemental EIR/EIS for the Fresno to Bakersfield LGA. The Supplemental Final EIR for the LGA was certified by the Board of Directors on October 16, 2018. Therefore, this analysis is incorporated by reference into the Bakersfield to Palmdale Project Section environmental documents pursuant to Section 15150 of CEQA and Section 40 C.F.R. 1506.4 of the NEPA regulations. The technical studies completed in support of the Supplemental EIR/EIS are listed as follows:

- *Bakersfield F Street Station Alignment Alternative Historic Architectural Survey Report* (Authority and FRA 2016a)
- *Fresno to Bakersfield Locally Generated Alternative Historic Architectural Survey Report, Addendum 1 to Bakersfield F Street Station Alternative Alignment Historic Architectural Survey Report* (Fresno to Bakersfield LGA HASR Addendum 1) (Authority 2016c)
- *Fresno to Bakersfield Project Section Bakersfield F Street Station Alignment Alternative Archaeological Survey Report* (Authority and FRA 2016d)
- *Fresno to Bakersfield Locally Generated Alternative Archaeological Survey Report Addendum No. 1* (Authority and FRA 2016d)
- *Fresno to Bakersfield Section Locally Generated Alternative Finding of Effect Report* (Authority 2017b)

Fresno to Bakersfield Project Section Final Basque Traditional Cultural Properties Study (Authority and FRA 2016) Stipulation VIII.A of the PA requires that an MOA be developed by the Authority for each project section where the FRA determines there would be an adverse effect to historic properties or when phased identification is necessary and adverse effects would occur. The MOA stipulating treatment of historic properties within the Bakersfield to Palmdale Project Section will be developed with input from consulting parties (Table 3.17-7 later in this section), and will be executed concurrently with the completion of the final EIR/EIS and the ROD. Following the execution of the MOA, and in accordance with PA Stipulations VIII.B.i and VIII.B.ii, treatment plans—one for archaeological resources and one for historic built resources—will be developed by the Authority to detail the treatment measures negotiated for all historic properties within the Bakersfield to Palmdale Project Section. The Archaeological Treatment Plan (ATP) and Built Environment Treatment Plan (BETP) will define the process by which these treatment measures will be applied to each adversely affected historic property identified in the MOA, and also will outline measures for the phased identification of historic properties as additional parcel access is obtained and design work is completed. The MOA and treatment plans provide specific performance standards that ensure each adverse effect will be avoided, minimized, or mitigated. The measures stipulated in the Section 106 consultation process have been coordinated with the measures outlined in this EIR/EIS. These measures will be incorporated into the design and construction documents to ensure they are incorporated into the project.

3.17.4.2 Agency, Native American, Interested Parties, and Public Outreach

CEQA, NEPA, and Section 106 of the NHPA each require that outreach regarding cultural resources be conducted to government agencies, Native Americans, and other parties who may have a demonstrated historic preservation interest in a project. To the extent possible, the cultural resources outreach requirements for CEQA, NEPA, and Section 106 have been coordinated to identify interested parties early in the process to achieve maximum participation in identifying cultural resources, addressing impacts to cultural resources, and developing appropriated mitigation measures. The primary goals of this outreach are to help identify any cultural resources

of concern to these parties and to provide them an opportunity to become Section 106 consulting parties and participate in the development of significance findings, assessments of effect/impact, and the development of mitigation measures. For this reason, cultural resources outreach for the project began in the early scoping phase of the process.

Guiding documents include the PA, which describes the process for consulting with Native Americans and other interested parties. Specifically, Stipulation V.A. of the PA states that, "the public and consulting parties will have an opportunity to comment and have concerns taken into account on findings identified in Section 106 survey and effects documented via attendance at public meetings where they can submit comments on the information presented, as well as access to the Section 106 documents via email requests to the Authority." Furthermore, Stipulation V.C specifies that tribal consulting parties shall be consulted at key milestones in the Section 106 and NEPA processes to gain input from the tribal governments. Consultation with the Section 106 consulting parties will continue through the design and construction phase of the project during implementation of the MOA and treatment plans.

Agency and Interested Party Outreach

Consultation with local, state, and federal agencies and other interested parties has been ongoing throughout the project planning process. Table 3.17-4 describes the outreach to these potentially interested parties and includes local government planning departments, historic preservation organizations, historical societies, libraries, and museums. As per PA Stipulation V.A., these interested agencies, groups, and individuals were invited to comment on the significance findings and treatments proposed, and those with demonstrated interest in the project have been invited to participate as consulting parties in the preparation of the MOA. Table 3.17-4 also summarizes the outreach to federal, state, regional, and local agencies that may have responsibilities for historic properties and may want to review reports and findings for a project within their jurisdiction, as well as outreach to other potentially interested parties and individuals. These potentially interested parties were generally contacted by letter regarding informational requests. Most of the correspondence began in September 2015.

Table 3.17-4 Potentially Interested Parties Contacted Via Letter as of September 11, 2015

Action	Date	Response Summary
Kern County		
Informational letter sent to City of Bakersfield, Economic and Community Development, Historic Preservation Commission	September 11, 2015	No response received.
Informational letter sent to City of Bakersfield, City Hall North	September 11, 2015	No response received.
Informational letter sent to City of Tehachapi, Planning Commission	September 11, 2015	No response received.
Informational letter sent to Kern-Antelope Historical Society	September 11, 2015	No response received.
Informational letter sent to Kern County Historical Society	September 11, 2015	No response received.
Informational letter sent to Kern County Museum	September 11, 2015	No response received.
Informational letter sent to County of Kern Library, Beale Memorial Library	September 11, 2015	No response received.
Informational letter sent to County of Kern Library, Mojave Branch	September 11, 2015	No response received.
Informational letter sent to County of Kern Library, Rosamond Branch	September 11, 2015	No response received.

Action	Date	Response Summary
Informational letter sent to County of Kern Library, Tehachapi Branch	September 11, 2015	No response received.
Informational letter sent to County of Kern, Planning & Community Development	September 11, 2015	No response received.
Informational letter sent to Rosamond Municipal Advisory Council, 2nd District Supervisor's Office	September 11, 2015	No response received.
Informational letter sent to Southern San Joaquin Valley Information Center	September 11, 2015	No response received.
Informational letter sent to Tehachapi Heritage League Museum	September 11, 2015	No response received.
Los Angeles County		
Informational letter sent to City of Lancaster, Architectural & Design Commission	September 11, 2015	No response received.
Informational letter sent to City of Lancaster, Community Development & Planning	September 11, 2015	No response received.
Informational letter sent to City of Palmdale, Planning Commission	September 11, 2015	No response received.
Informational letter sent to City of Palmdale, City Library	September 11, 2015	No response received.
Informational letter sent to Historical Society of Southern California	September 11, 2015	No response received.
Informational letter sent to Los Angeles County Department of Regional Planning	September 11, 2015	In a response letter dated September 21, 2015, the Department of Regional Planning stated that the county does not maintain a list of cultural or historic resources. The letter suggested that the Authority consult the South Central Coastal Information Center and the California Historical Resource Information System.
Informational letter sent to Los Angeles County Department of Regional Planning, Antelope Valley Office	September 11, 2015	No response received.
Informational letter sent to Los Angeles Public Library, Lancaster Library	September 11, 2015	No response received.
Informational letter sent to West Antelope Valley Historical Society	September 11, 2015	No response received.

Source: California High-Speed Rail Authority and Federal Railroad Administration, 2017f
Authority = California High-Speed Rail Authority
FRA = Federal Railroad Administration
NHL = National Historic Landmark
NPS = National Park Service

In the letters, the Authority requested information regarding historic properties and the treatment of such properties. Ongoing and future consultation with the above-listed entities and local government agencies (and any additional potentially interested parties identified during preparation) regarding historic properties will be included in subsequent editions of this EIR/EIS.

The Authority and FRA have an extensive public and agency involvement program as part of the environmental review process and the requirements of NEPA and CEQA. The public and agency involvement program includes the following efforts:

- Preparation and distribution of informational materials (e.g., fact sheets), informational meetings, public and agency scoping meetings, meetings with individuals and groups, and presentations; workshops regarding the Bakersfield to Palmdale Project Section; and briefings to interested and/or affected stakeholders.
- Agency scoping meetings, an interagency working group, meetings with agency representatives, and other agency consultation.
- Public and agency outreach, including focused informational meetings and presentations.
- Ongoing coordination regarding the National Chavez Center (also known as Nuestra Señora Reina de La Paz), a historic property that is listed in the NRHP and is also an NHL and a National Monument.

The identification and evaluation of all built resources were presented in the HASR (Authority and FRA 2019c). The regional information center recommended by the Los Angeles County Department of Regional Planning has been incorporated into the research and property identification efforts. No additional responses have been received to date.

The Authority also formed and met with agency Technical Working Groups composed of senior staff from county and city public works and planning departments. The purpose of these groups was to facilitate the exchange of information and ideas with regard to built resources during the course of the study. The Authority has met with agency staff, elected officials, general interest organizations, and stakeholder organizations. The outreach meetings are summarized in Table 3.17-5.

Table 3.17-5 Public and Agency Meetings (January 2012–September 2017)

Date of Meeting	Meeting Location / Attendees	Category*
9/28/2017	Tehachapi Rotary Club	P
9/8/2017	U.S. Forest Service	AS
8/24/2017	U.S. Forest Service, BLM, Pacific Crest Trail Association	AS
8/24/2017	Kern County Black Chamber of Commerce Small Business Diversity Expo and Trade Show	P
8/23/2017	Antelope Valley Hispanic Chamber of Commerce Spanish Luncheon	STO
8/17/2017	Rosamond Municipal Advisory Council-Board Meeting	P
8/1/2017	Tehachapi National Night Out—Information Table	P
7/7/2017	Environmental Justice Pop-Up Activity Center Event at Mercado Latino (Bakersfield)	P
6/20/2017	Meeting with the City of Tehachapi	AS
6/20/2017	Antelope Valley Hispanic Chamber of Commerce	STO
6/9/2017	African American Chamber of Commerce	STO
5/25/2017	City of Palmdale	AS
4/27/2017	U.S. Fish and Wildlife Service	AS
4/25/2017	National Chavez Center, National Park Service, Advisory Council on Historic Preservation, and State Historic Preservation Office	STO, AS
4/22-23/2017	Environmental Justice Activity Center Event at the California Poppy Festival (Lancaster)	P
4/17/2017	National Chavez Center and National Park Service	STO, AS
4/11/2017	City of Lancaster	AS
4/4/2017	California Department of Fish and Wildlife	AS
3/16/2017	BLM and Pacific Crest Trail Association	AS

Date of Meeting	Meeting Location / Attendees	Category*
3/14/2017	City of Lancaster	AS
3/14/2017	California Department of Fish and Wildlife	AS
3/13/2017	National Chavez Center, National Park Service, and State Historic Preservation Office	STO, AS
3/8/2017	Monthly Regulatory Agency Meeting	AS
3/3/2017	Environmental Justice Pop-Up Activity Center Event at Mercado Latino (Bakersfield)	P
3/2/2017	California Department of Fish and Wildlife	AS
3/1/2017	BLM and Los Angeles County Department of Parks and Recreation	AS
2/25/2017	Bakersfield Black American History Parade	P
2/13/2017	Lancaster	AS
2/7/2017	Palmdale	PIM
2/2/2017	Edison	PIM
2/1/2017	Tehachapi	PIM
1/31/2017	Lancaster	PIM
1/28/2017	Rosamond	PIM
1/10–12/2017	SWG Meetings: Tehachapi, Edison, Palmdale, Rosamond, and Lancaster	SWG
7/26/2016	Rosamond	PIM
7/21/2016	Lancaster	PIM
7/20/2016	Tehachapi	PIM
7/19/2016	Edison	PIM
3/30/2016	OHP, Sacramento; attended by cultural resources staff from OHP, the Authority, the Rail Delivery Partner, and the technical subconsultant (JRP Historical Consulting, LLC)	AS
3/24/2016	SWG Meetings: North Antelope Valley and Lancaster	SWG
3/22/2016	SWG Meetings: Edison and Tehachapi	SWG
12/9/2015	Smart Growth-Tehachapi Valleys	STO
12/3/2015	Valley Small Business and Construction Report Business, Transportation, and Construction Expo	P
11/24/2015	NRG Renew, LLC	STO
11/12/2015	Traffic Analysis Kickoff Conference Call (Lancaster)	AS
11/10/2015	Traffic Analysis Kickoff Conference Call (Bakersfield)	AS
11/10/2015	Traffic Analysis Kickoff Conference Call (Kern County)	AS
11/10/2015	Traffic Analysis Kickoff Conference Call (Tehachapi)	AS
11/5/2015	Tribal Meeting	SWG
11/4/2015	Antelope Valley Transportation Summit	SWG
11/3/2015	Windland, Inc.	STO
11/2/2015	Presentation to Lancaster High School STEM Students	STO
10/7/2015	Lancaster Community Open House	PIM
10/6/2015	Rosamond Community Open House	PIM

Date of Meeting	Meeting Location / Attendees	Category*
10/6/2015	Brookfield Renewable Energy	STO
10/5/2015	Mojave Community Open House	PIM
10/1/2015	Tehachapi Community Open House	PIM
9/30/2015	Edison Community Open House	PIM
9/26–27/2015	Streets of Lancaster	P
9/17/2015	Lancaster SWG	SWG
9/16/2015	Rosamond SWG	SWG
9/15/2015	SWG Meetings: Tehachapi and Edison	SWG
9/8/2015	Rex Parris, Mayor, City of Lancaster	AS, STO, EL
8/5/2015	Antelope Valley Transportation Summit	SWG
8/4/2015	CalPortland Cement Company	STO
7/30/2015	Kern Wind Energy Association	STO
7/16/2015	Rosamond Municipal Advisory Council/Rosamond Chamber of Commerce	STO
7/2/2015	Tehachapi Area Association of Realtors—General Membership Meeting	STO
6/24/2015	City of Lancaster Coordination Meeting	AS, EL
6/24/2015	University of Antelope Valley	STO
6/22/2015	City of Lancaster	AS, EL
6/16/2015	Greater Tehachapi Chamber of Commerce Monthly Networking Luncheon	STO
6/2/2015	2015 Small Business Awards	STO
6/2/2015	CalPortland Cement Company	STO
5/28/2015	Mojave Chamber of Commerce—Monthly Meeting	STO
5/27–30/2015	Sustainatopia	STO
5/26/2015	Meet and Greet—Rosamond Municipal Advisory Council	EL
5/26/2015	Antelope Valley Board of Trade—Monthly Business Luncheon	STO
5/21/2015	Women Can Build!	STO
5/6/2015	City of Lancaster Coordination Meeting	AS
5/6/2015	University of Antelope Valley	STO
5/6/2015	Antelope Valley Transportation Summit	SWG
5/4/2015	City of Tehachapi Briefing	EL
5/1–3/2015	Women Building the Nation Conference	P
4/22/2015	City of Tehachapi	AS
4/18–19/2015	California Poppy Festival	P
4/13/2015	Rosamond Community Services District	AS
4/7/2015	Building Ladders of Opportunity—A Pathway to Transportation	STO
3/12/2015	Kern County Planning & Community Development	AS
3/12/2015	Edison Elementary School District	STO
3/12/2015	Kern County Farm Bureau	STO
3/12/2015	Tejon Ranch	STO

Date of Meeting	Meeting Location / Attendees	Category*
3/4/2015	National Chavez Center (Paul Chavez, Director, and Monica Parra, Director of Operations)	STO
3/4/2015	Cummings Ranch	P
3/4/2015	City of Tehachapi	AS
3/4/2015	Greater Tehachapi Economic Development Council	STO
2/27/2015	Antelope Valley 2015 Business Outlook Conference	P
2/24/2015	CalPortland Cement Company	P
1/14/2015	Antelope Valley Transportation Summit	SWG
12/12/2014	Antelope Valley African-American Chamber of Commerce—Monthly Business Luncheon and Business Showcase	STO
12/2/2014	High-Speed Rail Conference	STO
10/29/2014	Antelope Valley Transportation Summit	SWG
10/23/2014	Orange County Transportation Authority Business Expo	STO
10/23/2014	Successful Women in Business Leadership and Procurement Conference	STO
10/15/2014	City of Lancaster Coordination Meeting	AS
10/15/2014	City of Palmdale Coordination Meeting	AS
10/11/2014	Neighborhood Sustainability Symposium	STO
10/10/2014	Office of Kern County Supervisor Mike Maggard, 3rd District	EL
10/10/2014	California State University, Bakersfield	STO
10/10/2014	Greater Bakersfield Chamber of Commerce	SWG
10/9/2014	The Women's and Girl's Fund Reception	STO
10/6–7/2014	Los Angeles Cleantech Incubator Cleantech Global Showcase 2014	STO
10/3/2014	Regional Hispanic Chamber of Commerce—Southern California Business Development Conference	STO
9/17/2014	Los Angeles County Economic Development Corporation SoCal Jobs Defense Council	SWG
9/16/2014	California High-Speed Rail Authority Board Meeting	PIM
9/5/2014	Mobility 21 Summit	STO
8/28/2014	Kern County Supervisor Leticia Perez	EL
8/27/2014	North County Transportation Coalition	SWG
8/22/2014	California Black Chamber of Commerce Business and Economic Summit	STO
7/28/2014	Kern County Planning & Community Development	AS
7/28/2014	Office of Supervisor Zack Scrivner Briefing	EL
7/28/2014	Kern Transportation Foundation	STO
7/28/2014	Kern County Separation Grade District/Kern Council of Governments	STO
7/28/2014	Kern County Farm Bureau	STO
7/23/2014	Antelope Valley Democratic Club	STO
7/14/2014	City of Palmdale Coordination Meeting	AS
7/9/2014	Office of Senator Steve Knight	EL
7/9/2014	Antelope Valley Transportation Summit	SWG

Date of Meeting	Meeting Location / Attendees	Category*
6/19/2014	California Public Agencies Procurement Summit	GIO
5/29/2014	U.S. Air Force Plant 42	STO
5/27/2014	Antelope Valley Board of Trade Transportation Committee Leadership	STO
5/27/2014	Steve Perez, Rosamond Community Services District	AS
4/23/2014	High Desert Corridor/Xwest/Antelope Valley Transit Authority meeting	SWG
4/23/2014	Antelope Valley Transportation Summit	SWG
4/16/2014	Office of Assemblymember Fox Briefing	EL
4/16/2014	City of Lancaster Coordination Meeting	AS
4/16/2014	City of Palmdale Coordination Meeting	AS
11/2013	EDF Renewable Energy—Avalon and Catalina Wind Farms	STO
11/19/2013	American Public Works Association—Antelope Valley Chapter	GIO
11/14/2013	Antelope Valley Board of Trade Transportation Committee Meeting	STO
10/17/2013	Kern County Fire Department	AS
10/2/2013	California Department of Transportation, District 6	AS
10/2/2013	Antelope Valley Transportation Summit	PWG
9/24/2013	Antelope Valley Board of Trade Monthly Luncheon	GIO
9/11/2013	Palmdale Water District Presentation	GIO
8/21/2013	Los Angeles County Sanitation Districts	AS
5/14/2013	Los Angeles Supervisor Antonovich (Norm Hickling)	EL
5/14/2013	City of Lancaster	AS
5/6/2013	Union Pacific Railroad	STO
4/17/2013	Antelope Valley Transportation Summit	PWG
4/11/2013	Cummings Ranch (Steve Cummings)	STO
4/11/2013	Community of Rosamond	AS
4/10/2013	BLM—Ridgecrest Office	AS
4/10/2013	Willow Springs International Raceway	STO
3/14/2013	City of Tehachapi	AS
3/14/2013	Kern County Planning & Community Development	AS
3/7/2013	Edison Middle School	STO
3/7/2013	Edison Agricultural Businesses	SWG
3/6/2013	Tejon Ranch	STO
3/6/2013	Loop Ranch	STO
3/6/2013	National Chavez Center (Paul Chavez, Director, and Paul Park, General Counsel)	STO
2/6/2013	U.S. Air Force Plant 42	STO
2/6/2013	University of Antelope Valley	STO
1/31/2013	Lehigh Southwest Cement Plan	STO
1/31/2013	City of Tehachapi	AS
1/30/2013	Kern County Farm Bureau	STO

Date of Meeting	Meeting Location / Attendees	Category*
1/30/2013	Kern County Roads Department	AS
1/30/2013	Kern County Planning Department	AS
1/15/2013	City of Palmdale	AS
1/15/2013	City of Lancaster	AS
1/14/2013	Los Angeles County Supervisor Mike Antonovich	EL
1/9/2013	Antelope Valley Transportation Summit	P
1/8/2013	City of Palmdale	EL
10/11/2012	City of Palmdale	AS
10/10/2012	City of Lancaster	AS
10/10/2012	Rosamond Community Services District	STO
10/9/2012	U.S. Air Force Plant 42	STO
8/28/2012	Los Angeles County Sanitation Districts	AS
8/28/2012	Los Angeles County Supervisor Mike Antonovich	EL
8/23/2012	City of Lancaster	AS
8/23/2012	Kern Wind Energy Association	STO
8/23/2012	Rosamond Community Services District/Municipal Advisory Council	STO
6/28/2012	Los Angeles Department of Water and Power	STO
6/27/2012	Southern California Edison	STO
6/26/2012	U.S. Air Force Plant 42 Defense Contractors	STO
6/26/2012	Sempra Energy	STO
6/19/2012	Metrolink	AS
5/16/2012	City of Tehachapi	AS
5/15/2012	Kern County Farm Bureau (Ben McFarland, President)	AS
5/9/2012	Greater Antelope Valley Association of Realtors	STO
4/19/2012	Greater Antelope Valley Economic Alliance	STO
3/22/2012	U.S. Air Force Plant 42 Defense Contractors	STO
3/22/2012	City of Lancaster	EL
3/21/2012	Rosamond Community Services District	STO
1/5/2012	Tehachapi Mountain Democratic Club	GIO

Source: California High-Speed Rail Authority, 2019
*Category Key: AS=Agency Staff; EL=Elected Official; GIO=General Interest Organization; P=Public; PIM=Public Information Meeting; SM=Scoping Meeting; STO=Stakeholder Organization; SWG=Stakeholder Working Group
BLM = Bureau of Land Management OHP = Office of Historic Preservation

The Authority sent follow-up emails to the above parties on July 12, 2016, to inform them of upcoming community open house meetings and to offer focused one-on-one meetings related to cultural resources. The Authority has received no responses to date.

Additional outreach has taken place with the National Parks Conservation Association, the National Trust for Historic Preservation, the National Park Service, Southern California Edison, and United Farm Workers. Specifically, the Authority received comment letters pertaining to the historic properties analyzed in the November 2018 Draft Section 106 FOE from the National Park Service, the SHPO, Southern California Edison, and the San Manuel Band of Mission Indians. The Authority addressed most of the comments received on the November 2018 Draft Section

106 FOE by revising this FOE to eliminate proposed mitigation measures, revising the effects analysis terminology, eliminating effects conclusions about contributors to historic districts, updating visual simulations and associated mapping, adding a list of document preparers, and incorporating recommended Southern California Edison documents into the analysis, which caused a refinement of the effects conclusions to the Southern California Edison historic property. Some of the concerns expressed by the San Manuel Band of Mission Indians have been addressed in this FOE, and outstanding issues will be addressed via ongoing tribal consultation. For more detail regarding comments and outreach efforts, refer to the December 2019 FOE (Authority 2019a).

In addition, the Authority posts meeting notices and public documents on its website (www.hsr.ca.gov). The site includes information about the HSR project, the proposed HSR route, business plan updates, newsletters, press releases, board of directors meetings, recent developments, the current status of the environmental review process, Authority contact information, and related links. The Authority Board of Directors meetings are open to the public, and one of the first items on the meeting agenda is to provide an opportunity for public comment on any public agenda item. In addition, materials (in English and Spanish) on how to participate in the public comment period and navigate the extensive documentation were also available online.

Section 106 Consulting Party Meetings

In addition to the agency and public meetings held, the following meetings with consulting parties were held. Table 3.17-6 offers a list of the Section 106 consulting party meetings.

Table 3.17-6 Section 106 Consulting Party Meetings

Date of Meeting	Meeting Location / Attendees
3/30/2016	Office of Historic Preservation (OHP), Sacramento; attended by cultural resources staff from OHP, the Authority, the Rail Delivery Partner, and the technical subconsultant (JRP Historical Consulting, LLC)
8/24/2016	FRA sent a notification letter to the National Park Service (NPS) that included a description of the undertaking and an invitation to consult with FRA regarding potential effects to the historic property
12/7/2016	FRA and Authority staff met with the NPS to discuss the Nuestra Señora Reina de La Paz National Historic Landmark (NHL). The NPS accepted the FRA's invitation to be a consulting party for the undertaking in a letter received by the FRA on March 16, 2017.
3/13/2017	National Chavez Center, NPS, State Historic Preservation Office (SHPO)
4/17/2017	National Chavez Center and NPS
4/18/2017	The Authority, the Advisory Council on Historic Preservation, and the SHPO held a meeting regarding the NHL
4/25/2017	National Chavez Center, NPS, Advisory Council on Historic Preservation, SHPO
6/5/2017	The Authority, the Advisory Council on Historic Preservation, the NPS, the SHPO, the Chavez Foundation, and the FRA met again to discuss the project. The law firm of Chatten-Brown & Carstens, on behalf of the National Chavez Center, sent a letter on July 5, 2017, to the Authority and the FRA expressing concerns over potential effects to the NHL and requesting an analysis of alternative alignments or configurations that would completely avoid effects. On August 15, 2017, the Authority and the FRA sent a response letter stating that the project team was evaluating potential alternative alignments.

Date of Meeting	Meeting Location / Attendees
6/25/2018	The Authority, the Advisory Council on Historic Preservation, the NPS, the SHPO, the Chavez Foundation, and the FRA met again to discuss the project. The Authority presented a minimization option (CCNM Design Option) and described the constraints of constructing an alignment that would completely avoid adverse effects. On September 4, 2018, the Authority provided further information, as requested at the meeting, to the consulting parties, including a memorandum documenting the Authority's consideration of avoidance alternatives (Consideration of Alternatives to Avoid Adverse Effects to César E. Chávez National Monument, September 4, 2018). The Chavez Foundation requested additional information by email on September 18, 2018, to which the Authority responded to all consulting parties on September 24, 2018. The Authority provided the NCC (and other consulting parties) a copy of the draft FOE for review and comment on November 16, 2018. The NCC responded with a comment letter on December 28, 2018; on January 22, 2019, the Authority responded in a letter acknowledging receipt of the NCC's letter and reconfirming the Authority's commitment to ongoing collaboration and consultation.
7/11/2019	The Authority followed up the delivery of a June 2019 Design Options Screening Report with a meeting on July 11, 2019, during which it addressed consulting parties' comments on the draft FOE and presented the results of the screening report. During the meeting, the consulting parties expressed their concern that the Authority still had not considered an avoidance alternative in its analysis. The ACHP and the Authority followed up the July 11, 2019 consulting party meeting with a conference call on July 18, 2019. The ACHP then provided comments to the Authority to assist in complying with Section 106 in a letter August 16, 2019. The ACHP comments clarified a recent decision by the District of Columbia Circuit Court, which addressed the definition of a "direct" effect under Section 106 and 110(f) of the NHPA, instructed the Authority to amend the Section 106 PA for the undertaking to address the recent assignment of FRA National Environmental Policy Act responsibilities to the Authority.
8/28/2019	The Authority proposed an addendum to the June 2019 Design Options Screening Report, and consulting parties agreed to review the addendum. The addendum was provided to consulting parties on August 30, 2019. The addendum contained an environmental and design analysis of two additional options developed to avoid adversely affecting La Paz. Comments were requested from consulting parties by October 2, 2019.
10/16/2019	The Authority received comments on the addendum to the Design Options Screening Report. A meeting was held with consulting parties to address comments to the addendum. The Authority responded to consulting party comments during the meeting, and committed to compiling a revised draft FOE by the end of the October 2019 that addressed or incorporated many of the comments from consulting parties.

ACHP = Advisory Council on Historic Preservation
FOE = Finding of Effect
FRA = Federal Railroad Administration
La Paz = Nuestra Señora Reina de La Paz National Historic Landmark/César E. Chávez National Monument
NHPA = National Historic Preservation Act
NPS = National Park Service
Section 106 PA = The *Programmatic Agreement Among the FRA, the Advisory Council on Historic Preservation, the SHPO, and the Authority regarding Compliance with Section 106 of the NHPA, as it Pertains to the California High-Speed Train Project*

Native American Outreach and Consultation

The Authority and FRA engaged with tribal governments in the early stages of project development and the preparation of cultural resources studies by affording them the opportunity to participate in the cultural resources investigations throughout the project delivery process. The Cal. Public Regs. Code requires consultation with Native American tribes. Cal. Public Res. Code 21080.3.1 requires a lead state agency to consult with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project; Cal. Public Res. Code 21080.3.2 requires that, as part of the consultation, the parties may propose mitigation measures capable of avoiding or substantially lessening potential significant impacts to a tribal cultural resource; and Cal. Public Res. Code 21082.3 requires that any mitigation measures

agreed upon through this consultation shall be included in the environmental document. Additionally, in accordance with 36 C.F.R 800.2(c)(2) and the PA, federally recognized Native American tribes are to be given the opportunity to identify their concerns about historic properties, advise on the identification and evaluation of historic properties, articulate their views on the undertaking's effects on such properties, and participate in the resolution of adverse effects.

The Authority and FRA rely on the NAHC to identify those Native American tribal governments with whom it is most appropriate to consult for a given geographical area. These include both federally recognized and non-federally recognized tribes. A revised/updated list of local tribes is regularly obtained from the NAHC to ensure that the most current tribal contact information is used when communicating with tribal representatives.

Tribal entities were notified of the initiation of the HSR programwide Section 106 process in 2009 and were consulted during the preparation of the PA between 2010 and its execution in 2011. For the Bakersfield to Palmdale Project Section, Native American outreach and consultation among the Authority, the FRA, and local tribes (both federally recognized and nonfederally recognized), has been ongoing since March 2015. The Authority and the FRA rely on the NAHC to identify those Native American tribal governments with whom it is most appropriate to consult for a given geographical area. The NAHC provided a list of Native American tribes culturally affiliated with the Bakersfield to Palmdale Project Section corridor on March 26, 2015. The Authority mailed letters to all tribes on the tribal mailing list on May 29, 2015, and sent follow-up emails on June 1, 2015, requesting information on the project section relative to Native American concerns. The following list indicates the various tribes whose representatives were contacted. Those tribes marked with an asterisk have requested consulting party status for the project and are involved in government-to-government consultation with the FRA and/or the Authority, as appropriate.

- Barbareño/Ventureño Band of Mission Indians*
- Fernandeño Tataviam Band of Mission Indians*
- Kawaiisu Tribe of the Tejon Indian Reservation
- Kern Valley Indian Community*
- Picayune Rancheria of Chukchansi Indians*[4]
- San Fernando Band of Mission Indians
- San Manuel Band of Mission Indians*[4]
- Santa Rosa Tachi-Yokut Tribe*
- Soboba Band of Luiseño Indians[4]
- Table Mountain Rancheria*[4]
- Tejon Indian Tribe*
- Tule River Tribe of California*[4]

Tribal participation in the cultural resources studies in the Bakersfield to Palmdale Project Section includes tribal contributions to the identification of resources and/or culturally sensitive areas, participation in project alignment tours, and participation in pedestrian archaeological field surveys. As discussed in Section 3.17.2, California and federal laws exempt from disclosure information regarding the location of Native American, archaeological, and other culturally sensitive sites. Therefore, the locations of such sites are not included in this chapter. Tribes also contribute to, review, and may comment on cultural resources technical reports, and assist in the development of MOAs and ATPs. The MOA will include provisions for phased identification of archaeological resources because of limited access to perform pedestrian archaeological surveys. Tribal representatives monitor construction and archaeological excavations and collaborate on the development of meaningful mitigation options to address effects to significant cultural resources. The Authority and the FRA will continue to consult with Native American tribes after the ROD, as the previously inaccessible parcels are acquired, accessed, and surveyed. Table 3.17-7 summarizes the outreach conducted to identify Native American consulting/ concurring parties.

[4] Federally recognized tribe.

Table 3.17-7 Summary of Outreach Efforts to Identify Native American Consulting/ Concurring Parties

Action	Date	Summary
The Authority sent a letter to the NAHC requesting the Sacred Lands File records and a list of Native American contacts for the Bakersfield to Palmdale Project Section.	March 4, 2015	The NAHC completed a search of the Sacred Lands File for the APE and sent a list of Native American contacts for the project section.
The Authority sent letters to, and contacted via email, all tribes and individuals on the Tribal Mailing List, including both federally recognized tribes and additional tribal communities. The Authority requested input regarding sensitive tribal cultural resources.	May 29, 2015	Responses were received from the Soboba Band of Luiseño Indians (June 4, 2015) requesting government-to-government consultation and for the requests of the tribe to be honored.
The Authority sent a response to the Soboba Band of Luiseño Indians inviting them to return a consulting party participation form.	June 16, 2015	The Soboba Band of Luiseño Indians responded June 16, 2015, to request longer timelines for analysis of the alignment and tribal consultation. The Soboba Band of Luiseño Indians may wish to play a more active role in the development of the MOA.
The Authority hosted a telephone meeting with a representative of the Soboba Band of Luiseño Indians.	August 5, 2015	The Authority discussed the project sections of the HSR system, project phases, and the MOA process.
The Authority sent a response to a representative of the Soboba Band of Luiseño Indians summarizing a meeting with the representative.	August 5, 2015	A representative of the Authority sent an email summarizing the points of discussion in the August 5 meeting.
The Authority sent a response to a representative of the Soboba Band of Luiseño Indians following a meeting with the representative.	August 14, 2015	The Authority provided KMZ and GIS files of the preliminary design of the Los Angeles to San Diego Project Section and the Bakersfield to Palmdale Project Section per the request of the tribal representative.
The Authority sent an email and a hard-copy letter inviting tribal representatives to attend an invitation-only tribal informational meeting with the Authority in Bakersfield.	October 26, 2015	The Authority invited tribal representatives to attend an invitation-only tribal informational meeting with the Authority in Bakersfield on November 5, 2015.
The Authority hosted a tribal informational meeting.	November 5, 2015	The Authority met with tribal representatives at an invitation-only tribal informational meeting, where it discussed Section 106 consulting party invitations to tribes, Tribal Monitor Designation Forms to tribes, arranging a bus-guided tour of the alignment, and updates to the HSR Tribal Territories Map.
The Authority sent an email to tribal representatives summarizing the November 5 meeting.	January 4, 2016	A representative of the Authority sent an email summarizing the points of discussion in the November 5 meeting described above, attaching detailed notes from the meeting.

Action	Date	Summary
The Authority sent letters formally inviting all tribes invited to the November 5 meeting, as well as all tribes previously contacted for the project, to participate in the project section as a Section 106 consulting party.	January 7, 2016	To date, the respective tribal leadership for the Tejon Indian Tribe, the Kern Valley Indian Council, and the Fernandeño Tataviam Tribe have elected to participate as Section 106 consulting parties for the project section. The cultural resources director of the Soboba Band has formally requested status as a Section 106 consulting party for the project. At this time, the San Manuel Band of Mission Indians has expressed interest in being a consulting party; however, this status has not yet been formalized.
The Authority individually met with the Tejon Indian Tribe, the Tule River Tribe, the Kern Valley Indian Council, and the Fernandeño Tataviam Tribe.	February 2016	The Authority met with the Tejon Indian Tribe and the Tule River Tribe at the Tejon tribal office in Bakersfield on February 12, 2016, regarding the HSR program and the tribe's participation in the project. The Authority met with the Kern Valley Indian Council and its tribal members on February 13, 2016, to give an overview of the HSR program and how the tribe can participate throughout the process. Lastly, the Authority met with the Fernandeño Tataviam Tribe at its tribal office in San Fernando on February 24, 2016, to discuss the HSR program, confirm the tribe's interest in this project section, and to discuss their involvement as a consulting party.
The Authority sent a notification to the local tribal representatives regarding general Community Open House meetings.	June 2016	The Authority sent a notification to the local tribal representatives informing them about a series of upcoming Community Open House meetings scheduled to take place in the area. In the notification, the Authority stated that while the meetings are not specifically about cultural resources, they are a good opportunity to learn more about the project and the alternatives under consideration.
The Authority hosted a Bakersfield to Palmdale Project Section tour for Native American consulting parties.	March 2018	On March 19 and 20, 2018, the Authority hosted a tour of the Bakersfield to Palmdale Project Section specifically for Native American consulting parties. The intent of the tour was to provide the tribal stakeholders an opportunity to view the landscape of the Preferred Alternative and to learn more about the proposed engineering features of the alignment at archaeologically sensitive locations. Mapbooks of archaeologically sensitive areas were provided to help orient the participants during the tour, and stops were made at key locations along the project section. The tour included 13 participants, including representatives from the Tejon Indian Tribe, the Kern Valley Indian Council, the San Manuel Band of Mission Indians, and the Barbareño/Ventureño Band of Mission Indians, as well as representatives from the FRA and the Authority.

Action	Date	Summary
The Authority held meetings and teleconferences to solicit tribal input.	October 2018	The Authority held meetings and teleconferences on May 20, August 20 and 29, September 18, and October 15, 2018 to provide updates on NEPA assignment, project status, and to solicit tribal input and concerns regarding the project. The Authority and the FRA will continue to consult with the tribal consulting parties for this project section, and any input from the tribes will be integrated into the project planning process.
The Authority sent email communications to relevant tribal contacts regarding the APE.	November 2018	APE Modification notice for the Bakersfield to Palmdale Project Section resulting from the development of a design option that would minimize anticipated effects to the Nuestra Señora Reina de la Paz National Historic Landmark. No comments were received.
The Authority received a letter from the San Manuel Band of Mission Indians regarding the revised FOE.	December 2018	The San Manuel Band of Mission Indians provided comments on the Bakersfield to Palmdale Project Section FOE. The tribe will not opine on the César E. Chávez National Monument, as this area is outside of its traditional tribal territory.
The Authority requested a meeting with the San Manuel Band of Mission Indians regarding FOE comments.	March 2019	On May 2, 2019, the Authority met with the San Manuel Band of Mission Indians to discuss NEPA assignment and the status of project sections of concern to the tribe. The tribe had no comment on the César E. Chávez National Monument, as this area is outside of its traditional tribal territory. Stephanie Perez (FRA) was invited to the meeting but declined.
The Authority met with interested tribes regarding a Central Valley project section.	August 2019	On August 20, 2019, the Authority met with interested tribes regarding a Central Valley project section status update. No comments from tribes on the César E. Chávez National Monument or "3 Peaks" were received.
The Authority met with the Fernandeño Tataviam Band of Mission Indians.	August 2019	On August 29, 2019, the Authority met with the Fernandeño Tataviam Band of Mission Indians per the tribe's request to provide program status update and additional information regarding NEPA assignment. The Authority and the tribe discussed the selection of the Palmdale to Burbank route that avoids Blum Ranch and additional measures underway to address Una Lake.
The Authority followed up with the Fernandeño Tataviam Band of Mission Indians regarding the meeting.	September 2019	The tribe had no comment on the meeting minutes from the August 29, 2019, meeting.

Action	Date	Summary
The Authority hosted a teleconference with interested tribes.	October 2019	The Authority held a teleconference to discuss topics of importance to tribes. Mr. Rushing informed the tribes of the revised FOE in preparation for changes to the Bakersfield to Palmdale alignment to avoid the César E. Chávez National Monument. Colin Rambo (Tejon Indian Tribe) asked if the Authority would continue work on the Bakersfield to Palmdale Project Section; Mr. Rushing responded that the Authority is committed to completing the environmental documents. No questions or comments regarding the César E. Chávez National Monument or "3 Peaks" were received.

Source: California High-Speed Rail Authority and Federal Railroad Administration, 2017b; 2017d

APE = area of potential effect
Authority = California High-Speed Rail Authority
FRA = Federal Railroad Administration
GIS = geographic information systems
HSR = high-speed rail
KMZ = Keyhole Markup Language Zipped
MOA = memorandum of agreement
NAHC = Native American Heritage Commission
NEPA = National Environmental Policy Act

Consulting Parties

Table 3.17-8 presents the entities to date who have elected to become Section 106 consulting parties for the cultural resources investigation and the preparation of the MOA.

Table 3.17-8 Consulting Parties in the Preparation of the Memorandum of Agreement

Name of Entity
Barbareño/Ventureño Band of Mission Indians
Fernandeño Tataviam Band of Mission Indians
Table Mountain Rancheria
San Manuel Band of Mission Indians
Picayune Rancheria of Chukchansi Indians
Santa Rosa Tachi-Yokut Tribe
Tejon Indian Tribe
Tule River Tribe of California
Kern Valley Indian Community
Nuestra Señora Reina de La Paz National Historic Landmark
National Park Service
County of Los Angeles
National Parks Conservation Association
National Trust for Historic Preservation

As required by Section 106, and in response to comments received from interested parties, Qualified Investigators confirmed that all built resources noted in the responses were included in the studies conducted for the Bakersfield to Palmdale Project Section and that all local surveys and inventories were consulted. Ongoing and future consultation with the above-listed entities and agencies (as well as any additional consulting parties identified during preparation) regarding historic properties will be included in subsequent editions of this EIR/EIS.

3.17.5 Methods for Evaluating Impacts

Methods for identifying and evaluating the significance of historic properties and historical resources and assessing impacts on these properties and resources for the Bakersfield to Palmdale Project Section were conducted in accordance with the Section 106 PA. This document provides an overall framework for conducting the Section 106 process, including outreach and consultation efforts, delineation of the APE, historic properties identification procedures, assessment of adverse effects and treatment of historic properties, documentation standards, and state and federal agency oversight in compliance with the NHPA. Additional direction by the Authority provides guidance in compliance with NEPA and CEQA.

The separate assessment of adverse effects required under Section 106 of the NHPA is documented in the Section 106 FOE.

3.17.5.1 Definition of Resource Study Area

The Section 106 process uses the term "area of potential effect" (APE) for the study area established for cultural resources surveys and analyses. Regulations implementing Section 106 of the NHPA require that an APE be established by the lead agency for all federal projects (36 C.F.R. 800.4(a)(1)). The APE is the geographic area or areas within which a project may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist (36 C.F.R. Section 800.13(d)). Prior to establishing the APE, during the early stages of project design, a study area was delineated to initiate presurvey studies, including a records search at the California Historical Resources Information System at both the Southern San Joaquin Valley Information Center and the South Central Coastal Information Center, as well as preliminary archival research.

With the identification of the alternatives to be considered, two distinct APEs were delineated for the purpose of this undertaking, one for archaeology (Archaeological APE) and one for architectural or built resources (Built Resources APE). The APEs were delineated to consider both construction-related effects and operational effects. Both APEs were established following guidelines provided for in PA Attachment B. The survey and impacts analysis under CEQA also used these APEs. These APEs are defined in detail below. Both the Archaeological and Built Resources APEs for the Bakersfield to Palmdale Project Section are based on the current level of design, which is approximately 15 percent.

Archaeological Area of Potential Effects

What is the Area of Potential Effect?

The Area of Potential Effect (APE) is the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, as defined in 36 C.F.R. 800.16(d).

The APE for archaeological properties was established in accordance with Attachment B and Stipulation VI.A of the Section 106 PA. The Archaeological APE is the area of ground proposed to be disturbed before, during, and after construction as well as during operation. Ground-disturbing activities may include, but are not limited to, excavation for the vertical and horizontal profiles of the alignment, station location footprints, geotechnical drilling, grading, cut-and-fill, easements, staging/laydown areas, utility relocation, borrow sites, temporary or permanent road construction, infrastructure demolition, biological mitigation areas, and all permanent rights-of-way (i.e., the project footprint). The APE includes areas for on-site disposal of spoils for Alternatives 1, 2, and 5, but does not include off-site spoils disposal areas required for Alternative 3.

For future planning purposes, the background research and field survey conducted for the ASR documents recorded archaeological sites within a larger geographical boundary than the Archaeological APE. For the purposes of this document, archaeological surveys were conducted within the APE and within a 300-foot buffer of the APE, and those newly identified resources appear within discussions of the Affected Environment for the project. However, only those resources within the Archaeological APE require evaluation to determine eligibility for listing on the NRHP and CRHR and may require mitigation for potential adverse effects.

The Archaeological APE for this undertaking extends from the two alternative Bakersfield Station locations under consideration at the northern terminus to the proposed Palmdale Transportation Center at the southern terminus of the Bakersfield to Palmdale Project Section. However, the Archaeological APE for the two Bakersfield Station alternatives is documented under separate environmental documents: the *Fresno to Bakersfield Section Final EIR/EIS* (2014) and the *Fresno to Bakersfield Locally Generated Alternative Supplemental EIR/EIS* (public draft released December 9, 2017; Board certified October 16, 2018). The Archaeological APE discussed in the following analysis includes only the portion of the Project Section that extends from Oswell Street in Bakersfield to the proposed Palmdale Station.

The vertical Archaeological APE was delineated in coordination with project engineers and includes maximum depth of ground disturbance for various features of the project. The maximum depth of project excavation would be 240 feet, which is the vertical APE for all B-P Build Alternatives.

It is anticipated that the Archaeological APE would be revised during future project design and construction in order to account for design changes, infrastructure needs, additional geotechnical testing locations, and off-site staging and biological mitigation areas. The APE has been modified during the environmental review process already, and PA signatories were contacted with information regarding the modification. As design of the project advances after the Record of Decision, the Authority will determine future revisions to the APE, and these revisions will be implemented in a manner consistent with Section VI.C.4 and Attachment B of the Section 106 PA.

Historic Built Resources Area of Potential Effects

The Built Resources APE for the Bakersfield to Palmdale Project Section includes either full or appropriate portions of all legal parcels intersected by the proposed HSR right-of-way for all alternatives considered in this EIR/EIS, including proposed ancillary features (e.g., grade separations, stations, maintenance facilities, and construction staging areas). The Built Resources APE is larger than the project footprint and was delineated to also take into consideration potential visual and audible effects. Visual and audible changes have the potential to adversely affect character-defining features of some historic built resources.

This methodology for establishing the historic Built Resources APE follows standard practices for the discipline, as well as Attachment B of the PA and the Authority's Cultural Resources Technical Guidance Memorandum #1 (Authority and FRA 2013). 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.
- Properties near the project where railroad materials, features, and activities have not been part of the 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 project that were used by a railroad or served by a railroad, or where railroad materials, features, and activities have long been part of their historic setting.
- Parcels that would be included when delineating an APE, even if they are empty or would otherwise be exempt per PA Attachment D. This provides a record of which properties were exempted; no other documentation of such properties is required.

In addition to compliance with the PA and guidance described above, the Built Resources APE was delineated using the following methodology:

- If built resources existed on a large rural parcel within 150 feet of the proposed right-of-way for each alternative, or if it was determined that the resources on that parcel would be otherwise potentially affected by the project, the entire legal parcel was included in the APE.
- If built resources on a large rural parcel were more than 150 feet away from the proposed at-grade right-of-way and were otherwise not potentially affected by the project, the APE

boundary was set at 150 feet from the right-of-way. In these cases, resources outside the APE on that parcel did not require further survey.

- If parcels located adjacent to those intersected by the Bakersfield to Palmdale Project Section could be visually or audibly impacted, they were included in the APE.
- Other potential effects that were considered when delineating the APE include, but are not limited to, physical damage or destruction of all or part of a property; physical alterations; moving or realigning property; isolating a property from its setting; visual, audible, or atmospheric intrusions; shadow effects; damage from vibration; and change in access or use.

The Built Resources APE remained in draft form during the course of environmental review to account for updated project information as well as ongoing field efforts that clarify whether individual properties meet the above stipulations. It was considered final with delivery of the HASR and ASR. Subsequently, an addendum APE was provided. The Built Resources APE would be updated in accordance with and implemented in a manner consistent with Section VI.C.4 and Attachment B of the Section 106 PA, should future design changes require it.

As discussed above, the APE extends from the two station alternatives in Bakersfield (on the north) to the station in Palmdale on the south. The APE for the subsections around the Bakersfield station (F Street [LGA]) is included in the APE, but were studied and the findings reported in the *Fresno to Bakersfield Section Final EIR/EIS* (Authority and FRA 2014) and the *Fresno to Bakersfield Section Supplemental EIR/EIS* (public draft released December 9, 2017; Board certified October 16, 2018). These subsections of the APE for the Bakersfield Station alternatives have map reference numbers only for the eligible historic properties contained therein.

Cultural Resources Data Sources

California Historical Resources Information Systems Record Search

Cultural resource records searches were conducted at the Southern San Joaquin Valley Information Center at California State University, Bakersfield, and at the South Central Coastal Information Center at California State University, Fullerton. The Southern San Joaquin Valley Information Center and the South Central Coastal Information Center are affiliates of the California Office of Historic Preservation (OHP) and are the regional repositories of cultural resources records and reports for Kern and Los Angeles Counties, respectively. Initial records searches were completed at the respective information centers in March 2015. Project design revisions were made that extended the project footprint; these were captured in records searches conducted in April 2016. Information on all recorded cultural resources, as well as previous studies, was obtained, including the following:

- Locations of all recorded cultural resources and studies
- Copies of all cultural resource records, Directory of Properties listings, and Archaeological Determinations of Eligibility
- A bibliographic list of studies

Background and Literature Research

Information consulted regarding potential cultural, archaeological, historic, and architectural resources in the project vicinity includes the following:

- California Inventory of Historic Resources (OHP 1976)
- *Five Views: An Ethnic Historic Site Survey for California* (OHP 1988)
- *Archaeological Determination of Eligibility for Kern County* (OHP 2012a)
- *Archaeological Determination of Eligibility for* Los Angeles County (OHP 2012b)
- *Directory of Properties in the Historic Property Data File for Kern County* (OHP 2013) and *Los Angeles County* (OHP 2012c) (includes the listings of the NRHP, NHL, CRHR, California Historical Landmarks, and California Points of Historical Interest)

- *National Register of Historic Places–Listed Properties and Determined Eligible Properties* (National Park Service [as of February 2016])
- State Historic Resources Commission (OHP, pending nominations, February 2016)

The background research also included a review of pertinent literature and inventories to establish the overall archaeological, historical, and environmental context for the area. For archaeological resources, the environmental literature reviewed included relevant soils, geologic, geomorphic, and geoarchaeological literature pertinent to defining the potential for buried archaeological resources within the APE. For built resources, sources consulted included archival and published records, including but not limited to the following:

- California Department of Transportation District 6 (Fresno) maps and plans
- California Department of Transportation Library and History Center (Sacramento)
- California Geological Survey Library
- California Railroad Museum Library (Sacramento)
- California State Archives and Library
- Kern County Assessor and Recorder
- Kern County Department of Engineering, Surveying, and Permit Services
- Kern County Library, Beale Memorial Library (Bakersfield)
- Kern County Museum (Bakersfield)
- Los Angeles County Public Library, Lancaster Branch
- Palmdale City Library
- University of California, Berkeley, Bancroft Library
- University of California, Davis, Shields Library
- Water Resources Center Archives

In addition, the background research included a review of historic fire insurance maps prepared by the Sanborn Company to identify areas where previously unrecorded historic-era archaeological and architectural resources might be found. Historic features and land uses identified on the Sanborn maps were plotted on a modern aerial photograph. These aerial figures were then used to determine the types of archaeological deposits and built resources that may be encountered within the APE during field investigations. Sanborn maps published in 1910, 1918, 1923, 1927, and 1934 for those portions of Lancaster and Palmdale within the APE and vicinity were reviewed. Sanborn map coverage of other areas in the APE was not available, indicating that the physical development was too sparse to warrant inspection by the insurance industry in the late 19th and early 20th centuries.

Bureau of Land Management General Land Office plats and historic U.S. Geological Survey topographic quadrangle maps were examined to identify historic features within the APE and vicinity. The presence of historic features, which could include built resources (structures 50 years or older) or archaeological resources (e.g., early wagon roads, historic residences, homesteads, farmsteads, and related features that may have associated historic-period archaeological deposits such as trash scatters or structural remains) were noted on the General Land Office plats and historic U.S. Geological Survey maps. The General Land Office plat and U.S. Geological Survey map review was useful for assessing 19th and early 20th century built environments in rural areas otherwise excluded by Sanborn map renderings.

The General Land Office plats that were examined consist of the following:

- Township 6 North, Range 12 West (1855, San Bernardino Baseline and Meridian [SBBM])
- Township 7 North Range 12 West (1856, SBBM)
- Township 8 North, Range 12 West (1856, SBBM)
- Township 8 North, Range 13 West (1856, SBBM)
- Township 9 North, Range 13 West (1856, 1899, 1917, SBBM)
- Township 10 North, Range 13 West (1856, 1935, SBBM)
- Township 10 North, Range 14 West (1856, 1881, 1935, SBBM)
- Township 11 North, Range 14 West (1856, 1894, SBBM)
- Township 12 North, Range 14 West (1856, SBBM)

- Township 29 South, Range 28 East (1855, Mount Diablo Base and Meridian [MDBM])
- Township 29 South, Range 29 East (1855, MDBM)
- Township 30 South, Range 29 East (1856, MDBM)
- Township 30 South, Range 30 East (1856, MDBM)
- Township 30 South, Range 31 East (1859, 1875, MDBM)
- Township 31 South, Range 31 East (1855, 1856, MDBM)
- Township 31 South, Range 32 East (1876, MDBM)
- Township 32 South Range 32 East (1855, 1856, MDBM)
- Township 32 South Range 33 East (1855, 1856, MDBM)

The U.S. Geological Survey maps that were examined include *Caliente, California* (1914), *Elizabeth Lake, California* (1915, 1917), *Mojave, California* (1915), *Oban, California* (1930, 1933), and *Fairfax School, California* (1932). The focus of the U.S. Geological Survey map review was on those parcels targeted for survey as part of the current field investigation in order to assess their potential for containing historic-period archaeological deposits and built resources.

Geoarchaeological Sensitivity Assessment

A geoarchaeological sensitivity assessment of the Bakersfield to Palmdale Project Section corridor (see Appendix E of the ASR [Authority 2019e]) indicates that the majority of the current APE consists of surface landforms that are too old to contain buried prehistoric archaeological resources. However, younger landforms (i.e., Holocene-age deposits) are present in a substantial portion of the current APE and overlie older landforms that predate human occupation of the region. Younger Holocene-age deposits in the APE may be covering older archaeological deposits.

As stipulated in the Section 106 PA (Section VIII.A.1), a phased identification (including testing and evaluation of archaeological resources) will be necessary as access is granted, as the project section design is refined, and where adverse effects are likely to occur. These phased efforts will be conducted pursuant to the future MOA and subsequent ATP, and will be documented in Supplemental ASRs as well as, when warranted, Extended Phase I and Archaeological Evaluation Reports.

3.17.5.2 Methods for Resource Identification

The approach to resource identification differs between archaeological resources and historic built or architectural resources. While both studies are initiated by a records search and general research to identify known historic resources and past studies, followed by field surveys, the process generally diverges at this point, largely because of limited access to conduct archaeological pedestrian surveys.

Although an archaeological or built resource may not be listed in or determined to be eligible for listing in the NRHP, the CRHR, a local register of historic resources (pursuant to Section 5020.1[k] of the Cal. Public Res. Code), or identified in a historic resources survey (meeting the criteria in Section 5024.1[g] of the Cal. Public Res. Code), a lead agency may determine it to be a historical resource as defined in Cal. Public Res. Code Section 5020.1(j) or 5024.1 for the purposes of CEQA, unless the preponderance of the evidence demonstrates that the resource is not historically or culturally significant.

Archaeology Methods

All surveys were conducted by archaeologists meeting the professional qualification standards as required in Stipulation III of the PA, and the Secretary of the Interior's Professional Qualification Standards (48 *Federal Register* 44738–44739) (Appendix A to 36 C.F.R. Part 61), referred to as Qualified Investigators in the PA.

In addition to the archival research and tribal outreach and consultation discussed above, a series of intensive pedestrian surveys for archaeological resources were conducted for the project section in 2011, 2012, 2015, and 2016 to identify prehistoric and historic archaeological resources. During all stages of the survey, pedestrian coverage has been limited to those areas for which permission to enter has been obtained.

Stipulation VI.E of the PA provides for phased identification in situations where identification of historic properties cannot be completed, for instance, when private property owners deny permission to enter, which was the principal constraint to completing field surveys. In such cases, the development and implementation of a post-ROD identification and evaluation effort will be stipulated in an MOA to ensure the historic properties identification effort is completed once the properties become accessible and prior to construction.

The total area surveyed in the APE to date is 1,700 acres. This accounts for 16 percent of the APE. Additional identification and evaluation efforts will, therefore, be undertaken for the Bakersfield to Palmdale Project Section subject to future permission to enter, engineering and design development, and selection of the preferred alternative. These identification efforts may include pedestrian surveys, subsurface exploration (e.g., soil coring and trenching), remote sensing, monitoring, or some combination thereof, depending on archaeological sensitivity and site-specific logistics. This phasing is being coordinated through the development and implementation of the MOA.

The field procedures that guided the identification of archaeological sites encountered during the field investigation adhered to the PA as well as the standards of professional practice of archaeology (see Section 110 of the NHPA and the Secretary of the Interior's Standards and Guidelines for Identification of Historic Properties [Federal Register Volume 48, Page 44716]). The PA defined the overarching approach to assessing the resources encountered in the field for the Bakersfield to Palmdale Project Section and the guidance for establishing historic property exemptions. The criteria for what constitutes an "isolate" and a "site" and the process for the initial evaluation of a given resource are the implementation of the criteria for exemption provided by Attachment D of the PA. Those resources encountered that qualified as exempt were reviewed under CEQA criteria and found not to be historical resources or unique archaeological resources as defined by the CEQA Guidelines.

Details of the pedestrian field surveys are documented in the ASR prepared for the Bakersfield to Palmdale Project Section (Authority and FRA 2019e). Field inventory not completed prior to the ROD will follow the requirements in the MOA and will be completed for the selected alternative when access has been granted and/or the parcels have been acquired.

Historic Architectural/Built Resources Methods

All surveys were conducted by architectural historians and/or historians meeting the professional qualification standards as required in Stipulation III of the PA, and the Secretary of the Interior Professional Qualification Standards (48 *Federal Register* 44738–44739) (Appendix A to 36 C.F.R. Part 61).

In addition to the records and background research discussed above, a series of field surveys were conducted in 2011, 2012, 2013, 2014, and 2016 that sought to identify all historic-period buildings, structures, and objects, as well as districts, historic landscapes, and TCPs located within the APE. These surveys took into account previously identified, as well as newly identified, built resources. Qualified Investigators conducted an initial reconnaissance-level survey of built resources within the APE that were 50 years of age or older at the time of survey and documented those that required no further study using streamlined documentation per Attachment C of the Section 106 PA Guidelines (Authority and FRA 2011c). Of the hundreds of historic architectural resources subject to survey, only two parcels were not fully visible for field survey photography. In these cases, detailed property histories were prepared following standard practices, including review of multiple editions of historic aerial photography and documentary research, and the lack of field visibility was noted on the recordation forms. The information gleaned from this research allowed the properties to be fully evaluated, Qualified Investigators made evaluation conclusions, and no further study is needed.

The field surveys and background research supported the evaluation of the survey population of built resources. The survey and evaluations identified and documented properties 50 years old and older within the APE that were either previously listed in the NRHP and/or the CRHR, or determined eligible for listing, as well as identifying resources that did not meet the criteria for listing in the NRHP or CRHR. The surveys and research also confirmed the population of built

resources that was 50 years old and older that had not been previously studied for historic significance. These built resources were subject to study and were evaluated on California Department of Parks and Recreation 523 forms, or were evaluated through streamlined documentation in compliance with the Section 106 PA for the project. The survey population of built environment resources addressed by the analysis consists of those resources built in 1965 or before (resources that were 50 years or older at the time of survey in 2015 for the majority of the APE, as well as resources from 1966 and before in expansion areas of the APE that were surveyed in 2016, in accordance with the PA and CEQA).

Consideration of the Presence of Traditional Cultural Properties

Both the historic built resources survey and archaeological survey included the consideration of the presence of TCPs. These are properties that can be defined generally as those that are eligible for inclusion in the NRHP under criteria A, B, C, and/or D and because of their association with cultural practices or beliefs of a living community that (1) are rooted in that community's history and (2) are important in maintaining the continuing cultural identity of the community. "Traditional" in this context refers to those beliefs, customs, and practices of a living community of people that have been passed down through the generations, usually orally or through practice. The traditional cultural significance of a historic property, then, is significance derived from the role the property plays in a community's historically rooted beliefs, customs, and practices. Unlike archaeological resources and sacred sites, these resources are not subject to federal and state nondisclosure laws. Two such properties were identified in the Built Resources APE: Noriega's and Salon Juarez in the City of Bakersfield. However, these properties are incorporated into this document by reference only. For analysis pertaining to these TCPs, refer to the *Bakersfield F Street Station Alignment Alternative HASR* (Authority and FRA 2016c) and the *Fresno to Bakersfield Section Final EIR/EIS* (Authority and FRA 2014), respectively.

Methods for Identifying Resources of Importance to Native Americans and Other Interested Parties

As described in Section 3.17.6, the Authority has consulted Native Americans and other interested parties to obtain information regarding cultural resources of importance. Native Americans and other interested parties have not notified the Authority regarding the existence of additional TCPs or other cultural resources that could be affected by the current B-P Build Alternatives in this region.

3.17.5.3 Impact Avoidance and Minimization Features

The Authority will integrate into the HSR project programmatic impact avoidance and minimization features (IAMF) consistent with (1) the 2005 Statewide Program EIR/EIS, (2) the 2008 Bay Area to Central Valley Program EIR/EIS, and (3) Appendix 2-E of this document. Prior to construction, several IAMFs for archaeological and historic built resources will be implemented (see Chapter 2). IAMFs are incorporated into the project design and construction that would avoid or minimize the environmental or community impacts. The description of each measure details the means and effectiveness of the measure in avoiding or minimizing impacts, as well as the environmental benefits of implementing the measure.

For archaeological resources, these include the completion of any remaining pedestrian surveys and inventories, protective measures (e.g., conducting archaeological sensitivity training), and preserving sites in place where feasible. For built resources, these IAMFs include the completion of building conditions assessments or historic structures reports, the determination of safe construction vibration levels, and the creation and implementation of protection and stabilization plans. During construction, IAMFs include vibration monitoring for built resources, monitoring for archaeological resources during ground-disturbing activities, and protocols for halting work during construction in the event of a discovery of archaeological resources or damage to built resources.

The Authority will implement IAMFs into the Bakersfield to Palmdale Project Section design and construction, as appropriate, to avoid or minimize the project impacts. IAMFs implemented at either the design or construction phases are conditions that would reduce the degree of adverse

effect or impacts on historic properties. Standardized IAMFs that are applicable to the project section are listed below and described in detail in Appendix 2-E.

- **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.
- **CUL-IAMF#2: Worker Environmental Awareness Program (WEAP) Training Session:** This measure reduces potential cultural resource impacts by providing training on measures to avoid or protect built historic resources, and to recognize archaeological resources that may be encountered, and mandatory procedures to follow should potential cultural resources be exposed during construction. The training also provides project avoidance and mitigation features to project construction crews. Regularly updated mandatory training reduces potential impacts on cultural resources by producing a well- informed construction crew versed in operational procedures that must be followed during construction activity. This reduces the potential for unplanned impacts to cultural resources during construction activities.
- **CUL-IAMF#3: Pre-Construction Cultural Resource Surveys:** This measure calling for conducting pre-construction surveys prior to any ground disturbing activities in consideration of archaeological sites, and, once access is acquired, for parcels containing built resources inaccessible during environmental studies is required by the MOAs. This may reduce impacts on cultural resources during construction by identifying cultural resources on lands that could not be previously surveyed. Some portions of the disturbance footprint were not previously surveyed because of inability to obtain legal access. Pre-construction surveys provide assurance that HSR cultural resource protocols and procedures would be implemented on previously inaccessible portions of the area of potential effect. These surveys are also required in areas that the design necessitates that the APE be expanded or for acquired parcels that contain buildings that would be demolished.
- **CUL-IAMF#4: Relocation of Project Features When Possible:** This measure prioritizes the Authority's efforts to avoid impacts to newly discovered archaeological sites, would reduce potential impacts to cultural resources and is the Authority's preference if avoidance is feasible and practical. HSR is a linear project and changing the rail alignment to avoid archaeological sites discovered during project construction is likely infeasible; however, access areas and laydown sites may be relocated if their proposed location is found to be on newly discovered archaeological resources. Access areas and laydown sites may also be relocated should a built historic resource have the potential to be affected. This avoids such impacts.
- **CUL-IAMF#5: Archaeological Monitoring Plan and Implementation:** Committing to prepare an archaeological sensitivity monitoring plan that identifies and maps areas of archaeological sensitivity reduces impacts on cultural resources by developing a systematic approach to cultural resource monitoring. The sensitivity of such areas is based on one or a combination of any of the following: known locations of archaeological sites, tribal consultation, landforms, depositional processes, distance to water, or historic mapping. This commitment to implement the plan by conducting archaeological and tribal monitoring during construction activities reduces impacts to cultural resources by providing assurances that construction activities would be conducted in a manner consistent with HSR cultural resource protocols and procedures. Oversight by the Cultural Resource Compliance Manager and monitoring by qualified cultural resource and tribal monitors of construction activities near

archaeologically sensitive areas reduces the potential for inadvertent construction impacts to cultural resources.

- **CUL-IAMF#6: Pre-Construction Conditions Assessment, Plan for Protection of Historic Built Resources, and Repair of Inadvertent Damage:** This measure calling for a Pre-Construction Conditions Assessment, Plan for Protection of Historic Built Resources and Repair of Inadvertent Damage reduces potential impacts on historic cultural resources by identifying techniques to minimize inadvertent damage. If damage occurs the plan calls for establishing standards of repair consistent with Secretary of the Interior's Standards for the Treatment of Historic Properties.
- **CUL-IAMF#7: Built Environment Monitoring Plan:** This commitment to prepare and implement a built environment monitoring plan would reduce potential impacts on cultural resources by detailing an implementation strategy for monitoring historic structures and tying implementation of the measures to discrete steps in the construction process. The monitoring plan would define responsibilities and timing (spot check versus full time monitoring) to verify that monitoring occurs in an appropriate manner consistent with HSR cultural resource protocols and procedures.
- **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.

3.17.5.4 Method for NEPA and CEQA Impact Analysis

As stated earlier, the Advisory Council on Historic Preservation advises federal agencies to coordinate compliance with Section 106 and the procedures in the regulations implementing Section 106, with steps taken to meet the requirements of NEPA. Consequently, the NRHP criteria for adverse effect, no adverse effect, or no effect to historic properties (36 C.F.R. Part 800.5) was used to evaluate effects to historic properties within the project's APE. Properties that are listed on the NRHP or found eligible for the NRHP are listed on the CRHR and are considered historical resources for the purposes of CEQA. The findings were documented in the Bakersfield to Palmdale Project Section: Section 106 FOE (Authority 2019a) report.

This section describes the sources and methods the Authority and FRA used to analyze potential impacts from implementing the Bakersfield to Palmdale Project Section on cultural resources. These methods apply to both NEPA and CEQA unless otherwise indicated. Refer to Section 3.1.3.4, Methods for Evaluating Impacts, for a description of the general framework for evaluating impacts under NEPA and CEQA. Refer to the Bakersfield to Palmdale Project Section ASR (Authority 2019e) and the HASR (Authority 2019c) for more information regarding the methods, evaluation criteria, and data sources used in this analysis. Section 3.4 and Section 3.16 describe the methods used to analyze visual, audible, and vibration-related impacts on cultural resources. Laws, regulations, and orders (see Section 3.17.2) that regulate cultural resources were also considered in the evaluation of impacts on prehistoric archaeological resources, historic archaeological resources, and historic architectural resources.

The analysis considers both direct and indirect impacts on cultural resources that could result from construction and operations of the Bakersfield to Palmdale Project Section. For purposes of this analysis, a "direct" effect includes any effects involving physical encroachment (temporary or permanent) within the boundary of the historic property, as well as those that may not physically impact the historic property but would introduce visual or audible impacts that alter its character-defining features. An "indirect" effect includes reasonably foreseeable effects that would occur later in time (e.g., effects resulting from induced growth) or are farther removed in distance.

Section 3.17.5.1, Study Area for Analysis, describes the geographic area in which these impacts were considered. The analysis also considers the permanent impacts from implementing the Project and its components, and the temporary impacts of construction activities.

3.17.5.5 Method for Evaluating Impacts under NEPA

In considering whether an action may "significantly affect the quality of the human environment" under NEPA, an agency must consider, among other things, the unique characteristics of the geographic area. Such considerations include proximity of the project to historic or cultural resources (40 C.F.R. 1508.27(3)), and the degree to which the action may adversely affect districts, sites, highways, buildings, structures, or objects listed or eligible for listing, in the NRHP, and if the project may cause loss or destruction of significant scientific, cultural, or historical resources (40 C.F.R. 1508.27(8)).

Pursuant to NEPA regulations (40 C.F.R. 1500–1508), project effects are evaluated based on the criteria of context and intensity. "Context" is defined as the affected environment in which a proposed project occurs. "Intensity" refers to the severity of the effect, which is examined in terms of the type, quality, and sensitivity of the resource involved; location and extent of the effect; duration of the effect (short- or long-term); and other considerations of context. Beneficial effects are also considered. When no measurable effect exists, no impact is found to occur. The intensity of adverse effects is the degree or magnitude of a potential adverse effect, described as negligible, moderate, or substantial. Thus it is possible that an adverse effect may still be the finding under Section 106 of the NHPA even when the intensity of the impact is determined to be negligible. For the purposes of NEPA compliance, the same methods used to identify and evaluate historic properties are applied to aspects of the cultural environment that are not considered NRHP-eligible properties. In compliance with NEPA, evidence or information that suggested both the existence of and impacts to these resources was incorporated into the following analysis.

The cultural resource impact assessment findings presented below are consistent with the NHPA criteria for adverse effect, no adverse effect, or no effect to historic properties (36 C.F.R. Part 800.5). Under these regulations, a project has an effect on an historic property when the project may alter, directly or indirectly, the characteristics of the property that may qualify the property for inclusion in the NRHP (36 C.F.R. § 800.5(a)). An effect is considered adverse when the effect on a historic property may diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Consideration is given to all qualifying characteristics of a historic property during the effects analysis, including those that may have been identified subsequent to the original evaluation of the property's NRHP eligibility. Adverse effects may include reasonably foreseeable effects caused by the project that may occur later in time, be farther removed in distance, or be cumulative.

Adverse effects on historic properties include, but are not limited to:

- Physical destruction of or damage to all or part of the property.
- Alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation, and provision of handicapped access that is not consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties (36 C.F.R. 68) and applicable guidelines.
- Removal of the property from its historic location.
- Change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance.
- Introduction of visual, atmospheric, or audible elements that diminish the integrity of the property's significant historic features.
- Neglect of a property that causes its deterioration, except where such neglect and deterioration are recognized qualities of a property of religious and cultural significance to a Native American tribe or Native Hawaiian organization.
- Transfer, lease, or sale of property out of federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance.

3.17.5.6 Method for Determining Significance under CEQA

The NRHP eligibility criteria (36 C.F.R. § 60.4) was used to evaluate historic significance of resources within the project's APE, as described earlier in this chapter, for the purposes of CEQA compliance. Properties that are listed on local agency registers may be considered historical resources for the purposes of CEQA (Cal. Public Res. Code § 21084.1), even if they are not found to be eligible for the NRHP. The CRHR criteria of eligibility are based on the NRHP criteria. One of the primary differences between NEPA and CEQA in general is that CEQA requires a threshold-based approach to impacts, which is similar to that of the NRHP. Once the lead state agency determines a property to be eligible for the NRHP and the CRHR, the potential for the property to be affected by the project must be analyzed.

Based on the CEQA Guidelines, the project would result in a significant impact on cultural resources if it would result in any of the following:

- Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5.
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.
- Disturb any human remains, including those interred outside of formal cemeteries.

The CEQA Guidelines use the following definitions to analyze impacts on historical or archaeological resources:

- Substantial adverse change in the significance of a historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be materially impaired (Section 15064.5[b][1]).
- The significance of a historical resource would be materially impaired when a project demolishes or materially alters in an adverse manner those physical characteristics that convey its historic significance or justify its inclusion in, or eligibility for, the NRHP, CRHR, or local registers (Section 15064.5[b][2][A–C]).

3.17.6 Affected Environment

In accordance with PA Attachment C, HSR Program Documentation and Format Guidelines, the methodology for identification of historic properties includes the development of historic themes and contexts. Such contexts characterize the historical environment of the project APE and provide the baseline against which archaeological and historic built resources are evaluated for historic significance and integrity. The following historic contexts and resource typologies are summaries of those included in the Section 106 technical documents. The NRHP eligibility criteria (36 C.F.R. 60.4) was used to evaluate historic significance of resources within the project's APE, as described in earlier in this chapter, for the purposes of NEPA and CEQA compliance.

Historic properties (NRHP) and *historical resources* (CRHR) are historically significant resources that are listed in, or eligible for, the NRHP and/or the CRHR. Historic properties/historical resources can include both archaeological resources and built resources. These resources reflect important aspects of local, state, and/or national history and can be buildings, structures, objects, sites, districts, TCPs, and/or historic cultural landscapes.

This section describes the types of existing and potential cultural resources within each APE for the Bakersfield to Palmdale Project Section, including Kern and Los Angeles Counties, as well as the geomorphic, prehistoric, and ethnographic archaeological settings, and prehistoric and historic archaeological settings of cultural resources in the vicinity of the project section.

3.17.6.1 Fresno to Bakersfield Locally Generated Alternative from the Intersection of 34th Street and L Street to Oswell Street

This section describes the cultural resources analysis of the portion of the F-B LGA alignment from the intersection of 34th Street and L Street to Oswell Street as described in the Fresno to Bakersfield Section Supplemental EIR (Authority 2018). An Archaeological Area of Potential Effect (Archaeological APE) and a Built Environment Resources APE (BE APE) were established for the F-B LGA in accordance with the Section 106 Programmatic Agreement. The Archaeological APE includes all areas of proposed ground disturbance, while the BE APE includes all legal parcels intersected by the proposed right-of-way, footprints of proposed ancillary features, and construction staging areas. Refer to Section 3.17.2.1 of the Fresno to Bakersfield Section Supplemental EIR for full descriptions of each APE.

Archaeological Resources within the Fresno to Bakersfield Locally Generated Alternative APE between the Intersection of 34th Street and L Street to Oswell Street

Five archaeological cultural resources were identified within a 1-mile radius of the F-B LGA centerline between the Intersection of 34th Street and L Street to Oswell Street; however, none are within the Archaeological APE.

Refer to Section 3.17.3.2 of the Fresno to Bakersfield Section Supplemental EIR for more details.

Built Resources within the Fresno to Bakersfield Locally Generated Alternative APE between the Intersection of 34th Street and L Street to Oswell Street

Of the numerous built environment cultural resources identified within the F-B LGA BE APE between the Intersection of 34th Street and L Street to Oswell Street, the following 10 built environment resources were determined eligible or are listed on the NRHP and the CRHR or otherwise meet the definition of an historical resource as defined by CEQA:

- Father Garcés Statue, Garces Memorial Circle, Bakersfield; BE APE Map Reference (MR) #133 (NRHP/CRHR).
- Republic Supply Company (Golden Empire Gleaners), Assessor's Parcel Number (APN): 00224002, 1326 30th Street, Bakersfield; MR #042 (NRHP/CRHR).
- Division of Forestry Service Office, APN: 00212007, 2731 and 2738 O Street; 1120 Golden State Avenue, Bakersfield; MR #055 (NRHP/CRHR).
- Kern County Land Company Warehouse, APN: 01435009, 210 Sumner Street, Bakersfield; MR #075 (NRHP/CRHR).
- Noriega's, APN: 00645002, 525 Sumner Street, Bakersfield; MR #097 (NRHP/CRHR). This resource is also eligible for listing on the NRHP as a TCP.
- Amestoy Hotel (Narducci's Café, formerly the Cesmat Hotel), APN: 01606012, 622 E 21st Street, Bakersfield; MR #107 (NRHP/CRHR).
- Southern Pacific Depot, APN: 01437001, 730 Sumner Street, Bakersfield; MR #116 (NRHP/CRHR).
- Fire Station Number Two, APNs: 01607012; 01607013; 01607014, 716 E 21st Street, Bakersfield; MR #120 (NRHP/CRHR).
- Folk Victorian Residence, APN: 14113025, 2509 E California Avenue, Bakersfield; MR #00D (NRHP/CRHR).
- State Route 204/Golden State Avenue, Bakersfield (segment from 24th Street to 22nd Street in the Built Environment APE): MR #030 (NRHP/CRHR).

3.17.6.2 Overview of Archaeological Resources

Archaeological resources are generally categorized as sites or isolates based on Attachment D of the Section 106 PA (Authority 2011). An isolate is defined as an isolated prehistoric or historic finding consisting of fewer than three artifacts per 100 square meters (1,076 square feet). A site is defined as a place where humans lived or where human activities were carried out. Archaeological resources are further categorized as either prehistoric, dating from the pre-contact period before A.D. 1769, or historic, dating after that date.

Prehistoric Archaeological Resources

Prehistoric archaeological resources in California are the remaining physical evidence of locations where Native Americans lived or carried out activities during the prehistoric period before A.D. 1769. Prehistoric sites contain artifacts and subsistence remains of pre-contact human occupation, and may contain human burials. Artifacts are objects made by people, and can include stone tools (e.g., lithic projectile points, scrapers, and grinding implements), waste products from making flaked stone tools (debitage), and nonutilitarian artifacts (beads, ornaments, ceremonial items, and rock art). Subsistence remains include the inedible portions of foods (e.g., animal bone and shell), and edible parts that were lost and not consumed (e.g., charred seeds). Prehistoric resources can include quarries, lithic scatters, temporary camps, bedrock mortars, and isolated artifacts.

What are Prehistoric and Historic Archaeological Resources?

Prehistoric archaeological resources are the remaining physical evidence of human activity that occurred prior to 1769 AD, linked to early Native American occupation in California. *Historic archaeological resources* are the remaining evidence of human activities that were carried out during the historic period, generally defined as beginning with European contact in the mid-18th century and ending approximately 50 years ago.

Historic Archaeological Resources

Historic archaeological resources in California are the remaining physical evidence of human activities that were carried out during the historic period, generally defined as beginning with contact in the mid-18th century and ending approximately 50 years ago. Some of these sites may be the result of Native American activities during the historic period, but most are the result of Spanish, Mexican, Asian, African-American, or Anglo-American activities. Most historic archaeological sites are domestic sites (places where houses formerly stood) and they tend to contain the types of household goods reflecting the economic standing and ethnic identity of their occupants. Remains of ceramic, metal, and glass containers and dishes are most common, together with remains of the materials used in house construction (i.e., nails, brick, and plate glass). Historic archaeological sites can also be nonresidential, resulting from ranching, farming, mining, manufacturing, transportation, and other commercial and industrial activities. Human burials dating to the historic period may also be considered archaeological resources.

Prehistoric Context

This section provides an overview of the cultural contexts and settings for the Bakersfield to Palmdale Project Section for the three archaeological regions that the project section traverses: the Southern San Joaquin Valley within the Central Valley, the Tehachapi Mountains and Far Southern Sierra Nevada, and the Mojave Desert. As described below, the project section spans multiple geomorphic, prehistoric, and ethnographic settings.

Southern San Joaquin Valley

The northern extent of the Bakersfield to Palmdale Project Section traverses the Southern San Joaquin Valley of the Central Valley archaeological region. A long history of archaeological research in the southern San Joaquin Valley exists that informs the present understanding of the region's prehistory. Despite more than a century of archaeological research in the Central Valley, not a single chronology accommodates the cultural-historical diversity of this region; however, the following is a generalized sequence for the project vicinity within the Southern San Joaquin Valley.

The Paleoindian Period (11,550 to 8550 cal. B.C.[5]) began with the first entry of people into California. The Central Valley area was settled by native Californians as early as 13,500 years ago. Human populations during this period were low in number and probably consisted of small groups moving frequently in order to exploit animal resources. Valley sites with quartzite, basalt, and metamorphic rock artifacts are common, while obsidian is a scarcer artifact material for the region. Evidence of Paleoindian occupation in the Southern San Joaquin Valley is sparse. Tulare Lake is one of the oldest known occupation sites in the Central Valley, with a long history of continuous occupation.

The Lower Archaic Period (8550 to 5550 cal B.C.) is characterized by isolated finds, most of which have been found in association with Tulare Lake in Kings County. It is speculated that climate change toward the end of the Paleoindian Period brought about changes in subsistence and habitation patterns for Central Valley Native Americans. Tulare Lake was one of the few interior lakes that persisted throughout the Lower Archaic Period and, along with Buena Vista Lake, was one of regional importance. On the western shore of Buena Vista Lake in Kern County, a rare, buried Lower Archaic component was identified at CA-KER-116, which yielded radiocarbon dates ranging from 7175 to 6450 B.C.

During the Middle Archaic Period (5550 to 550 cal B.C.), the climate changed substantially, ushering in generally warmer conditions. Tulare Lake shrank in size and entirely dried during the period. In the Southern San Joaquin Valley, evidence of exchange networks that emerged by this period have been identified. Some archaeologists have suggested the grooved-rectangle shell *Olivella biplicata* beads that have been found at San Joaquin Valley archaeological sites were part of an interregional trade network connecting coastal Southern California with the northwestern Great Basin.

The Upper Archaic Period (550 cal B.C. to cal A.D. 1100), which corresponds to the onset of cooler and wetter climatic conditions, is better represented and understood than previous periods, but information for this period in the southern San Joaquin Valley is still incomplete. Year-round villages are represented in the archaeological record at Buena Vista Lake and are characterized by a variety of residential features (e.g., house floors and accumulations of aquatic and terrestrial dietary debris). Trade was integral to the cultural groups in the southern San Joaquin Valley during the Upper Archaic Period, and vast amounts of obsidian were obtained from the Bodie Hills, Casa Diablo, and Coso sources from the east side of the Sierra Nevada.

The Emergent Period (cal A.D. 1000 to Historic) witnessed relatively stable climate conditions punctuated by episodes of floods and drought, including the Medieval Climatic Anomaly (cal A.D. 800 to 1350) and the Little Ice Age (cal A.D. 1400 to 1875). This period is marked by the appearance of bow-and-arrow technology, which eventually replaced the atlatl; the ascendance of wealth-linked social status; and increased social complexity, as indicated by increased variation in burial type and furnishings. Trade networks were expanded, signified in part by the appearance of clam disc bead money and pottery, which was obtained through trade from groups in the foothills to the east.

[5] "Cal B.C" dates represent calibrated radiocarbon dates.

Tehachapi Mountains and the Far Southern Sierra Nevada

No comprehensive archaeological study has been completed for the Tehachapi Mountains and the far southern Sierra Nevada region. Although sporadic archaeological work in the area began in the 1920s, intensive surveying and testing did not occur until the mid-1980s. Early research in the region included rock-art studies and documentation of Tubatulabal village sites. The first large village site excavated extensively in this region produced numerous stone and bone tools, shell and glass beads, and petroglyphs, while other smaller occupation sites, burials, and workshop areas have been excavated minimally in the past few decades. Archaeologists have used point typology and obsidian hydration to assign dates to regional archaeological sites and used these data to divide the region's prehistory into five temporal periods: Kennedy, Lamont, Canebrake, Sawtooth, and Chimney.

Archaeological material from the Kennedy Period (13,000 to 8500 B.P. [6]) is relatively sparse. Artifact assemblages from this period are characterized by large lanceolate, basally thinned, concave base points and fluted points. The subsequent Lamont Period (8500 to 3200 B.P.) is marked by various split-stem points of the Pinto/Lake series. The points are thought to represent sporadic use of upland areas by hunting parties in search of big game, which were likely based on the western fringe of the Great Basin desert to the east. Basalt was used for flaked-stone tool production, as was obsidian, and some archaeologists suggest that locations of intense obsidian reduction are indicative of artifact production intended for trade with aboriginal groups living in areas to the north and west of the Tehachapi region.

The Canebrake Period (3200 to 1500 B.P.) is characterized by Humboldt, Elko, and Gypsum series projectile points, and the presence of millingstones indicates the exploitation of plant resources. Direct evidence of the use of a village site in the Tehachapi Mountains from the Canebrake Period is provided by a radiocarbon date from bone found within a deposit at the village site of Tehetsi-va-adi. Obsidian from the Coso quarry was being imported into the Tehachapi Mountains during this time, and obsidian reduction sites indicate the continued production of bifaces intended for exchange with neighboring groups. The Sawtooth Period (1500 to 650 B.P.) is marked by the transition from dart and atlatl to bow-and-arrow technology. The number and size of sites increase dramatically during the early portion of this period, which is presumed to correspond to an increase in population. Other artifacts from this period include manos and millingstones, bedrock mortars and cobble pestles, steatite and serpentine stone beads, and the occasional *Olivella* shell bead. The Chimney Period (650 B.P. to Historic) represents the ethnographic pattern of occupation by the Kawaiisu and the Tubatulabal. Most recorded archaeological sites in the southern Sierra Nevada date to this time, indicating a period of population growth and more intensive occupation. Owens Valley brown ware ceramics, imported soapstone beads, *Olivella* shell beads, glass beads, and many pictographs also characterize the Chimney Period.

Mojave Desert

Several chronologies for archaeological sites in the Mojave Desert region have been proposed. Some archaeologists have claimed that very early human occupations may have existed in the desert region. A "Pre-Projectile Point Period" may have existed pre-10,000 B.C. However, these very early sites are controversial among specialists and, even if valid, have little or no relationship to later cultural developments in the region. For the purposes of this study, the Mojave Desert chronology consists of the Paleoindian, Lake Mojave, Pinto, Deadman Lake, Gypsum, Rose Spring, and Late Prehistoric complexes, as described below.

The Paleoindian Period (10,000 to 8000 cal B.C.) experienced profound environmental changes as the cool, moist conditions of a North American glacial age gave way to the warmer, drier climate of the Holocene. Paleoindian Period sites are characterized by fluted Clovis projectile points and related materials, commonly viewed as representing a big-game hunting tradition focused on the exploitation of Pleistocene megafauna. Some archaeologists have noted concentrations of Clovis points in the drainage basins of Lake China and—closest to the project—at Lake Thompson. The subsequent Lake Mojave Complex (8000 to 6000 cal B.C.) has been interpreted by archaeologists

[6] B.P. ("Before Present") dates represent more general, uncalibrated dates.

as a widespread adaptation to former pluvial lakes, marshes, and old stream channels. Diagnostic artifacts for this time period include flaked-stone crescents; abundant bifaces; and a variety of large, well-made scrapers, gravers, perforators, and heavy core tools. Millingstones are generally absent in the archaeological record of this time, although some archaeologists have noted a few millingstones that occur at sites dating to the Lake Mojave Complex period.

The Pinto Period (6000 to 3000 cal B.C.) is marked by the appearance of Pinto series projectile points, presumably used on atlatl darts. The transition from big-game hunting is evidenced in archaeological artifact assemblages, with a greater prevalence of milling equipment relative to the previous Lake Mojave period. Other major technological shifts during the Pinto Period include the appearance of domed scrapers and new types of millingstones with plane surfaces, typically associated with the processing of small, hard seeds. Big-game hunting probably continued as an important focus during this time, but other Pinto Complex subsistence included rodents, reptiles, and freshwater mussel. Pinyon processing is also suggested by the recovery of hulls from hearth features at some sites, which suggests an expanding food resource strategy during the period. The Deadman Lake Period (7500 to 5200 cal B.C.) is smaller geographically and overlaps the time period of the Pinto Period. Artifact assemblages from the Deadman Lake Period are characterized by small- to medium-size, contracting, stemmed, or lozenge-shaped points; battered cobbles and core tools; milling implements; simple flake tools; and bifaces. Some archaeologists suggest that differences between the Pinto and Deadman Lake complexes may reflect alternate subsistence focuses, with Pinto assemblages occurring near pluvial lakes and Deadman Lake assemblages occurring at higher elevations.

A gradual change in the climate began around 5,000 years ago, as climates cooled and precipitation increased during the Late Holocene. The Gypsum Complex Period (3000 cal B.C. to cal A.D. 200) marks the onset of the Late Holocene in the Mojave Desert region and reflects the change in adaptive strategy that resulted from the change in climate. In addition to open sites, the use of rock shelters appears to have increased at this time. Base camps with extensive midden development are a prominent site type in well-watered valleys and near concentrated subsistence resources. Processing of plant foods took on greater importance than in previous periods as well, as evidenced by an increase in the frequency and diversity of groundstone artifacts, including the appearance of the mortar and pestle for the first time. Evidence exists for increased contact with the California coast and the Southwest during this period.

During the Rose Spring Period (cal A.D. 200 to 1100), smaller projectile points become ubiquitous, and appear to mark the introduction of a bow-and-arrow technology and the decline of the atlatl and spear weaponry. Archaeological sites dating to this period are common in the Mojave Desert, possibly an indication that pre-contact population peaked during this time. Rose Spring Period sites often contain abundant cultural materials, including milling equipment, hunting implements, and marine shell artifacts. In the eastern Mojave Desert, agriculture was practiced during the Rose Spring Period and into the subsequent Late Prehistoric Period. The Late Prehistoric Period (cal A.D. 1100 to Historic) is characterized by the apparent expansion of Numic speakers (or Shoshonean groups) throughout most of the Great Basin, including the Mojave Desert. Many researchers accept the idea that sometime around A.D. 1000, the Numa peoples spread eastward from a homeland in the southwestern Great Basin, possibly from Death Valley or Owens Valley. While there is little dispute that the Numic spread occurred, there is much disagreement over its mechanics and timing. It is apparent, however, that the ethnographic Southern Paiute peoples represent the entry of Numic speakers into the Mojave Desert sometime during this period. Also during the Late Prehistoric Period, Takic-speakers spread eastward to what are now the ethnographic territories of the Vanyume, Serrano, Cahuilla, and Cupeno. Characteristic artifacts of this period include Desert series projectile points, brown ware ceramics, millingstones, incised stones, mortars, pestles, and shell beads.

Ethnographic Setting

This section provides an ethnographic setting for the Bakersfield to Palmdale Project Section. It discusses four specific groups that have historically inhabited the region: the Southern Valley Yokuts, the Kawaiisu, the Serrano, and the Kitanemuk. As part of its ongoing consultation with Native American tribes and commitment to connect the tribes more closely with the cultural resources investigations for the HSR program, the Authority has invited tribal consulting parties to document their own tribal ethnohistories. To date, the following tribes have prepared ethnohistorical narratives: the Tejon Indian Tribe and the Fernandeño Tataviam Band of Mission Indians. These ethnohistories are included in the Bakersfield to Palmdale Project Section ASR (Authority and FRA 2019e). For more detailed information regarding the ethnographic background and tribal ethnohistories of the project section, please refer to the Bakersfield to Palmdale Project Section ASR.

Southern Valley Yokuts

The present-day southern San Joaquin Valley is the territory occupied by the Southern Valley Yokuts, a geographic division of the much larger Yokuts linguistic group, which occupied the entire San Joaquin Valley and the adjoining Sierra Nevada foothills. The Southern Valley Yokuts territory was centered near the basins of Tulare, Buena Vista, and Kern lakes; their connecting sloughs; and the lower portions of the Kings, Kaweah, Tule, and Kern rivers. Most of the known Southern Valley Yokuts villages were located along the Kern River northeast of Bakersfield, or near Kern and Buena Vista lakes south and southeast of Bakersfield. The Southern Valley Yokuts' subsistence focused on fishing, hunting waterfowl, and collecting shellfish, seeds, and roots. Food supplements and minerals were also collected, including salt and sugar. Fish species commonly caught using nets, spears, traps, bow and arrow, and bare hands included lake trout, chubs, perch, steelhead, salmon, and sturgeon. Waterfowl were mainly caught using snares, nets, and decoys. All reptiles were considered unclean and unfit for food by the Southern Valley Yokuts. The Southern Valley Yokuts relied heavily on tule reeds for making woven baskets and mats. Basketry tools (e.g., awls) were manufactured from bone. The Yawelmani (or Yowlumne), were a group within the Southern Valley Yokuts that inhabited the area around present-day Bakersfield and Caliente. Ethnographic Yawelmani villages include Woilu on the townsite of Bakersfield; and Wawcoye and Hawsu on the south and north banks of the Kern River, respectively. The locations of known Yawelmani villages are distant from the current project vicinity.

Kawaiisu

The territory occupied by the Kawaiisu ranged from the southern Sierra Nevada through the Tehachapi Mountains, and included the western Mojave Desert and the southwestern Great Basin. As with other Native American groups in Southern California, the Kawaiisu were a hunter-gatherer society, following an annual seasonal round depending on the availability of a variety of plant and animal resources. The Kawaiisu relied heavily on the abundant acorn and pinyon nuts in the higher mountainous regions of their territory, making temporary camps during the spring, summer, and fall foraging months and occupying permanent camps near reliable water sources during the winter. Kawaiisu winter settlements were near watercourses and dwellings were built on a ground-level circular base with vertical forked poles bound together at the top. Bark and tule mats were used to waterproof the exterior. The historic Kawaiisu population may have been 500 people by some estimates. By 1984, fewer than 30 documented members of this group were living in Southern California, although those who identify today as Kawaiisu (and related Kern River tribal members) have increased. The village of Tahichpiu is identified within Kawaiisu territory at present-day Tehachapi.

Serrano

Most researchers place the Serrano in the San Bernardino Mountains east of the Cajon Pass, at the base and north of the mountains in the desert near Victorville, eastward as far as Twenty-Nine Palms, and south into the Yucaipa Valley. However, the greater Serrano group includes not just the Serrano proper, but the Kitanemuk, Tataviam (formerly known as Alliklik), and Vanyume.

It has been suggested that a paucity of ethnographic information makes it difficult to assign exact boundaries to the various divisions of Serrano territory due to Serrano sociopolitical organization and lack of reliable data (Authority and FRA 2017d). However, ethnohistorical data is sufficient to provide an outline of Serrano social organization, and several named historic-period villages have been identified. Near the headwaters of the Mojave River, for instance, at least six historic-period Serrano Rancherias have been identified: *Topipabit, Atongaibit, Tameobit, Kaiuvit, Guapiabit*, and *Amutskupiabit* (Authority and FRA 2017d: 5-11). The territory of Serrano villages was divided according to patrilineal clans (Authority and FRA 2017d: 5-10), and approximately 20 named Serrano clans have been identified (Authority and FRA 2017d: 7-1). All clan villages were associated with a totemic moiety, and exogamous marriage reinforced alliances between clans and moieties and facilitated distribution of resources between widely dispersed villages.

Kitanemuk

The Kitanemuk were a relatively small Serrano division whose territory was principally in the Tehachapi Mountains, with a portion in the Antelope Valley of the western Mojave Desert. The Kawaiisu bordered the Kitanemuk on the east and in the higher Sierra Nevada, while the Southern Valley Yokuts were on the north and west. As with other Native American groups in Southern California, the Kitanemuk were a hunter-gatherer society, moving seasonally between the mountainous areas and the arid lowlands of their territory in pursuit of a variety of plant and animal resources. The settlement patterns of the Kitanemuk are not well documented, but were likely similar to those of surrounding groups, where the higher-elevation villages were situated in well-watered canyons or on fans near streams and springs. The Kitanemuk village of Hihikeave is identified along Caliente Creek at Caliente, approximately 1 mile north of modern day Bealville and very near the current proposed project.

Historic Archaeological Context

Early Exploration

The Spanish first explored the southern end of the San Joaquin Valley in Kern County and the Antelope Valley in northern Los Angeles County, within the western Mojave Desert, in the early and mid-1770s. In 1772, Pedro Fages traveled north from San Diego to the desert in pursuit of deserters from his party, then headed north into the Antelope Valley via the Tejon Pass and into the San Joaquin Valley. Several years later, Spanish missionary Father Francisco Garcés traveled through the region via the eastern side of the Tehachapi Mountains via Oak Creek Pass, which connected the present City of Tehachapi to the Mojave Desert. Garcés undertook this expedition in search of a route from Sonora to Monterey. Nonnative settlement of these regions was delayed because of their geographical isolation until the mid-19th century.

Explorers (e.g., the American trapper Jedediah Smith) passed through the area and some of the routes of these expeditions eventually became important transportation corridors used by later travelers and stage companies. Smith explored the Mojave Desert and the Antelope Valley in 1827. As a private venture, Smith's excursions went deep into Mexican-governed Alta California without the consent of either the Mexican or U.S. governments. In 1844, John C. Frémont came through the valley in one of his early expeditions. Like Garcés, Frémont used the Oak Creek Pass in his western explorations between 1843 and 1845. Oak Creek Pass, also known as Oak Creek Road or State Route 58, was the only direct route through the mountains to the valley until 1876, when the Southern Pacific Railroad was constructed through the Tehachapi Mountains.

After secularization of the Spanish missions in 1833, large tracts of land previously held by the missions became the responsibility of the Mexican government and were redistributed. The project alignment crosses through the northern portion of Rancho El Tejon, a 97,617-acre land grant situated in the southernmost section of Kern County in the Tehachapi Mountains. Rancho El Tejon was the largest land grant in the San Joaquin Valley and was granted to José Antonio Aguirre and Ygnacio del Valle in 1843.

In 1854, General Edward Beale, superintendent of Indian Affairs, purchased Rancho El Tejon along with two other Kern County ranchos (Rancho Los Alamos y Aqua Caliente and Rancho Castaic) for the U.S. Army. The U.S. Army used the property to build Fort Tejon, located 40 miles

south of Bakersfield. Fort Tejon became a U.S. military headquarters charged with protecting Native Americans and deterring cattle theft. Today, much of Tejon Ranch is in conservation, and an approximately 7-mile-long segment of the project intersects this property east of Edison.

Transportation and Settlement

The Southern Pacific Railroad was the first railroad to link major cities in Northern California to cities in the south of the state. The Southern Pacific Railroad was founded as a landholding company in 1865 and had designed a southerly route for the California segment of the transcontinental railroad. This route ran from San Jose across the San Joaquin Valley, over the Tehachapi Mountains, and across the Mojave Desert to Needles. This southerly route would have been in competition with the Central Pacific—Union Pacific's Northern California route. Central Pacific purchased the landholding company in 1868 and consolidated the lines to create the Southern Pacific Railroad. The consolidation secured control of the western portion of the transcontinental route. Southern Pacific Railroad began construction of its southern track in 1870 and reached the area east of Bakersfield in 1874.

Bakersfield was one of the earliest settlements established in the San Joaquin Valley. Colonel Thomas Baker founded the homestead in 1862 after purchasing 160 acres of land from Christian Bohna. The area was initially named Baker's Field, and Baker constructed his home on the property. His homestead became a local gathering place for the area and grew into a small farming community. In 1864, Baker surveyed and planned the town of Bakersfield for Kern County.

In 1875, the Southern Pacific Railroad expanded its line south of Bakersfield through the Tehachapi Pass to reach the Los Angeles Basin. Construction reached the Antelope Valley in 1876 and progressed quickly given the area's flat topography. Laborers were able to lay 2.5 miles of railroad track per day through the Antelope Valley and passed Palmdale by September 1876.

Tehachapi Valley was settled as early as 1854, although a post office was not established in the town of Tehachapi until 1870, when gold was found in the China Hill placers. The original town site, now called Old Town, was approximately 3.5 miles east of the present location of Tehachapi, and was displaced when the railroad was built in 1876.

In 1877, settlers named Lancaster after their former home in Pennsylvania. Lancaster was a whistle-stop between San Francisco and Los Angeles on the Southern Pacific Railroad, and the town owes its birth to the construction of the railroad. The city was challenged soon after its foundation by a decade-long drought in the area that peaked from 1888 through 1894. The town grew quickly, however, due to its promotion by speculator Moses Langley Wicks. Lancaster's location near several artesian wells made the area desirable to those looking to relocate to the area. In 1933, the U.S. Army Air Corps conducted flight and weapons testing at Muroc Army Air Field, presently known as Edwards Air Force Base.

In April 1886, the first settlement in the Palmdale area was the town of Palmenthal, which was settled by German Lutherans. Palmenthal was a farming hub for grain and fruits in the 1890s but was quickly abandoned during the drought years. The town of Palmdale was created near a Southern Pacific Railroad station, and some of the buildings from Palmenthal were relocated to the new town site.

Los Angeles Aqueduct

The Owens Valley Aqueduct, also known as the Los Angeles Aqueduct, was constructed between 1908 and 1913 to provide water for the City of Los Angeles. The controversial aqueduct was constructed in the Owens River Valley, a fertile area on the eastern slopes of the Sierra Nevada in Inyo and Mono Counties. The channel began on the valley's north end and ran southwest for 235 miles.

More than 100,000 workers from all over the world were employed in manufacturing, excavating, and laying 223 miles of 12-foot-diameter steel pipe; constructing two hydroelectric plants; and building 170 miles of power lines. Construction included more than 12 miles of 21 inverted, steel pipe siphons; 164 tunnels through the eastern Sierra Nevada and San Gabriel mountain ranges; and dozens of work camps. Scattered physical evidence of the construction can be encountered

across the landscape in the form of historical tools, hardware, food debris such as cans, and other historic archaeological artifacts. A railroad was constructed and 215 miles of road were built to transport men and materials. The project was completed in 1913.

The City of Los Angeles opened a cement plant in the Tehachapi Valley near the project corridor at the townsite of Monolith to supply the necessary cement for aqueduct construction. The first cement product was shipped out in 1909, and the plant operated until aqueduct construction was completed in 1913. The city provided accommodations for the plant workers, including houses for those who had families and a bunkhouse for single men.

Geomorphology of the Project Vicinity

While most of the landforms in the project vicinity are too old to contain buried sites, some segments are composed of Holocene-age deposits that formed thousands of years after the arrival of prehistoric people. Where present, Holocene deposits typically overlie formerly stable land surfaces that were available for human use and occupation. Consequently, there is an elevated potential for portions of the project vicinity to contain buried archaeological remains (i.e., artifacts, materials, deposits, and sites) that may be associated with these former land surfaces.

A geoarchaeological assessment was completed to identify the areas of buried site potential. The findings of these studies are confidential and are not absolute, but are probable "best estimates" based on reasoned assumptions using available datasets. For more information, refer to Appendix E, *Geoarchaeological Sensitivity Assessment* in the *Archaeological Survey Report* (Authority and FRA 2019e).

Description of Known Archaeological Sites

Based on this archival review, research, and field survey, 86 archaeological resources (sites and isolates) are documented within the current APE. Of the 86 archaeological resources that have been documented within the current APE, 50 resources are prehistoric-era and 36 are historic-era; no multicomponent sites were noted. A total of 61 resources were previously recorded and 25 resources were identified during subsequent surveys conducted specifically for the Bakersfield to Palmdale Project Section (Authority and FRA 2019e).

The prehistoric archaeological resources identified in the APE include quarries, lithic scatters, temporary camps, bedrock mortars, and isolated artifacts. The historic archaeological resources identified in the APE include trash scatters, structural remains, and a grave. The ASR includes a discussion of archaeological resources within the immediate vicinity of the APE (i.e., within a 300-foot buffer of the current APE); however, the following discussion and subsequent analyses are limited to those archaeological resources that are within the current APE for the Bakersfield to Palmdale Project Section.

No recorded NRHP- or CRHR-eligible archaeological properties are identified in the portion of the current project section Archaeological APE, which extends from Oswell Street to the Bakersfield Station—Bakersfield Station—F Street (LGA). Identification of historic properties for this portion of the APE is documented in ASRs and a geoarchaeological investigation report completed for the Fresno to Bakersfield Project Section and the Bakersfield Station—F Street (LGA) (Authority 2016b, 2016c).

As stipulated in the Section 106 PA (Section VIII.A.1), a phased identification (including testing and evaluation of archaeological resources) will be necessary as access is granted, as the project section design is refined, and where adverse effects are likely to occur. These phased efforts will be conducted pursuant to the future MOA and subsequent ATP, and will be documented in Supplemental ASRs, Extended Phase I Reports, and Archaeological Evaluation Reports.

The following sections describe the nature of both newly and previously recorded archaeological resources within the APE and the immediate vicinity, as well as the eligibility of these resources according to the NRHP and CRHP criteria. Unevaluated resources are assumed eligible for the purposes of determining project effects and will be formally evaluated using a phased approach, which is consistent with the Section 106 PA.

Table 3.17-9 lists archaeological resources that occur within the APE, but were recorded during previous studies. Table 3.17-9 also lists archaeological resources that were previously identified during field survey specific to the Bakersfield to Palmdale Project Section. Known archaeological resources within the APE that could not be evaluated formally are presumed to be potentially eligible for the NRHP in accordance with Section IV.C.1 and Attachment E of the PA. In order to protect the archaeological resources, they are not presented on figures in this EIR. In accordance with Appendix D of the HSR Section 106 PA, the Authority has identified 37 of the resources in the current APE (e.g., isolates) as exempt from evaluation—or otherwise not eligible for listing in either the NRHP or CRHR. The combined background research and field surveys resulted in a total of 49 resources identified as potentially eligible within the current APE.

Table 3.17-9 Previously Recorded Archaeological Resources within the Area of Potential Effect

Resource Number/Trinomial	Resource Type	Attributes	Eligibility for NRHP/CRHR	Alternative
P-15-002959/CA-KER-2959	Prehistoric site	Bedrock milling feature; lithic scatter	Assumed Eligible	All
P-15-010030/CA-KER-5917	Prehistoric site	Bedrock milling feature; lithic scatter	Assumed Eligible	All
P-15-010031 (CA-KER-5918)	Prehistoric site	Lithic scatter	Assumed Eligible	All
P-15-002750 (CA-KER-2750)	Prehistoric site	Bedrock milling feature	Assumed Eligible	All
P-15-002189 (CA-KER-2189)	Prehistoric site	Lithic scatter; cairns/rock features; quarry	Assumed Eligible	All
P-15-002954 (CA-KER-2954)	Prehistoric site (with locus of sparse amethyst glass)	Lithic scatter, bedrock milling feature, architectural feature, cairns/rock features, trash scatters	Assumed Eligible	All
P-15-012809 (CA-KER-7230H)	Historic site	Trash scatter	Assumed Eligible	All
P-15-007681 (CA-KER-7681)	Prehistoric site	Bedrock milling feature	Assumed Eligible	All
P-15-012810 (CA-KER-7231)	Prehistoric site	Lithic scatter	Assumed Eligible	All
P-15-015559 (CA-KER-8592)	Prehistoric site	Lithic scatter	Assumed Eligible	All
P-15-012811 (CA-KER-7232)(Subsumes P-15-001420/CA-KER-1420)	Prehistoric site	Lithic scatter, bedrock milling feature, cairn/rock feature	Assumed Eligible	All
P-15-001615 (CA-KER-1615)	Historic site	Grave	Assumed Eligible	1,2,5
P-15-013689 (CA-KER-7690H)	Historic site	Trash scatter	Assumed Eligible	All
P-15-013841 (CA-KER-7749)	Prehistoric Site	Lithic Site	Assumed Eligible	All
P-15-016251 (CA-KER-8784H)	Historic site	Trash scatter; road	Assumed Eligible	All
P-15-016252 (CA-KER-8985H)	Historic site	Foundation; trash scatter; fence	Assumed Eligible	3
P-15-012714 (CA-KER-7172H)	Historic site	Foundations/structure pads; trash scatters	Assumed Eligible	All
P-15-010951 (CA-KER-6340)	Historic site	Trash scatter	Assumed Eligible	3
P-15-013690 (CA-KER-7691H)	Historic site	Trash scatter	Assumed Eligible	All
P-15-016534 (CA-KER-9114)	Prehistoric site	Lithic scatter	Assumed Eligible	All
P-15-016248 (CA-KER-8981H)	Historic site	Trash scatter, homestead or mining claim marker	Assumed Eligible	All

Resource Number/Trinomial	Resource Type	Attributes	Eligibility for NRHP/CRHR	Alternative
P-15-002539 (CA-KER-2539)	Prehistoric site	Lithic scatter, habitation debris	Assumed Eligible	All
P-15-010955 (CA-KER-6344)	Prehistoric site	Lithic scatter	Assumed Eligible	All
P-15-000522 (CA-KER-522)	Prehistoric site	Lithic scatter	Assumed Eligible	All
P-15-012466 (CA-KER-7031H)	Historic site	Trash scatter	Assumed Eligible	All
P-19-002396 (CA-LAN-2396H)	Historic site	Trash scatter	Assumed Eligible	All
P-19-003819	Historic site	Trash scatter	Assumed Eligible	All
P-19-002183 (CA-LAN-2183H)	Historic site	Foundations, landscaping, trash scatters, wall	Assumed Eligible	All
P-19-002215 (CA-LAN-2215H)	Historic site	Foundations, trash scatters	Assumed Eligible[1]	All
P-19-002461 (CA-LAN-2461H)	Historic site	Trash scatters, wells	Assumed Eligible	1,2,3
P-19-002039 (CA-LAN-2039H)	Historic site	Foundations/structure pads, trash scatter, well, fence	Assumed Eligible	All
P-15-002498 (CA-KER-2498)	Prehistoric site	Lithic scatter; quarry	Assumed Eligible	N/A
P-15-018645 (CA-KER-10171)	Prehistoric site	Lithic scatter; quarry	Assumed Eligible	All
P-15-001043 (CA-KER-1043)	Prehistoric site	Bedrock milling feature	Assumed Eligible	N/A
P-15-002747 (CA-KER-2747)	Prehistoric site	Lithic scatter; bedrock milling feature	Assumed Eligible	N/A
P-15-002748 (CA-KER-2748)	Prehistoric site	Bedrock milling feature	Assumed Eligible	N/A
P-15-002749 (CA-KER-2749)	Prehistoric site	Bedrock milling feature	Assumed Eligible	N/A
P-15-002433 (CA-KER-2433)	Prehistoric site	Lithic scatter	Assumed Eligible	N/A
P-15-003053 (CA-KER-3053H)	Historic site	Former school	Assumed Eligible	N/A
P-15-012514 (CA-KER-7056)	Prehistoric site	Lithic scatter	Assumed Eligible	N/A
P-15-012808 (CA-KER-7229)	Prehistoric site	Bedrock milling feature	Assumed Eligible	N/A
P-19-003258	Historic site	Trash scatter	Assumed Eligible	N/A

Source: *California High-Speed Rail Authority, 2019e*
Table 3.17-9 lists the resources from north to south, in order of their location between Bakersfield and Palmdale. The Archaeological Survey Report lists additional archaeological resources that are outside the current area of potential effect; refer to that technical report for more detail.
[1]The property was previously determined eligible, but may no longer be eligible due to a loss of integrity from construction of the Los Angeles County Sheriff's Department building.
CRHR = California Register of Historical Resources NRHP = National Register of Historic Places
N/A = Not Available

Previously Recorded Archaeological Sites

Of the 86 previously recorded archaeological resources in the current APE and immediate vicinity, 47 are determined not eligible for listing on the NRHP and/or CRHR for the purposes of the HSR project. In total, there are 50 prehistoric-era resources and 36 historic-era resources, with no noted multicomponent sites. Table 3.17-9 summarizes the 39 previously recorded eligible or unevaluated archaeological resources within the APE and indicates the NRHP and CRHR eligibility status of the resources. Unevaluated resources are assumed eligible for the purposes of determining project effects and will be formally evaluated using a phased approach, which is consistent with the Section 106 PA.

The Authority identified the exempt resource statuses for the undertaking. Exempt and non-eligible resources are not listed in this document but were identified during surveys. Some sites were exempted based on information in the record search. These resources included prehistoric

resources such as lithic isolates and historic resources such as ineligible trash scatters. No further study of these resources is required pursuant to the Section 106 PA.

Newly Recorded Archaeological Sites

During the field inventory, 25 archaeological sites were newly identified within the APE, 5 of which were determined to be exempt. Table 3.17-10 lists the remaining 20 newly identified archaeological resources within the APE. As noted earlier, 19 of these resources are prehistoric-era and 1 is historic-era. Prehistoric-era resources include quarries, lithic scatters, temporary camps, bedrock mortars, and an isolated portable mortar; historic-era resources include trash scatters and two possible homesteads. Also, eight of these resources had been previously recorded but were revisited during surveys specific to the Bakersfield to Palmdale Project Section to verify that the sites remained extant and to determine any site boundary changes. An additional two resources that have previously recorded site numbers but whose site boundaries were adjusted by the HSR surveys were also revisited. Unevaluated resources are assumed eligible for the purposes of determining project effects and would be formally evaluated using a phased approach. For descriptions of these resources, refer to the ASR (Authority and FRA 2019e).

Table 3.17-10 Newly Identified Archaeological Resources within the Area of Potential Effect and Vicinity

Resource Number	Resource Type	Attributes	Eligibility for NRHP/CRHR	Alternative
Resources Within the APE				
BP-JS-1 (P-15-019272/CA-KER-10546)	Prehistoric site	Lithic scatter, quarry	Assumed Eligible	All
BP-IS-1 (P-15-019263/CA-KER-10537)	Prehistoric site	Lithic scatter, quarry	Assumed Eligible	All
BP-CJ-9 (P-19-004790/CA-LAN-4790H)	Historic site	Foundations, trash scatters, wells, fences	Assumed Eligible	All
BP-IS-2 (P-15-019264/CA-KER-10538)	Prehistoric site	Lithic scatter	Assumed Eligible	All
BP-LH-7 (P-15-019281/CA-KER-10555)	Prehistoric site	Lithic scatter	Assumed Eligible	All
BP-IS-3 (P-15-019265/CA-KER-10539)	Prehistoric site	Bedrock milling feature	Assumed Eligible	All
BP-JS-3 (P-15-019274/CA-KER-10548)	Prehistoric site	Bedrock milling feature	Assumed Eligible	All
BP-IS-4 (P-15-019266/CA-KER-10540)	Prehistoric site	Lithic scatter	Assumed Eligible	All
BP-IS-10 (P-15-019271/CA-KER-10545)	Prehistoric site	Lithic scatter	Assumed Eligible	1, 2, 5
BP-JS-6 (P-15-019275/CA-KER-10549)	Prehistoric site	Lithic scatter	Assumed Eligible	All
BP-JS-7 (P-15-019276/CA-KER-10550)	Prehistoric site	Lithic scatter	Assumed Eligible	All
BP-TJ-2 (P-15-019283/CA-KER-10557)	Prehistoric site	Lithic scatter	Assumed Eligible	All
BP-IS-7 (P-15-019268/CA-KER-10542)	Prehistoric site	Lithic scatter	Assumed Eligible	All

Resource Number	Resource Type	Attributes	Eligibility for NRHP/CRHR	Alternative
BP-JS-8 (P-15-019277/CA-KER-10551)	Prehistoric site	Lithic scatter, hearths, FAR	Assumed Eligible	All
BP-IS-8 (P-15-019269/CA-KER-10543)	Prehistoric site	Lithic scatter	Assumed Eligible	All
BP-JS-9 (P-15-019278/CA-KER-10552)	Prehistoric site	Lithic scatter, groundstone	Assumed Eligible	All
BP-IS-9 (P-15-019270/CA-KER-10544)	Prehistoric site	Lithic scatter	Assumed Eligible	All
BP-IS-6 (P-15-019267/CA-KER-10541)	Prehistoric site	Lithic scatter, FAR, pendant	Assumed Eligible	1, 2, 5
P-15-018645/CA-KER-10171 (BP-KB-4: Site Revisited)	Prehistoric site	Lithic scatter, quarry	Assumed Eligible	All
P-15-012714/CA-KER-7172H (Site Revisited)	Historic site	Foundations/structure pads, trash scatters	Assumed Eligible	All

Source: California High-Speed Rail Authority, 2019e
Resources in the immediate vicinity (i.e., within 300 feet of the current APE) were identified during archaeological surveys; however, those resources are not analyzed as these are outside the current APE. For further information regarding these resources, refer to the Archaeological Survey Report (California High-Speed Rail Authority 2019e)
APE = area of potential effect
CRHR = California Register of Historical Resources
FAR = fire-affected rock
NRHP = National Register of Historic Places

Anticipated Site Types

Anticipated archaeological resources could be either prehistoric or historic and would likely be encountered during earthmoving activities associated with construction of the Bakersfield to Palmdale Project Section. Geoarchaeological studies indicate that much of the APE consists of landforms that predate human occupation. However, there are areas with Holocene deposits that could contain previously unrecorded archaeological resources. Portions of the APE that occur in urbanized areas have been subject to development; therefore, it is anticipated that archaeological resources would have been disturbed by previous development projects. However, in dense urban areas where the entire landscape has been used historically, historic archaeological deposits can be expected to occur anywhere within that landscape in both disturbed and intact contexts. Based on geoarchaeological assessments conducted for the project, approximately 25 percent of the current APE has a “High” or “Highest” potential for buried prehistoric archaeological deposits (Authority 2019e). Attachment D of the Section 106 PA (Authority 2011) includes a list of archaeological resources that are exempt from evaluation, which would serve as guidance for establishing archaeological resource exemptions, the criteria for what constitutes an “isolate” and a “site,” and would guide the process for the initial evaluation of a given resource (Authority 2011). An isolate is defined as an isolated historic finding consisting of fewer than three artifacts per 100 square meters (1,076 square feet), while a site is defined as a place where humans lived or where human activities were carried out, as previously stated.

3.17.6.3 Overview of Historic Built Resources

Historic Built Resources

Historic properties and historical resources are elements of the built environment that are listed in, or eligible for, the NHRP, or are considered historical resources for the purposes of CEQA. These elements reflect important aspects of local, state, or national history. They can be buildings, structures, objects, sites (including landscapes), or districts. Examples of the types of historic properties (per NHPA) or historical resources (per CEQA) within the APE include historic structures, historic buildings, and one historic district.

What is a historic built resource?

A *historic built resource* is a structural or architectural unit that is generally 50 years of age or older. Built resources can include, but are not limited to, buildings, structures, districts and objects, ranging from single-family residences, stores or factories, schools, and public buildings to town commercial districts, military bases, roads, bridges, ranches and agricultural structures, and railroads.

Built Resources Historic Context

This section provides an overview of the cultural setting for built resources in the APE for the Bakersfield to Palmdale Project Section, which passes through three distinct geographic regions: the low-lying Southern San Joaquin Valley, the mountainous Tehachapi Range, and the high-desert Antelope Valley. Each of the three regions traversed by the APE has its own historical identity because the development of each region was shaped by forces dictated in large part by its particular geographic characteristics. The purpose of this discussion is to provide the appropriate historical context within which the built environment resources are evaluated for historic significance. This discussion is based on the Bakersfield to Palmdale Project Section HASR (Authority 2019c). For the historic context related to the Bakersfield Station—F Street (LGA) subsection, see the Bakersfield F Street Station Alignment Alternative HASR (Authority and FRA 2016a) and the Fresno to Bakersfield LGA HASR (Authority and FRA 2016c).

Southern San Joaquin Valley

During the initial American Period, California's Gold Rush and the state's subsequent entry into the Union in 1850 increased the trickle of immigration into the state that began before the Mexican War (1846–1848) into a torrent. Besides myriad mining towns that sprang into existence as far south as Kern County, many other communities farther from the gold fields also experienced enormous growth. The discovery of gold along the Kern River in 1853 promoted settlement in the southern end of the San Joaquin Valley, but mostly up the river canyon northeast of today's Bakersfield. Access to the Kern River gold fields was achieved through the Tehachapi and Walker passes. From the north, early teamsters followed the Los Angeles-Stockton Road and turned to enter the Tehachapi Pass at Caliente Creek. Colonel Thomas Baker, the founder of Bakersfield, improved this route in 1867 and established a turnpike between his small settlement at Kern Island and the first county seat at Havilah. From the south, supplies crossed the Antelope Valley from Elizabeth Lake, passing Willow Springs en route to the Tehachapi Pass or northeast to Walker's Pass.

In the Bakersfield area of Kern County, the arrival of the Atchison, Topeka, and Santa Fe Railway in the 1890s and the Kern River oil boom of May 1899 ushered in a period of rapid urban development that carried into the 20th century. In an attempt to maintain a competitive edge over larger oil producers rushing to Kern County, more than 150 companies had joined the Bakersfield-based Independent Oil Producers Agency by 1908. The 1910s proved an oil-rich decade for Kern County, and the economic upswing continued as the U.S. entered the First World War. Suburbanization of the area accelerated in the immediate post-World War II period, as landowners and developers created several new modestly sized residential tracts in the vicinity of Sterling Road and Eucalyptus Drive. After the post-war boom, the pace of growth again slowed in the region, only to accelerate once more following construction of cross-town State Route 58 through the area in the 1970s. This spurred yet another period of residential expansion, with many new suburban subdivisions developed on both sides of the freeway in the decades that followed.

Tehachapi Range

Settlement in the Tehachapi Valley and environs began in the 1850s, when prospective gold miners and ranchers began to trickle into the area. Cattle and sheep were an important component of life in the Tehachapi Valley beginning in the 1850s, and they have remained a mainstay to the present. Herds of both animals had an ample supply of forage in the valleys and surrounding hills through most of the year. In the Tehachapi Valley proper, droughts in the 1860s and the fence laws of the 1870s reduced their grazing area and numbers, and land use in subsequent years increasingly became devoted to cultivated agriculture and settlements. The first population center along the Tehachapi portion of the study area was a town called Williamsburg, established in the 1860s in the western end of the Tehachapi Valley. A new wagon road built through the valley in the 1870s brought increasing numbers of travelers through the range after the Southern Pacific Railroad established a terminal station at Caliente in 1875.

Up into the 20th century, the principal agricultural pursuit in the mountainous Tehachapi Range continued to be raising livestock. The last sheep drive was held in 1970, and a few cattle ranchers still run their herds in the valley and grassy hills along the Caliente and Tehachapi creek drainages. Fruit agriculture also remained an important aspect of the Tehachapi Valley agricultural scene well into the 20th century. Extractive industries also contributed to the valley's economic base during the 20th century. Limestone, marble, and granite quarrying operations had a burst of activity in the early 1900s. In 1904, the Mountain Summit Lime Company built a kiln in Keene, and in 1913, the Kern County Highway Department established a nearby quarry to supply road-building materials.

Antelope Valley

Even in the early American Period, following the Treaty of Guadalupe Hidalgo in 1848 and California's entry into the Union two years later, incursions into the Antelope Valley in the vicinity of the study area were rare. Surveyors of the U.S. General Land Office arrived in the mid-1850s to establish township lines and open the area to settlement, but it appears that well into the following decade, nonnative permanent settlement along the line of the Bakersfield to Palmdale Project Section was virtually nonexistent. A few hardy farmers and ranchers arrived in the west end of the valley (near Lake Elizabeth) in the 1860s, but the dearth of surface water farther to the east discouraged permanent settlement until the arrival of the railroad in 1876. Until this time, most visitors were passing through, traveling along one of a handful of roads that traversed or skirted the margins of the valley.

Irrigated agriculture in the Antelope Valley expanded rapidly throughout the first half of the 20th century, driven in large part by the advent of groundwater pumping, especially in the areas surrounding Lancaster and Rosamond. Prior to 1900, nearly every well was free-flowing, or artesian, and water could be obtained with relative ease by drilling down as little as 200 feet. With the introduction of gas and electric engine pumps, farmers could lift groundwater for irrigation well beyond the artesian zone. By the 1930s, Antelope Valley farms were producing up to 100,000 tons of alfalfa on an annual basis; other important agricultural products included pears, stone fruits, grapes, and poultry. One project related to water development that affected the local economy in the early 20th century (even though the water source and its destination were both far outside the Antelope Valley) was the Los Angeles Aqueduct. The City of Los Angeles started construction of the aqueduct in 1907 and completed work by the end of 1913; a 28-mile-long section of aqueduct known as the Mojave Division traversed the Antelope Valley region to the west of Mojave, Rosamond, and Lancaster. Agriculture remained a vital component of the valley's economy into the post-World War II era, but by this time, it had become evident that the existing water supply could not keep pace with agricultural demands.

Geographic differences notwithstanding, the importance of reliable water supplies and efficient transportation systems was common to the developmental history of all three regions, especially in the decades leading up to the turn of the 20th century. The advent of irrigation and arrival of the first railroad in the 1870s profoundly reshaped the existing setting by encouraging permanent settlement and giving birth to cities and towns throughout the Bakersfield to Palmdale Project Section.

Additional events and trends that occurred after the turn of the 20th century influenced the development of the cities within the Bakersfield to Palmdale Project Section. These included adoption of the automobile as the primary mode of transportation and expansion of the highway and freeway system; large-scale municipal, state, and federal water development projects; introduction of new agricultural methods and crops; and the arrival of large military bases and industrial concerns. While these changes were distinct and important, their effect on the corridor was primarily to intensify and expand the land settlement patterns already established by the end of the 19th century.

The historical architectural resources inventoried and evaluated for the Bakersfield to Palmdale Project Section reflect the major historical events and trends of the development within the APE. The Bakersfield to Palmdale Project Section HASR further explores these major historic events and trends that occurred in the southern San Joaquin Valley, the Tehachapi Mountains, and the western Antelope Valley (Authority 2019c). While the built environment resources are located throughout this study corridor, most are located at the west end of the section, in the Kern County communities of Bakersfield and Edison, and at the east end of the section, in the Los Angeles County cities of Lancaster and Palmdale. For a more detailed discussion of the historic architectural setting, refer the Bakersfield to Palmdale Project Section HASR (Authority 2019c).

Types of Historic Built Resources

Historic properties and historical resources are elements of the built environment that are listed in or determined eligible for listing in the NRHP or CRHR (respectively), or that are considered historical resources for the purposes of CEQA. These elements reflect important aspects of local, state, or national history and can be buildings, structures, objects, sites, districts, landscapes, or TCPs. Examples of the types of historic properties or historical resources of the built environment within the APE include dwellings, industrial buildings, commercial buildings, downtown districts, farms, canals, rural landscapes, dams, bridges, roads, and other facilities. The NRHP uses the NRHP eligibility criteria (36 C.F.R. 60.4) to evaluate significance, described in Section 3.17.2, Laws, Regulations, and Orders. In addition to being significant under one or more of the criteria, a historic property must also possess sufficient integrity (i.e., those features necessary to convey its significance). The concept of integrity is based on seven aspects or qualities that include the historic property's location, design, setting, materials, workmanship, feeling, and association. All seven aspects to do not need to be present for eligibility, so long as the overall sense of past time and place is evident. There are built resources (historic properties under the NHPA and historical resources under CEQA) within the City of Bakersfield that are not analyzed in this document, but are addressed in other HSR environmental documents. Please refer to the Fresno to Bakersfield Section Final EIR/EIS (Authority and FRA 2005) and the Fresno to Bakersfield Section Supplemental EIR (Authority 2018).

Description of Historic Built Resources Within the Area of Potential Effect

Overall, the archival research, background research, and field surveys identified and evaluated a total of 768 built environment resources within the APE, 760 of which were determined ineligible for listing in the NRHP and CRHR. The 760 ineligible resources are not historic properties under Section 106 and are not historical resources for the purposes of CEQA. The inventory and evaluation of the study population concluded that the APE contains a total of eight built resources that are historic properties under the NHPA. These eight built resources are also considered historical resources under CEQA. These properties are listed or were previously determined eligible for listing in the NRHP and the CRHR. None of the built resources identified are considered historical resources for the purposes of CEQA only. The remaining 760 resources determined ineligible were documented by previous studies, or by California Department of Parks and Recreation 523 form evaluation, and streamlined documentation conducted specifically for the Bakersfield to Palmdale Project Section, and are reported in the Bakersfield to Palmdale Project Section HASR (Authority and FRA 2019c).

Oswell Street to Palmdale Station Study Area

Of the eight resources identified within the Oswell Street to Palmdale Station subsection APE, none have been identified as "not eligible" for listing in the NRHP but "eligible" for listing in the CRHR or local government registries or inventories. Thus, no built resources in the APE are considered historical resources solely under CEQA. Table 3.17-11 shows the eight Section 106 built historic properties identified in the HASR.

The majority of the overall built environment survey population (both eligible and ineligible resources) dates to the 20th century. Of the eight historic properties discussed below that have been listed or determined eligible for listing in the NRHP and the CRHR, only one was constructed during the 19th century. The remaining properties were generally built between 1912 and 1968.

Table 3.17-11 National Register of Historic Places-Listed and Eligible Built Resources Within the Area of Potential Effect

Map Reference Number	Historic Name	Address/ APN	City/ County	Year Built	Eligibility		OHP Status Code[1]	SHPO Response
					CRHR	NRHP		
1	**Big Creek Hydroelectric System Historic District** (Contributors: Magunden Substation, Big Creek East and West Transmission Lines, Vincent Transmission Line)	14503004 14508010 14505006 14510001	Bakersfield (vicinity)/ Kern	1912–1927	1, 3	A, C	1D	**Listed in NRHP July 26, 2016**
2	Keene Fire Station	50504001	Keene/ Kern	1934	3	C	2S2	**SHPO concurred in determination February 16, 2017**
3	National Chavez Center/Nuestra Señora Reina de la Paz	50504034 50504033 50508016 and portions of 50508017	Keene/ Kern	1914–2003	1, 2	A, B, Criterion Consideration G	1D	**Listed in NRHP August 30, 2011**
4	First Los Angeles Aqueduct	34601101 34606157 47418009 47419035	Willow Springs (vicinity)/ Kern	1908–1913	1, 3	A, C	2D	**Determined eligible April 10, 2007, by BLM**

Map Reference Number	Historic Name	Address/ APN	City/ County	Year Built	Eligibility		OHP Status Code[1]	SHPO Response
					CRHR	NRHP		
5	Willow Springs International Raceway	25205001 25205004 25205009 25205010 25205013 to 25205016 25217110 31501205 31507224 31507225 31507228 31507229 31507231 to 31507233	Rosamond (vicinity)/ Kern	1953	1, 3	A, C	2S2 / PHI	**SHPO concurred in determination February 16, 2017**
6	Lancaster Post Office[2]	3134011901	Lancaster/ Los Angeles	1941	3	C	2S2 / 2MPL	**SHPO concurred in determination February 16, 2017**
7	Western Hotel[2]	3134011912	Lancaster/ Los Angeles	ca. 1890	1, 3	A, C	2S2	**SHPO concurred in determination February 16, 2017**
8	Denny's Restaurant #30 (aka Village Grille Diner)	3132010018	Lancaster/ Los Angeles	1960	3	C	2S2	**SHPO concurred in determination February 16, 2017**

Source: California High-Speed Rail Authority and Federal Railroad Administration, 2017b
This APE includes areas from Oswell Street to Palmdale Station only; for information regarding resources, refer to the Bakersfield F-Street HASR (California High-Speed Rail Authority 2016a) and the Bakersfield LGA HASR (California High-Speed Rail Authority 2016c).

1 OHP Status Codes: 1 = Listed in the NRHP, 2 = Determined eligible for listing in the NRHP, 3 = Appears eligible for listing in the NRHP (has not yet received SHPO concurrence or agency determination); Code suffixes: D = District or contributor to a district, S = Individual property, MPL = Multiple Property Listing

2 Previously evaluated but did not receive SHPO concurrence at that time; an updated DPR 523 form was prepared for the Appendix D of the HASR (2017a).

APE = area of potential effect
APN = Assessor's Parcel Number
BLM = Bureau of Land Management
CRHR = California Register of Historical Resources
DPR = California Department of Parks and Recreation
HASR = Historic Architectural Survey Report
LGA = Locally Generated Alternative
NRHP = National Register of Historic Places
OHP = Office of Historic Preservation
SHPO = State Historic Preservation Officer

The following built resources in Kern and Los Angeles Counties are within the APE for the Bakersfield to Palmdale Project Section and were determined eligible for or are listed in the NRHP and the CRHR, or otherwise meet the definitions of a historical resource as defined by CEQA:

- **Big Creek Hydroelectric System Historic District (Magunden Substation, Big Creek East and West Transmission Lines, and Vincent Transmission Line) (APNs 145-030-04, 145-080-10, 145-050-06, and 145-100-01; Map ID No. 1).** The APE for this project intersects a portion of the Big Creek Hydroelectric System Historic District. The district is linear in nature and includes an early 20th century hydroelectric generation and transmission system that extends from Huntington Lake (northeast of Fresno) southward to the Eagle Rock Substation, west of Pasadena. The Big Creek Hydroelectric System Historic District consists of 48 contributing buildings and structures,

three of which are within the APE: Magunden Substation, Vincent Transmission Line, and Big Creek East and Big Creek West Transmission Lines. The period of significance of the Big Creek Hydroelectric System Historic District extends from 1909, when construction began on the initial features of the system, to 1929, with the completion of the key components of the system. The hydroelectric system as a whole remains operational to the present day. The Magunden Substation is a contributing element of the historic district that includes APNs 145-030-04, 145-080-10, 145-050-06, and 145-100-01 totaling approximately 17.3 acres, near East Bakersfield. The substation contributing elements include an industrial building with Art Deco and Classical Revival influences (constructed between 1913 and 1914), and the towers of the contributing transmission lines located the substation parcels. The towers carrying the Vincent, Big Creek East, and Big Creek West transmission lines are character-defining elements of the substation. The outdoor equipment and modern ancillary buildings also located on the substation parcels are non-contributing elements, because they were built after the district's period of significance (1909–1929). The transmission lines that are contributing elements of the district traverse the substation on a roughly north-south alignment. The parallel and identical Big Creek East and West transmission lines extend 241 miles within the Big Creek Hydroelectric System Historic District and were constructed in 1912–1913, while the Vincent Transmission Line (constructed between 1925 and 1927) extends approximately 230 miles. The overall transmission line alignments, the original steel frame towers, and the operational integrity of the lines as a transmission feature of the overall district are all considered character-defining features of the transmission lines. The historic boundaries of the contributing transmission lines are defined by their current legal parcels, right-of-way, and/or easement boundary for each line. The Keeper of the NRHP listed the Big Creek Hydroelectric System Historic District in the NRHP under Criteria A and C on July 26, 2016. This designation automatically listed the Big Creek Hydroelectric System Historic District in the CRHR under Criteria 1 and 3, and it is a historical resource for the purposes of CEQA. The contributing resources correspond to MR 005 Magunden Substation, MR 006 Vincent Transmission Line, and MR 007 Big Creek East and Big Creek West Transmission Lines in the HASR (Authority 2019c).

- **Keene Fire Station (Kern County Fire Station 11) (APN 505-040-01, 30356 Woodford-Tehachapi Road, Keene; Map ID No. 2).** The Keene Fire Station was built in 1934 and is a good example of California Conservation Corps adobe brick construction. The period of significance for the Keene Fire Station is 1934. The contributing elements of the property include a six-room adobe brick fire station designed in the Minimal Traditional style with Spanish Eclectic influences, an associated wood-frame garage, and low rock walls defining the driveway and parts of the parcel boundary. However, the boundaries of the historic property are the entire legal boundaries of the parcel. The property was determined eligible for listing in the NRHP in 2017 under Criteria A and C, as well as the CRHR under Criteria 1 and 3, as a result of studies associated with the Bakersfield to Palmdale Project Section (the resource corresponds to MR 22 in the Bakersfield to Palmdale Project Section HASR [Authority 2019c]).
- **National Chavez Center/Nuestra Señora Reina de la Paz (APNs 505-040-34, 505-040-33, and 505-080-16, and portions of APNs 505-080-17 and 505-080-0529700, 30356 Woodford-Tehachapi Road, Keene; Map ID No. 3).** Nuestra Señora Reina de la Paz was the residence of United Farm Workers founder César Chávez. In addition to being listed in the NRHP in 2011 under Criteria A and B, and Criteria Consideration G, as well as the CRHR in 2011, Nuestra Señora Reina de la Paz was also designated as a National Historic Landmark and a National Monument in 2012. National Historic Landmarks 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 the property special protections and gives the NPS authority to restore, reconstruct, rehabilitate, preserve, and maintain properties of national historical significance. "La Paz," as the National Chavez Center is colloquially known, possesses exceptional historical significance at the national level within the areas of the agriculture industry, social history, Hispanic heritage, and political history because of its role as the headquarters of the United Farm Workers, the first permanent

agricultural labor union established in the history of the U.S., and for its association with César Chávez, the founder of the United Farm Workers and to date the most important Latino leader in the history of the U.S.

The period of significance is from 1970 to 1984. The 187-acre property includes 23 buildings, 1 site, and 3 structures that are contributing elements to the historic property. Constructed between the 1910s and 1960s, the contributing resources reflect modest architectural characteristics. The FOE (Authority 2019a) describes the boundaries of the historic properties as follows: "The northern and eastern boundaries are formed by the property line that lies 100 feet from the center of the adjacent railroad track; the southern boundary line follows the property line along Tehachapi Creek; the western boundary follows the property line." The historical significance of this National Historic Landmark property comes from its connection to the agriculture industry, social history, Hispanic heritage, and political history (the resource corresponds to MR 21 in the HASR [Authority 2019c]).

- **First Los Angeles Aqueduct (segment of linear property, Kern County; Map ID No. 4).** The First Los Angeles Aqueduct was constructed between 1907 and 1931 and is characterized by its concrete channel and cover. The period of significance of the property is also 1907 through 1931. The character-defining features of the First Los Angeles Aqueduct are its alignment through this portion of the Mojave Desert, its below-grade profile with just the top or cover visible, its concrete conduit and cover, and the paralleling dirt access road. These features define the historic property boundary. The First Los Angeles Aqueduct was determined eligible for the NRHP and CRHR in 2007 under Criterion A/1 for its important association with the economics and politics of California water issues, as well as under Criterion C/3 for its design and construction significance as an important early 20th-century example of a concrete aqueduct and an important work by master engineer William Mulholland (the resource corresponds to MR 27 in the HASR [Authority and FRA 2019c]).
- **Willow Springs International Raceway (Map ID No. 5).** Willow Springs International Raceway, completed in 1953, is the oldest purpose-built road racetrack in the state and the oldest surviving European-style raceway in the U.S. The period of significance for this property extends from 1953 to 1956. 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 boundaries are limited to the footprint of the main track. The property was determined eligible for listing in the NRHP in 2017 under Criteria A and C as a result of studies associated with the Bakersfield to Palmdale Project Section, and for listing in the CRHR at the state level of significance under Criteria 1 and 3. Willow Springs International Raceway was also designated as a California Point of Historic Interest in 1996 (SPHI-KERN-011) (the resource corresponds to MR 28 in the HASR [Authority and FRA 2019c]).
- **Western Hotel Building (APN 3134-001-912, 557 W Lancaster Boulevard, Lancaster; Map ID No. 6).** The Western Hotel Building was constructed circa 1888 and remained a hotel through the 1960s. The hotel is one of Lancaster's oldest buildings and first hotels, and was the city's most important gathering place during its early years. The hotel notably housed construction crews of the Los Angeles Aqueduct. The period of significance for Criteria A and 1 extends from the building's date of construction (circa 1888) through the 1960s, when it ceased operating as a hotel. The property's period of significance under Criteria C and 3 is its date of construction (about 1888).The property was determined eligible for listing in the NRHP in 2017 as a result of studies associated with the Bakersfield to Palmdale Project Section. The Western Hotel Building is also considered a historical resource for the purposes of CEQA (the resource corresponds to MR 55 in the HASR [Authority and FRA 2017a]).
- **Lancaster Post Office Building (APN 3134-011-901, 567 W Lancaster Boulevard, Lancaster; Map ID No. 7).** The Lancaster Post Office Building was built in 1941 and is an example of the Public Works Administration Modern/Stripped Classical architectural style. The building's period of significance is also 1941, the year of its completion. The boundaries of the historic property are the legal parcel lines. The Lancaster Post Office Building features an interior mural by José Moya

del Piño for the U.S. Treasury Department's Section of Fine Arts program. The building was determined eligible for listing in the NRHP and CRHR in 2017 as a result of studies associated with the Bakersfield to Palmdale Project Section, and is also an historical resource for the purposes of CEQA (the resource corresponds to MR 54 in the HASR [Authority 2019c]).

- **Denny's Restaurant Building (APN 3132-010-018, 44303 Sierra Highway, Lancaster; Map ID No. 8).** The Denny's Restaurant Building, now occupied by another restaurant, was constructed in 1960 and is one of the few remaining examples of Googie architecture in Lancaster. The period of significance is also 1960, the year of its construction, and the boundary of the historic property is the legal parcel. The building's primary design characteristic is the asymmetrical sloped roof and strong geometric forms. The Denny's Restaurant building was determined eligible for listing in the NRHP and CRHR in 2017 under Criterion C/3 as a result of studies associated with the Bakersfield to Palmdale Project Section, and is also a historical resource for the purposes of CEQA (the resource corresponds to MR 93 in the HASR [Authority 2010c]).

Figure 3.17-1 shows the general location of the eight built resources addressed in the HASR (Authority 2017c) that are listed in or have been determined eligible for listing in the NRHP and CRHR by the HASR.

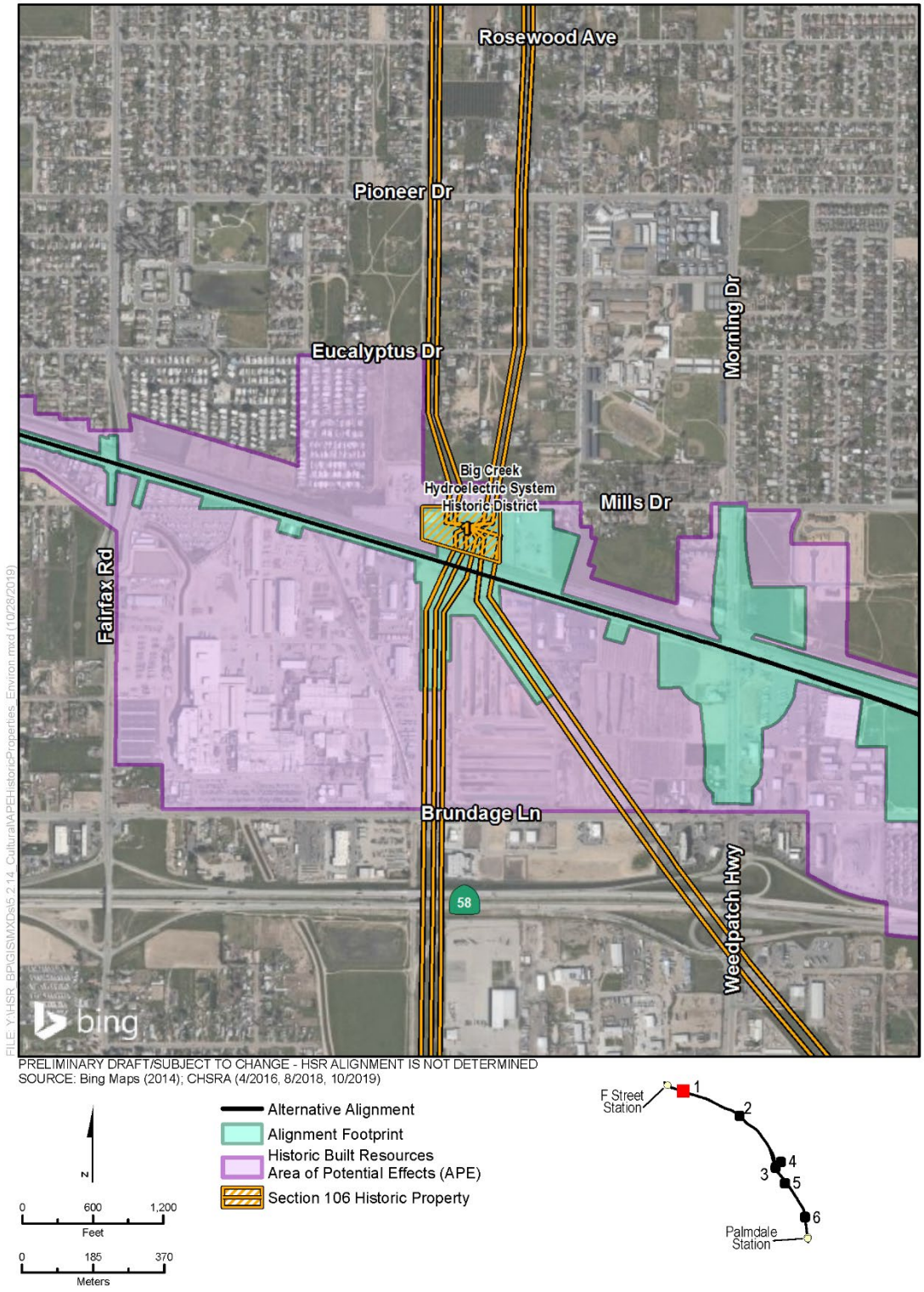

Figure 3.17-1 Historic Properties Within the Area of Potential Effects

(Sheet 1 of 6)

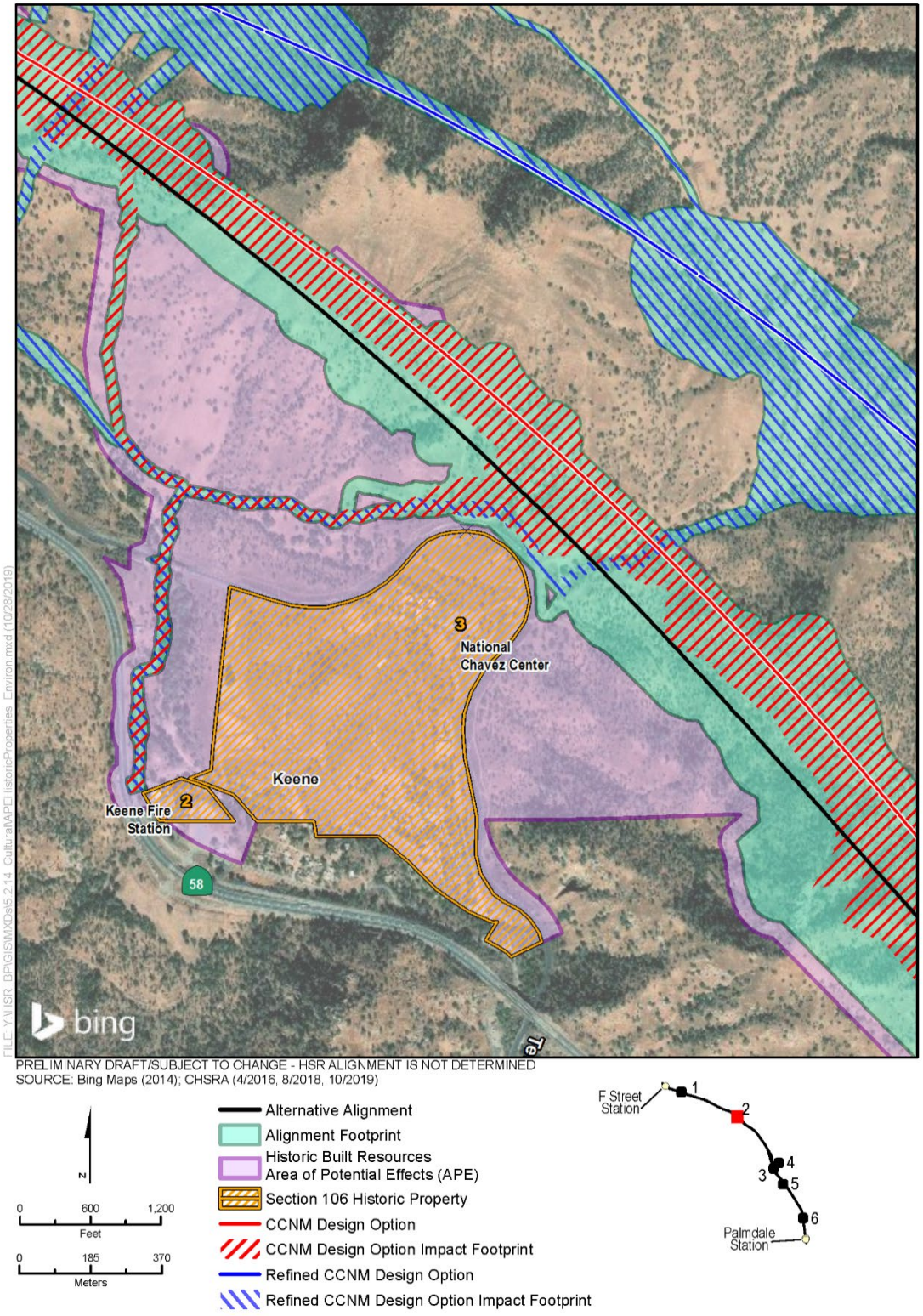

Figure 3.17-1 Historic Properties Within the Area of Potential Effects

(Sheet 2 of 6)

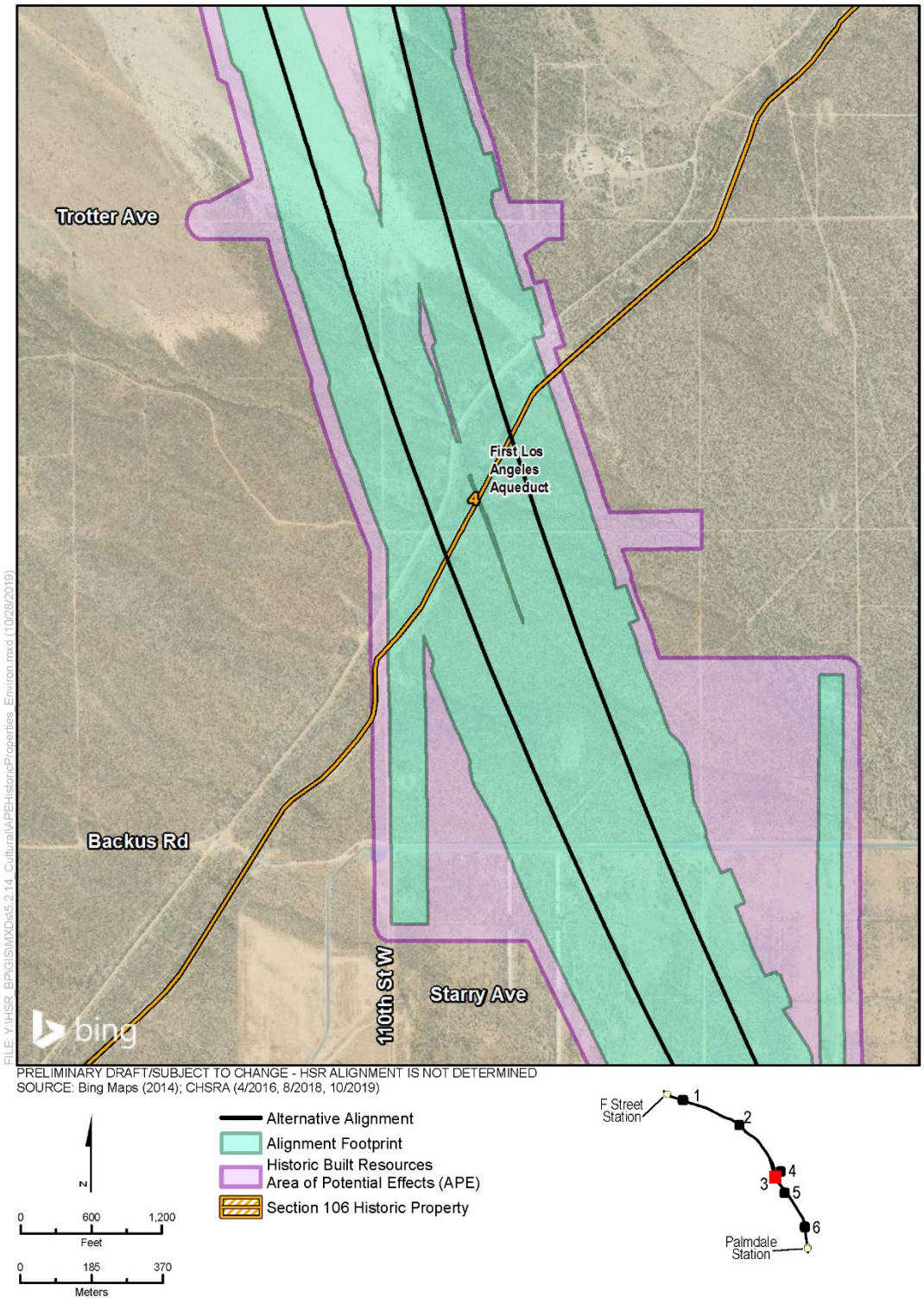

Figure 3.17-1 Historic Properties Within the Area of Potential Effects

(Sheet 3 of 6)

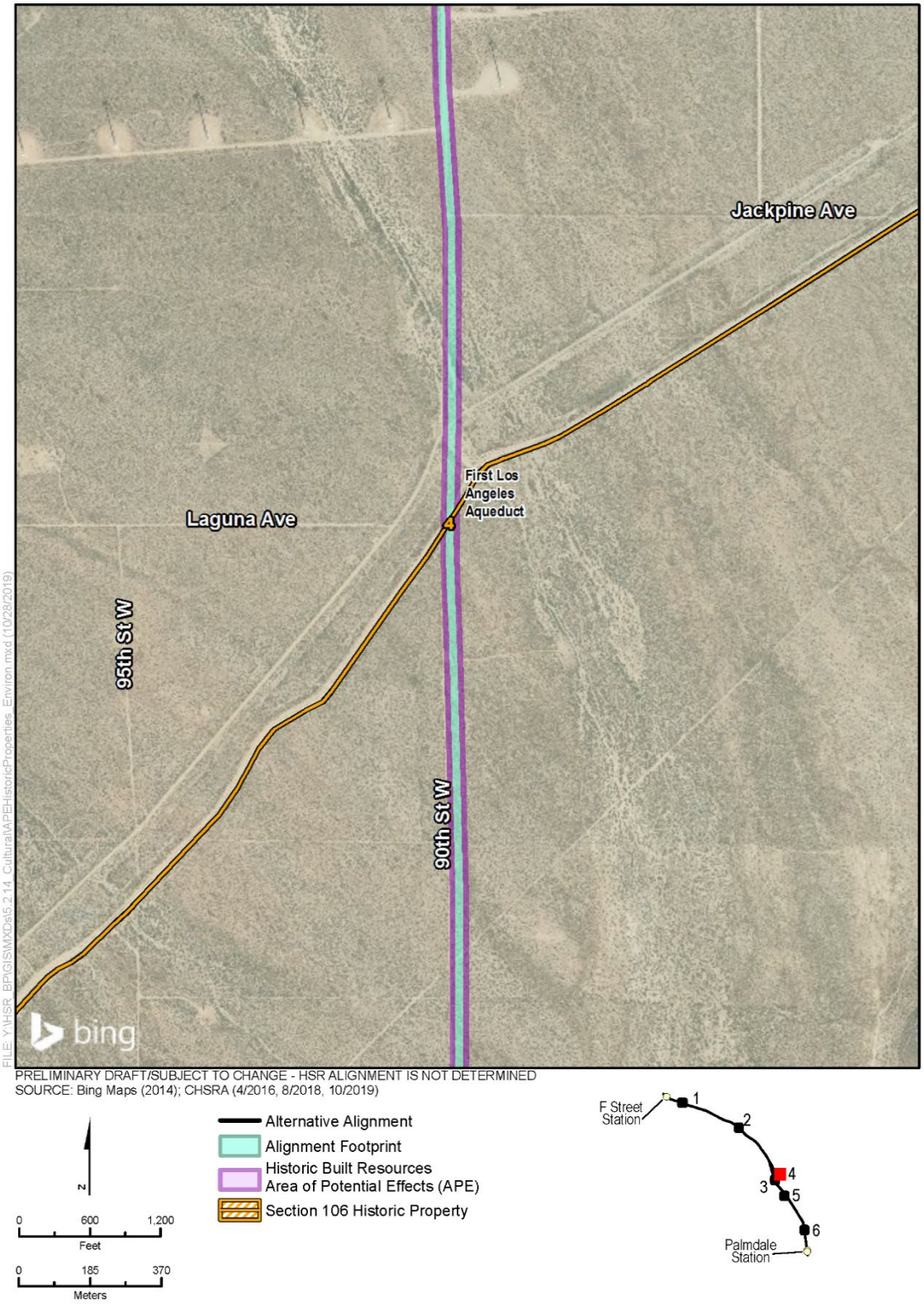

Figure 3.17-1 Historic Properties Within the Area of Potential Effects

(Sheet 4 of 6)

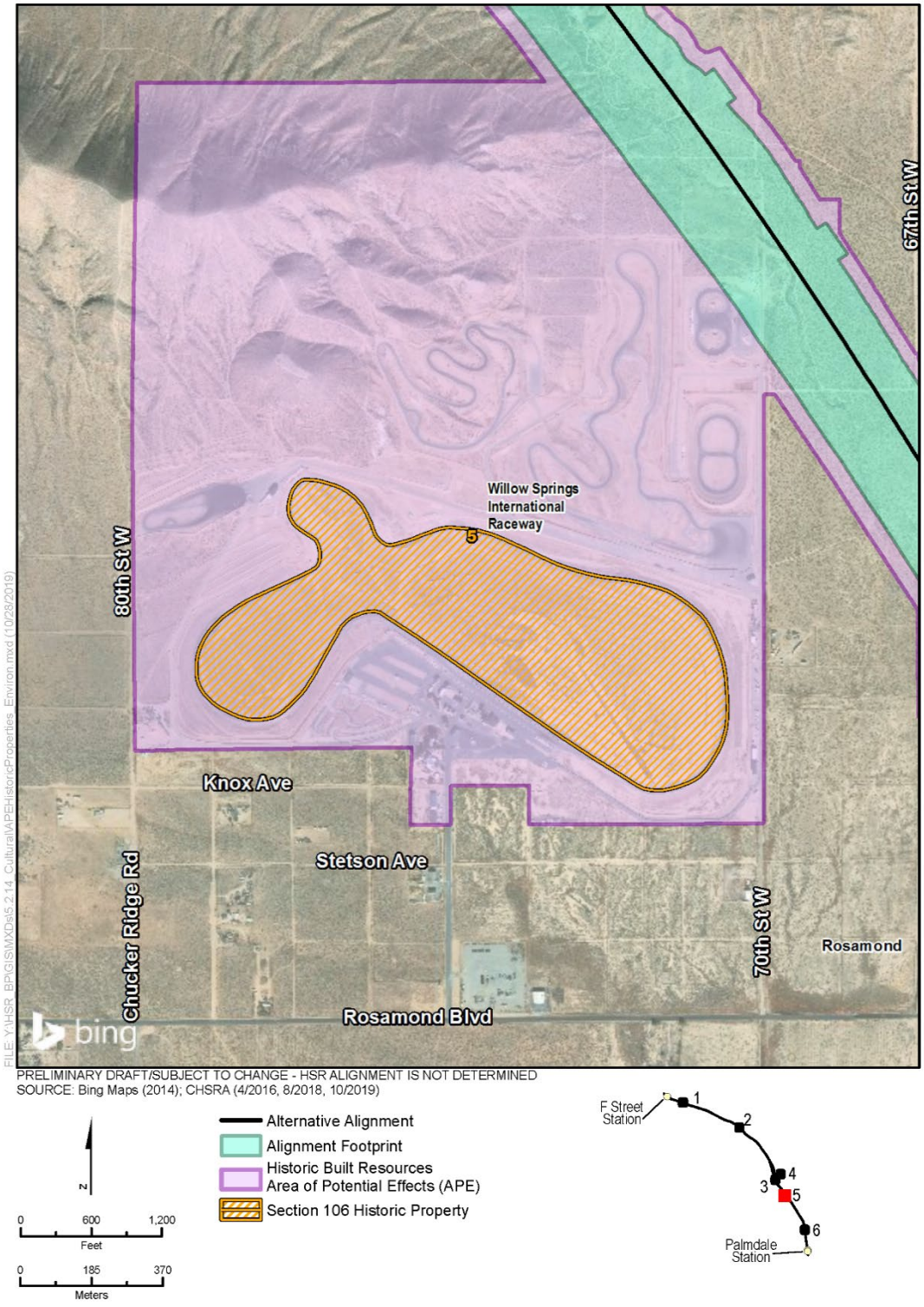

Figure 3.17-1 Historic Properties Within the Area of Potential Effects

(Sheet 5 of 6)

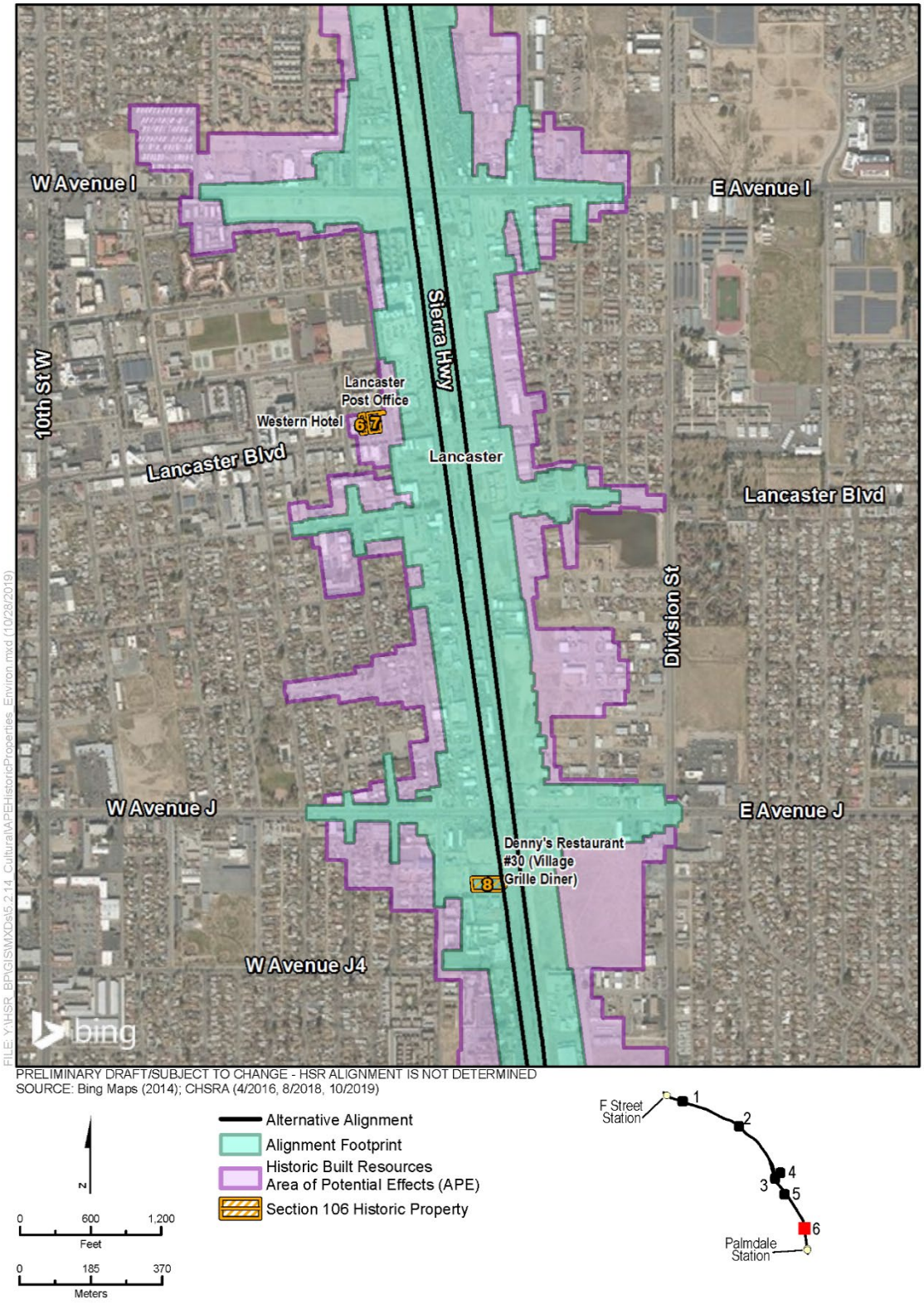

Figure 3.17-1 Historic Properties Within the Area of Potential Effects

(Sheet 6 of 6)

Bakersfield Station—F Street (Locally Generated Alternative)

The following table summarizes the eligible historic properties identified in the Fresno to Bakersfield Project Section HASRs that are within the APE for the Bakersfield to Palmdale Project Section, Bakersfield Station—F Street (LGA). The map reference numbers for these historic properties have been retained from the previous technical studies; for the purposes of this discussion, the suffix "-LGA" has been added to each to differentiate them from reference numbers used in the Oswell Street to Palmdale Station subsection. Table 3.17-12 shows the historic properties associated with the Bakersfield Station—F Street (LGA).

Table 3.17-12 Previously Identified Historic Properties (National Register of Historic Places) Bakersfield Station—F Street (Locally Generated Alternative)

Map Reference Number	Historic Name	APN	Address	City	Year Built	Eligibility		OHP Status Code
						CRHR	NRHP	
MR 030-LGA	SR 204/Golden State Avenue	SR 204/ Golden State Avenue	SR 204/ Golden State Avenue	Bakersfield	1933–1934	1	A	2
MR 030-LGA	Bridge[1] No. 50-0033	Bridge No. 50-0033	Bridge No. 50-0033	Bakersfield	1933	1*	A	2
MR 030-LGA	Bridge[1] No. 50-0208	Bridge No. 50-0208	Bridge No. 50-0208	Bakersfield	1933, 1954	1*	A	2
MR 030-LGA	Bridge[1] No. 50-0209	Bridge No. 50-0209	Bridge No. 50-0209	Bakersfield	1933, 1954	1*	A	2
MR 042-LGA	Republic Supply Company (aka Gleaners)	002-240-02	1326 30th St	Bakersfield	1937–1946	3	C	2S2
MR 055–LGA	Division of Forestry office	–	2731–2738 O St; 1120 Golden State Ave	Bakersfield	1942–1948	1, 3	A, C	2S2
MR 075-LGA	Kern County Land Company Warehouse	014-350-09	210 Sumner St	Bakersfield	1880	1, 3	A, C	2S2
MR 097-LGA	Noriega's[2]	016-050-05	525 Sumner St	Bakersfield	1893–1940	1, 2, 3	A, B, C	2S2
MR 107–LGA	Amestoy Hotel (aka Narducci's; aka Cesmat Hotel)	016-060-12	622 E 21st St	Bakersfield	1899	1	A	2S2
MR 116-LGA	Southern Pacific Depot (Bakersfield)	014-370-01	730 Sumner St	Bakersfield	1889, 1941	1, 3	A, C	2S2
MR 120-LGA	Fire Station #2	016-070-12; 016-070-13; 016-070-14	716 E 21st St	Bakersfield	1940	1, 3	A, C	2S2

Map Reference Number	Historic Name	APN	Address	City	Year Built	Eligibility		OHP Status Code
						CRHR	NRHP	
MR 133-LGA	Statue of Father Garcés	N/A	Garces Traffic Circle	Bakersfield	1939	3	C	2S2

Source: California High-Speed Rail Authority, 2019c
For mapped locations of these resources, please refer to the Bakersfield Station—F Street (Locally Generated Alternative) FOE.
[1] These bridges are part of the larger SR 204/Golden State Avenue historic district.
[2] Also found eligible as a traditional cultural property.
* Eligible for the CRHR, but not considered a historical resource for the purposes of the California Environmental Quality Act.
aka = also known as
APN = Assessor's Parcel Number
CRHR = California Register of Historical Resources
FOE = Finding of Effect
LGA = Locally Generated Alternative
MR = Map Reference
N/A = not applicable
NRHP = National Register of Historic Places
OHP = Office of Historic Preservation
SR = State Route

CEQA-Only Historical Properties

The following table summarizes the built resources that are historical resources for the purposes of CEQA only as identified in the Fresno to Bakersfield Project Section HASRs that are located in the APE for the Bakersfield to Palmdale Project Section, Bakersfield Station—F Street (LGA). The MR number for this historical resource has been retained from the previous technical studies; for the purposes of this discussion, the suffix "-LGA" has been added to differentiate the number from reference numbers used in the Oswell Street to Palmdale Station subsection. Table 3.17-13 shows the CEQA-only resource associated with the Bakersfield Station—F Street (LGA).

Table 3.17-13 Previously Identified "CEQA-Only" Cultural Resources, Bakersfield Station—F Street (Locally Generated Alternative)

Map Reference Number	Historic Name	APN	Address	City	Year Built	Eligibility		OHP Status Code
						CRHR	NRHP	
MR 032-LGA	Union Ice House	002-271-02, 002-271-06	3301 Chester Ave	Bakersfield	1901, 1910; c. 1960	None	None	5S1 (SPHI)

Source: California High-Speed Rail Authority, 2019c
For mapped locations of these resources, please refer to the Bakersfield Station—F Street (LGA) FOE.
APN = Assessor's Parcel Number
CEQA = California Environmental Quality Act
CRHR = California Register of Historical Resources
FOE = Finding of Effect
LGA = Locally Generated Alternative
MR = Map Reference
NRHP = National Register of Historic Places
OHP = Office of Historic Preservation
SPHI = State Point of Historical Interest

3.17.6.4 Resources of Importance to Native Americans or Other Interested Parties

Tribal Outreach Summary

The Authority and the FRA rely on the NAHC to identify those Native American tribal governments and representatives with whom it is most appropriate to consult for a given geographic area. A revised and updated list of local tribal entities is regularly obtained from the NAHC to ensure that the current tribal contact information is used when communicating with tribal representatives. The NAHC provided the Authority and/or its consultant a list of tribes and representatives in December 2009, February 2014, and March 2015. In each instance, a request was made for (1) a contact list of Native American tribes and representatives for Kern and Los Angeles Counties and (2) a review of the Sacred Lands File for the project. In December 2009, the NAHC indicated the "SLF search did indicate the presence of Native American cultural resources within one-half mile of the proposed project, specifically in the Edison, Lancaster East, Palmdale, Mojave, Tehachapi North and Tehachapi South Quadrangles." In March 2015, the

NAHC indicated "The search indicates the potential for Native American cultural resources in the Tehachapi North and the Monolith Quadrangles that may be impacted." Correspondence submitted to the NAHC and Native American tribes is provided in the Bakersfield to Palmdale Project Section ASR (Authority and FRA 2019e). For APE modifications, these parties would be consulted for potential cultural resources within the revised APE.

Local Governments, Historical Societies, and Other Potentially Interested Parties

As a result of outreach efforts to local governments, historical organizations, and other potentially interested parties contacted by the Authority, as described in *Section 3.17.4, Coordination of the Section 106 Process with NEPA and CEQA Compliance*, several consulting parties have been identified for continued participation in the Section 106 Process for the Bakersfield to Palmdale Project Section (Table 3.17-3). For APE modifications, these parties would be consulted for potential cultural resources within the revised APE.

As a result of the outreach efforts, the National Chavez Center was identified as an interested party and requested to be a consulting party for continued participation in the Section 106 process. The National Chavez Center administers La Paz in association with the National Park Service. On November 16, 2018, the National Chavez Center and other consulting parties were provided with the draft Finding of Effect document for review and comment; the National Chavez Center responded with a comment letter on December 28, 2018. Consultation with the National Chavez Center is ongoing.

Additionally, at an Authority-sponsored community open house meeting in Rosamond on July 26, 2016, a member of the public provided a map that depicted an area where archaeological sites and projectile points are reported. No recorded archaeological sites are at the location identified by the individual at the Rosamond open house meeting, although this is likely due to a lack of formal archaeological survey of this area (Authority 2019e: 7-3). All archaeological resource locations are confidential and are therefore not disclosed by this EIR/EIS document. However, archaeological resources are mapped and discussed in the Bakersfield to Palmdale Project Section ASR (Authority and FRA 2019e). No additional resources have been specifically identified by local governments or other potentially interested parties.

3.17.7 Environmental Consequences

The Authority has incorporated into the design of the Bakersfield to Palmdale Project Section IAMFs that would avoid or minimize impacts on cultural resources (refer to Chapter 2 for discussion regarding IAMFs). With respect to cultural resources, the application of IAMFs would minimize or avoid disturbance to archaeological and historic architectural resources and would comply with the design standards of the project as described in Volume 2, Appendix 2-I, Applicable Design Standards.

3.17.7.1 Overview

The Bakersfield to Palmdale Project Section is in both Kern and Los Angeles Counties, and crosses some urban and rural environments. This section describes the impacts and potential impacts on cultural resources from the B-P Build Alternatives. These alternatives include the No Project Alternative and Alternatives 1, 2, 3, 5, the CCNM Design Option, and the Refined CCNM Design Option. The discussion of the potential direct and indirect impacts of each B-P Build Alternative is organized by the timeframe during which they occur (i.e., construction or operation). Because of limited access for archaeological surveys during the environmental phase, the identification of archaeological sites will be phased as access to parcels is gained during design-build activities. However, impacts to specific known and yet-unknown sites have been accounted for in this analysis, and potential impacts are analyzed. Construction of the B-P Build Alternatives would take place in both urbanized and rural/undeveloped areas. As with other sections, the B-P Build Alternatives would have the greatest potential to adversely impact historic architectural properties in urbanized areas and the greatest potential to impact undisturbed prehistoric archaeological sites in rural/undeveloped areas. The Bakersfield to Palmdale Project Section has the potential to impact eight historic architectural resources (both previously and newly recorded)

that are listed or determined eligible for listing on the NRHP. Also, the Bakersfield to Palmdale Project Section has the potential to impact 49 archaeological resources (both previously and newly recorded). None of these have been previously evaluated and determined eligible for the NRHP, and all 49 are assumed eligible for the NRHP for the purpose of this EIR/EIS analysis. All historic architectural and archaeological resources identified within the project section APE that are listed or eligible for listing in the NHRP, or are assumed eligible for the purposes of this project, (called historic properties under the NHPA) were determined to also be historical resources for the purpose of CEQA. It should be noted that the light maintenance facility, the maintenance-of-way facility, and the maintenance of infrastructure sidings within the B-P alignment would not impact cultural resources.

The impacts of the B-P Build Alternatives are described and organized in Section 3.17.7.4 as follows:

- **Construction Impacts:**
  - Impact CUL-1: Permanent Construction-Period Potential Adverse Impacts on Archaeological Resources Due to Construction Activities
  - Impact CUL-2: Permanent Construction-Period Potential Adverse Impacts on Built Resources due to Construction Activities
- **Operations Impacts:**
  - Impact CUL-3: Permanent Operations—Potential Adverse Impacts on Archaeological Resources
  - Impact CUL-4: Permanent Operations—Potential Adverse Impacts on Built Resources

Fresno to Bakersfield Locally Generated Alternative from the Intersection of 34th Street and L Street to Oswell Street Environmental Consequences

This section describes the environmental consequences to cultural resources resulting from the construction and operation of the portion of the F-B LGA from the intersection of 34th Street and L Street to Oswell Street.

No previously identified archaeological resources are within the F-B LGA Archaeological APE from the Intersection of 34th Street and L Street to Oswell Street; however, impacts to unknown archaeological resources could potentially be significant if inadvertently disturbed during construction (Impact CUL #1 in the F-B LGA Final EIR/EIS).

A pre-construction conditions assessment of built environment resources would be conducted before construction begins to avoid construction vibration damage, and the guidelines for minimizing vibration impacts at sensitive receptors would be followed during construction (CUL-IAMF #6, CUL-IAMF#7, and CUL-IAMF #8 in the F-B LGA Final EIR/EIS). Therefore, no significant impacts on built environment resources due to vibration from construction activities will occur. Furthermore, no significant impacts to built environment resources that are directly over or adjacent to the HSR line would occur from project-related construction activities because these resources would receive appropriate protection and stabilization to protect them from inadvertent damage (CUL-IAMF #6, CUL-IAMF#7, and CUL-IAMF #8 in the F-B LGA Final EIR/EIS). Therefore, impacts to the following historic properties between the Intersection of 34th Street and L Street to Oswell Street would be less than significant (Impact CUL#2 in the F-B LGA Final EIR/EIS): Father Garcés Statue, San Joaquin Compress and Warehouse Company, Division of Forestry Service Office, Noriega's, Amestoy Hotel, Southern Pacific Depot, Fire Station Number Two, Folk Victorian Residence, and State Route 204/Golden State Avenue.

Archaeological sites would only be subject to adverse effects during construction activities, not during operational activities. Project operation would not result in effects on archaeological resources (Impact CUL#3 in the F-B LGA Final EIR/EIS).

The introduction of unavoidable visual features would diminish the integrity of the Republic Supply Company and the Kern County Land Company Warehouse. This would cause a

substantial adverse change to the immediate surroundings of these historical resources and cause an adverse effect under Section 106 (Impact CUL#4 in the F-B LGA Final EIR/EIS).

CEQA Conclusion

Ground-disturbing construction activities could cause direct or indirect effects to unknown archaeological resources, which would be considered a significant impact under CEQA (Impact CUL#1 in the F-B LGA Final EIR/EIS). Visual effects to the Republic Supply Company and the Kern County Land Company Warehouse would cause substantial adverse changes to the immediate surroundings of the historical resources. This is considered a significant impact under CEQA (Impact CUL#4 in the F-B LGA Final EIR/EIS). There would be no direct or indirect effects to any other resources; all other impacts would be less-than-significant under CEQA (Impacts CUL #2 and CUL#3 in the F-B LGA Final EIR/EIS).

Mitigation Measures CUL-MM#4 and CUL-MM#5, shown in Table 3.17-5 of the Fresno to Bakersfield Section Supplemental EIR, are both incorporated in CUL-MM#2, described in Section 3.17.8 of the F-B LGA Final EIR/EIS. CUL-MM#2 would mitigate impacts to archaeological resources in the F-B LGA Archaeological APE from the intersection of 34th Street and L Street to Oswell Street to less than significant should they be inadvertently discovered during construction.

Mitigation Measures CUL-MM#12 and CUL-MM#13, shown in Table 3.17-6 of the Fresno to Bakersfield Section Supplemental EIR, which correlate with CUL-MM#5 and CUL-MM#6, respectively, as described in Section 3.17.8 of the F-B LGA Final EIR/EIS, would mitigate the impacts to historic properties and historical resources within the F-B LGA from the intersection of 34th Street and L Street to Oswell Street to less than significant.

3.17.7.2 Archaeological Resources

Activities that impact archaeological resources are typically associated with the project construction. If NRHP and CRHR listed or eligible archaeological sites are within the project footprint, construction activities would likely result in adverse effects to those sites; consequently, construction impacts cannot be considered temporary impacts. Soil excavation or compaction resulting from the use of heavy machinery on the construction site itself or in staging areas or any other area of ground-disturbing activities may impact the integrity of artifact-bearing deposits associated with known and as-yet undiscovered archaeological sites. For all alternatives, unknown or unrecorded archaeological resources, including subsurface buried archaeological deposits, may exist. The disturbance and removal of archaeological resources would result in adverse effects on archaeological resources under Section 106 and could cause substantial adverse changes in the significance of an archaeological resource pursuant to California Code of Regulations Section 15064.5 and would be an impact under NEPA and a significant impact under CEQA.

As discussed previously, a geoarchaeological sensitivity assessment of the Bakersfield to Palmdale Project Section corridor indicates that despite the fact that much of the APE consists of landforms that are too old to contain buried archaeological resources, numerous younger geologic deposits overlie some of these older landforms. Therefore, areas within the APE have a high sensitivity for the occurrence of prehistoric archaeological resources. Additionally, the geoarchaeological sensitivity study notes that many areas within the APE have no record of systematic archaeological surveys being completed. Per the Section 106 PA, all areas would be subject to surveys and phased site identification processes prior to construction.

Archaeological resources are not typically subject to visual or audible effects because their settings do not generally contribute to their significance. Exceptions are described in Section 3.17.6.4, Resources of Importance to Native Americans and Other Interested Parties.

3.17.7.3 Historic Built Resources

Architectural resources can be both directly and indirectly affected if character-defining features are altered. As with archaeological resources, activities that impact architectural resources are typically associated with the project construction. Activities that can result in adverse effects under Section 106 or substantial adverse changes under CEQA from construction of a project

include, but are not limited to, relocation or realignment of resources; demolition, removal of all or portions of buildings, structures, linear features, or landscaping; settlement resulting from adjacent excavation or dewatering; vibration-induced damage; and the alteration of visual character, reducing the feeling and association of the property to its historic setting. Permanent limited access to a historic property can result in its abandonment and eventual demolition. Construction-period alterations to a setting (e.g., increased noise levels or materials storage) are considered temporary and as such are not considered an adverse effect or a substantial adverse change to historic built resources. For operation of the train to adversely impact a historic built property, the historic property would need to be significant for its quiet environment—an environment that would be adversely impacted by the noise from operating the trains.

3.17.7.4 Alternatives Analysis

This section describes the potential impacts to cultural resources from construction and operation of the proposed B-P Build Alternatives. Section 3.17.8, Mitigation Measures, summarizes the mitigation measures prescribed to address impacts to cultural resources.

The Archaeological APE is 10,486 acres in size and has been defined via the methodology described in Section 3.17.5 (Methods for Evaluating Impacts). The Built Resources APE has been defined via the methodology described in Section 3.17.5.1. While not all cultural resources within the Archaeological and Built Resources APEs would be directly or indirectly impacted by the HSR project, the larger study areas and record search areas provide information (and therefore important *context*) about the cultural resources within the project vicinity for the purpose of assessing impacts from the Bakersfield to Palmdale Project Section.

No Project Alternative

The analysis of the No Project Alternative is based on a review of regional transportation plans for all modes of travel, including the State of California Office of Planning and Research CEQAnet Database, the Federal Aviation Administration Air Carrier Activity Information System and Airport Improvement Plan grant data, the State Transportation Improvement Program, airport master plans, interviews with airport planning officials, intercity passenger rail plans, city and county general plans, and interviews with planning officials.

Under the No Project Alternative, the Bakersfield to Palmdale Project Section would not be constructed. However, implementing the No Project Alternative does not translate to no impacts to cultural resources, because, although the project section would not be constructed under the No Project Alternative, existing and planned improvements to the highway, aviation, conventional passenger rail, and freight rail systems would still be constructed to accommodate planned growth in the project section through the 2040 time horizon. These planned transportation projects could result in the neglect, abandonment, or removal of historic properties, including the unearthing of sensitive archaeological resources, disturbance of TCPs, and removal of, or changes to, the historic character and settings of built resources. Therefore, for assessing future conditions under the No Project Alternative, 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 identified) would be developed by 2040.

Bakersfield to Palmdale Project Section Build Alternatives

This section evaluates direct and indirect impacts to cultural resources from implementation of the B-P Build Alternatives (including the CCNM Design Option and the Refined CCNM Design Option) pursuant to the Section 106 PA, NEPA, and CEQA. Because the B-P Build Alternatives (Alternatives 1, 2, 3, and 5) have such similar areas of potential impact, all of the B-P Build Alternatives are discussed under this subsection. Consequences that are unique to any specific alternative are identified where relevant (e.g., within tables).

All B-P Build Alternatives (including the CCNM Design Option and the Refined CCNM Design Option) would result in physical and visual impacts to cultural resources.

Adverse effects on historic properties under Section 106 will also be considered adverse effects under NEPA, which are distinct from substantial changes under CEQA. Although the majority of the process of identifying significant cultural resources and assessing impacts to these cultural resources is guided by the Section 106 PA, the terminology differs among the three laws (NEPA, NHPA, and CEQA), as discussed in more detail in Section 3.17.5, Methods for Evaluating Impacts. This analysis assesses impacts to historic or cultural resources under NEPA, historic properties under Section 106, and historical resources under CEQA. In addition, Section 106 and NEPA define impacts differently. Section 106 refers to adverse effects, which are found when a project may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the NRHP in a manner that would diminish the property's integrity, including its location, design, setting, materials, workmanship, feeling, or association. Adverse effects may include reasonably foreseeable effects caused by the project that may occur later in time, be farther removed in distance, or be cumulative. A significant impact to a cultural resource under NEPA is determined by the context, intensity, and duration of the effect. As stated in Section 3.17.6, Affected Environment, there is a single resource considered significant only under CEQA (Table 3.17-13); however, this resource is analyzed under the Bakersfield Station—F Street (LGA) documents (Authority 2016a, 2016d). Therefore, impacts to this resource will not be discussed further in the current analysis.

The impacts analysis for archaeological historic properties identified in the Bakersfield to Palmdale Project Section APE, as documented in the Bakersfield to Palmdale Project Section ASR (Authority 2019e), is summarized in Table 3.17-14. As indicated in Table 3.17-14, all archaeological properties within the APE would be potentially subject to direct adverse effects from construction of one or more of the B-P Build Alternatives under consideration. Due to the inaccessibility of a number of locations during field surveys, the archaeological resources listed in Table 3.17-14 are assumed eligible for the NRHP. Future survey efforts and phased identification may prove listed resources ineligible for inclusion in the NRHP, or may identify additional archaeological resources not listed here. These direct adverse effects would result from permanent impacts and include grading, tunneling, drilling, utilities installation, road widening, and realignments for construction of grade separations, equipment staging, and travel along access routes to transport materials and personnel to and from construction areas. These construction activities would result in direct adverse effects to 49 recorded archaeological properties due to their partial or total physical destruction and/or removal by project excavation. Table 3.17-14 lists the construction activities that would adversely impact the 49 recorded archaeological properties within the APE.

Table 3.17-14 Summary of Project Ground-Disturbing Actions with the Potential to Cause Adverse Effects to Archaeological Historic Properties

Resource Number[1]	Construction Impact Type by Project Alternative						
	Surface Alignment	Elevated Alignment	Underground Alignment	Utility Installation	Roadway Overcrossing	Road Realignment	Access Road
BP-JS-1 (P-15-019272/CA-KER-10546)	1, 2, 3, 5	–	–	–	–	–	1, 2, 3, 5
BP-IS-1 (P-15-019263/CA-KER-10537)	–	–	–	–	–	–	1, 2, 3, 5
P-15-018645 (CA-KER-10171)	1, 2, 3, 5	–	–	–	–	–	–
BP-IS-2 (P-15-019264/CA-KER-10538)	1, 2, 3, 5	–	–	–	–	–	–

Resource Number[1]	Construction Impact Type by Project Alternative						
	Surface Alignment	Elevated Alignment	Underground Alignment	Utility Installation	Roadway Overcrossing	Road Realignment	Access Road
BP-LH-7 (P-15-019281/CA-KER-10555)	1, 2, 3, 5	–	–	–	–	–	–
BP-IS-3 (P-15-019265/CA-KER-10539)	–	–	1, 2, 3, 5	–	–	–	–
BP-JS-3 (P-15-019274/CA-KER-10548)	–	–	1, 2, 3, 5	–	–	–	–
P-15-010031 (CA-KER-5918)	–	1, 2, 3, 5	–	–	–	–	–
P-15-002750 (CA-KER-2750)	–	–	1, 2, 3, 5	–	–	–	–
P-15-002189 (CA-KER-2189)	–	–	–	–	–	–	1, 2, 3, 5
P-15-002954 (CA-KER-2954)	–	–	1, 2, 3, 5	–	–	–	–
BP-IS-4 (P-15-019266/CA-KER-10540)	1, 2, 3, 5	1, 2, 3, 5	–	–	–	–	–
P-15-012809 (CA-KER-7230H)	1, 2, 3, 5	–	–	–	–	–	–
P-15-007681 (CA-KER-7681)	1, 2, 3, 5	–	–	1, 2, 3, 5	–	–	–
P-15-012810 (CA-KER-7231)	1, 2, 3, 5	–	–	1, 2, 3, 5	–	–	–
P-15-015559 (CA-KER-8592)	–	1, 2, 3, 5	–	–	–	–	–
P-15-012811 (CA-KER-7232)	–	–	–	1, 2, 3, 5	–	–	–
P-15-001615 (CA-KER-1615)	–	1, 2, 5	–	1, 2, 5	–	–	–
P-15-013689 (CA-KER-7690H)	–	–	–	1, 2, 3, 5	–	–	–
P-15-013931 (CA-KER-7815H)	--	--	--	1, 2, 3, 5	--	--	--
P-15-013841 (CA-KER-7749)	–	–	–	1, 2, 3, 5	–	–	–
P-15-002959/ CA-KER-2959	–	–	–	–	–	–	–
P-15-010030/ CA-KER-5917	–	–	–	–	–	–	–
P-15-016251 (CA-KER-8784H)	–	–	–	–	–	–	1, 2, 3, 5

Resource Number[1]	Construction Impact Type by Project Alternative						
	Surface Alignment	Elevated Alignment	Underground Alignment	Utility Installation	Roadway Overcrossing	Road Realignment	Access Road
P-15-016252 (CA-KER-8785H)	–	3	–	–	–	–	–
P-15-012714 (CA-KER-7172H)	–	1, 2, 3, 5	–	–	–	–	–
P-15-010951 (CA-KER-6340)	–	3	–	–	–	–	–
P-15-013690 (CA-KER-7691H)	–	–	–	1, 2, 3, 5	–	–	–
P-15-016534 (CA-KER-9114)	–	–	–	1, 2, 3, 5	–	–	–
P-15-016248 (CA-KER-8981H)	–	3	–	–	–	–	1, 2, 3, 5
P-15-002539 (CA-KER-2539)	1, 2, 3, 5	1, 2, 3, 5	–	–	–	–	–
BP-IS-10 (P-15-019271/CA-KER-10545)	1, 2, 5	–	–	–	–	–	–
BP-JS-7 (P-15-019276/CA-KER-10550)	–	–	–	–	–	–	1, 2, 3, 5
BP-IS-6 (P-15-019267/CA-KER-10541)	1, 2, 5	–	–	–	–	–	–
BP-JS-6 (P-15-019275/CA-KER-10549)	1, 2, 3, 5	–	–	–	–	–	–
BP-TJ-2 (P-15-019283/CA-KER-10557)	1, 2, 3, 5	–	–	–	–	–	–
BP-IS-7 (P-15-019268/CA-KER-10542)	1, 2, 3, 5	–	–	–	–	–	–
BP-JS-8 (P-15-019277/CA-KER-10551)	1, 2, 3, 5	–	–	–	–	–	–
BP-IS-8 (P-15-019269/CA-KER-10543)	1, 2, 3, 5	–	–	–	–	–	–
BP-JS-9 (P-15-019278/CA-KER-10552)	1, 2, 3, 5	–	–	–	–	–	–
BP-IS-9 (P-15-019270/CA-KER-10544)	1, 2, 3, 5	–	–	–	–	–	–
P-15-010955 (CA-KER-6344)	–	–	–	–	–	–	1, 2, 3, 5

Resource Number[1]	Construction Impact Type by Project Alternative						
	Surface Alignment	Elevated Alignment	Underground Alignment	Utility Installation	Roadway Overcrossing	Road Realignment	Access Road
P-15-000522 (CA-KER-522)	–	1, 2, 3, 5	–	–	–	–	–
P-15-012466 (CA-KER-7031H)	1, 2, 3, 5	–	–	–	–	–	–
P-19-002396 (CA-LAN-2396H)	–	–	–	–	–	–	1, 2, 3, 5
P-19-003819	–	–	–	–	–	–	1, 2, 3, 5
P-19-002183 (CA-LAN-2183H)	–	–	–	–	1, 2, 3, 5	–	–
P-19-002215 (CA-LAN-2215H)	1, 2, 3, 5	–	–	–	–	–	–
P-19-002461 (CA-LAN-2461H)	–	–	–	–	1, 2, 3	–	–
BP-CJ-9 (P-19-004790/CA-LAN-4790H)	–	–	–	–	–	1, 2, 3, 5	–
P-19-002039 (CA-LAN-2039H)	–	–	–	–	–	1, 2, 3, 5	–

Source: California High-Speed Rail Authority and Federal Railroad Administration, 2019d
Resources are generally listed in table from north to south, in order of their location between Bakersfield and Palmdale.
[1] Locations of archaeological resources are confidential and are not available in public documents.

The preliminary effects analysis for built environment historic properties identified in the Bakersfield to Palmdale Project Section APE, as documented in the Bakersfield to Palmdale Project Section FOE (Authority 2019d), is summarized in Table 3.17-15. The HASR was reviewed by the SHPO and the PA signatories and concurring parties. The SHPO concurred on the eligibility determinations presented in the Bakersfield to Palmdale Project Section HASR on February 2017, and the Bakersfield to Palmdale Project Section FOE [to be confirmed with Final FOE] (Authority 2019d).

Table 3.17-15 Summary of Section 106 Preliminary Effects Findings for Built Environment Historic Properties Within the Oswell Street to Palmdale Station Area of Potential Effect Segment

Map ID	Resource Name and Address	Effect Finding			
		Alternative 1	Alternative 2	Alternative 3	Alternative 5
1	Big Creek Hydroelectric System Historic District, north of Edison Highway, east of Fairfax Road	Adverse Effect	Adverse Effect	Adverse Effect	Adverse Effect
2	Keene Fire Station 30356 Woodford-Tehachapi Road, Keene	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Adverse Effect
3	Nuestra Señora Reina de la Paz (La Paz) 29700 Woodford-Tehachapi Road, Keene	Adverse Effect—Visual	Adverse Effect—Visual	Adverse Effect—Visual	Adverse Effect—Visual
3	Nuestra Señora Reina de la Paz (La Paz) with CCNM Design Option 29700 Woodford-Tehachapi Road, Keene	Adverse Effect—Visual	Adverse Effect—Visual	Adverse Effect—Visual	Adverse Effect—Visual

Map ID	Resource Name and Address	Effect Finding			
		Alternative 1	Alternative 2	Alternative 3	Alternative 5
3	Nuestra Señora Reina de la Paz (La Paz) with the Refined CCNM Design Option 29700 Woodford-Tehachapi Road, Keene	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Adverse Effect
4	First Los Angeles Aqueduct About 1 mile SW of Tehachapi-Willow Springs Rd and about 6 miles NW of Willow Springs (multiple APNs)	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Adverse Effect
5	Willow Springs International Raceway About 5 miles west of Rosamond	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Adverse Effect
6	Western Hotel 557 West Lancaster Boulevard, Lancaster	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Adverse Effect
7	Lancaster Post Office 567 West Lancaster Boulevard, Lancaster	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Adverse Effect
8	Denny's Restaurant #30 (aka Village Grille Diner) 44303 Sierra Highway, Lancaster	No Adverse Effect	No Adverse Effect	No Adverse Effect	Adverse Effect

Source: California High-Speed Rail Authority, 2019
Resources are generally listed in table from north to south, in order of their location between Bakersfield and Palmdale.
[1] Impact depends upon selected modification option. Refer to Bakersfield to Palmdale Project Section Findings of Effect (California High-Speed Rail Authority 2019a).
APN = Assessor's Parcel Number
CCNM = César E. Chávez National Monument
NW = northwest
SW = southwest

Construction Impacts

The construction of any of the B-P Build Alternatives would permanently impact cultural resources. The Bakersfield to Palmdale Project Section involves activities such as ground disturbance, construction staging, and construction associated with the B-P Build Alternatives, associated facilities, and permanent structures to support the HSR system. These construction impacts include activities such as disturbance of buried archaeological resources, and removal of, or changes to, the historic character and setting of built resources.

The following sections discuss the potential and known construction impacts of each B-P Build Alternative on cultural resources with incorporation of IAMFs, consistent with the IAMFs discussed in Chapter 2 of this document and listed above. Mitigation measures are discussed in Section 3.17.8, and CEQA significance conclusions after mitigation are discussed in Section 3.17.10.

Impact CUL-1: Permanent Construction-Period Potential Adverse Impacts on Archaeological Resources Due to Construction Activities

Construction of the Bakersfield to Palmdale Project Section could result in possible adverse impacts on known and unknown archaeological deposits from ground-disturbing construction associated with the project section, including areas where permission to enter has not been granted. Unknown archaeological sites might represent the full range of prehistoric or historic activities conducted over time, from prehistoric lithic scatters and village sites to historic-era homestead remains and human burials. Human burials could be either prehistoric or historic, and are always considered archaeological in nature. Although the MOA for the Bakersfield to Palmdale Project Section would require standardized measures for avoidance and minimization to be implemented before, during, and after construction to ensure that construction activities would reduce these adverse impacts or changes to the extent possible, construction activities would still likely cause substantial adverse changes in the significance of an archaeological

resource pursuant to the CEQA Guidelines Section 15065.5 and adverse effects pursuant to the NHPA (36 C.F.R. Part 800.5). Therefore, this is considered a potentially significant impact under CEQA and/or an adverse effect under Section 106. These potential impacts/effects would be the same for all B-P Build Alternatives.

Unknown or unrecorded archaeological resources that are not observable when conducting standard surface archaeological surveys, including buried subsurface archaeological deposits, may exist within both urbanized or rural areas, including areas where permission to enter has not been granted.

CEQA Conclusion

Construction-related ground disturbance in areas that could contain known and unknown archaeological historical resources could cause an adverse change in the significance of archaeological resources pursuant to CEQA Guidelines Section 15064.5. This is considered a significant impact under CEQA. On-site workers would participate in a Worker Environmental Awareness Program (WEAP) training session under CUL-IAMF#2. Further, the contractor would follow appropriate schedule restrictions and halt work during any ground-disturbing activities should there be an unanticipated archaeological discovery with implementation of CUL-MM#2. Measures would also be in place to mitigate impacts to properties identified during phased identification, and to minimize impacts to pre-contact archaeological sites. Therefore, with the implementation of CUL-MM#1 through CUL-MM#3, this impact would not be a substantial adverse change to a historical resource and is considered less than significant under CEQA.

Section 106 Finding

Construction-related ground disturbance in areas that could contain known and unknown historical resources or properties could cause an adverse effect in the significance of archaeological resources pursuant to the NHPA (36 C.F.R. Part 800.5). Therefore, the Authority has made a finding of *potential adverse effect* on unknown or unrecorded archaeological resources because ground-disturbing construction activities may result in disturbance or destruction of such resources. Consultation with the SHPO regarding these findings, and how the Authority would resolve the adverse effect on archaeological resources, is currently underway.

Impact CUL-2: Permanent Construction-Period Potential Adverse Impacts on Built Resources due to Construction Activities

Construction of the Bakersfield to Palmdale Project Section could result in adverse impacts on built resources from construction activities such as excavation, staging, heavy-equipment usage and movement, drilling, demolition, the need for relocation, increases in vibration levels, or the introduction of new visual elements. Several of the built resources will not be adversely affected. One will be adversely affected and reconfigured under all Alternatives (Big Creek Hydroelectric System Historic District), one will be demolished under Alternative 5 only (Denny's Restaurant #30), one will be adversely affected under the Build Alternatives and the CCNM Design Option, but not under the Refined CCNM Design Option (National Chavez Center/Nuestra Señora Reina de la Paz), and one warrants protective measures during construction (Keene Fire Station). Execution of the treatments described in the IAMFs above would avoid and minimize these adverse effects or changes to the extent possible. This includes CUL-IAMF #6, CUL-IAMF#7, and CUL-IAMF #8, which would require pre-construction conditions assessment, a built environment monitoring plan, and the implementation of protection and/or stabilization measures. Additionally, the MOA for the project section, when executed, would also ensure that treatments implemented before, during, and after construction would avoid and minimize any adverse effects or substantial adverse changes (CUL-MM#1).

One common potential adverse effect or change is construction vibration. In response, IAMFs have been developed and are included in this section, and would be included in the MOA when executed and the subsequent treatment plans to ensure that there will be no adverse effects to historic properties (Section 106) or substantial adverse change to historical resources (CEQA) from vibration caused by construction activities for the B-P Build Alternatives. Applicable avoidance and minimization methods are available and will apply to all properties impacted by vibration. Impact assessments and mitigation measures are based on anticipated vibration levels from impact pile-driving during construction that reach up to 0.12 inch per second peak particle

velocity (approximately 90 vibration velocity decibels) at 135 feet from the project centerline, a level that could cause the physical destruction, damage, or alteration of historic properties or historical resources. Because impact pile-driving could cause adverse effects or significant adverse changes, alternative construction methods (such as cast-in-drilled-hole construction), causing vibration of less than 0.12 inch per second peak particle velocity, will be used near historic properties or historical resources within 135 feet from the project centerline (Authority and FRA 2005).

It should be noted here that Section 110(f) of the NHPA protects NHLs to a greater standard than other historic properties. Section 110(f) of the NHPA requires that federal agencies exercise a higher standard of care when considering undertakings that may "directly and adversely" affect NHLs. It also calls for the responsible federal agency to undertake, "to the maximum extent possible," planning and actions as may be necessary to minimize harm to such a landmark. However, Section 110(f) applies only when an undertaking is both direct and adverse with regard to the NHL.

Alternatives 1, 2, 3, and 5 result in adverse visual and noise effects to La Paz, while the CCNM Design Option results in adverse visual effects to La Paz. In response to coordination and comments from consulting parties, the Authority developed a Refined CCNM Design Option that accomplishes the most avoidance and minimization of effects, and would result in no adverse effect to La Paz.

This EIR/EIS includes an analysis consistent with the requirements of Section 110(f), and the Authority as the responsible Federal agency has, to the maximum extent possible undertaken planning to minimize harm to La Paz. The CCNM Design Option—and the Refined CCNM Design Option in particular—were developed to avoid and minimize harm to La Paz.[7]

CEQA Conclusion

All B-P Build Alternatives would cause adverse changes to built historical resources. The construction of the proposed project would result in impacts to the Big Creek Vincent Transmission Lines from the removal of a portion of the line (less than 1 percent). However, after proper documentation, there would be no significant impacts to the Big Creek Hydroelectric System as a whole, and recordation/documentation could be developed and stipulated in the MOA and implemented to mitigate impacts to less than significant. Also, the use of alternative construction methods at these locations would avoid substantial adverse vibration changes to historical resources and would be part of the Built Environment Treatment Plan (CUL-IAMF#6). Implementation of these methods would result in no significant impacts under CEQA. Potential noise impacts from the construction of the alternatives would not cause substantial adverse changes to historical resources under CEQA. Also, where appropriate, interpretive or educational materials would be prepared for various built resources (CUL-MM#7). The impact is less than significant with the mitigation applied.

Section 106 Finding

Likewise, these alternative construction methods would result in no adverse effects under Section 106 and potential noise impacts from construction of the B-P Build Alternatives are not anticipated to cause adverse effects to historic properties under Section 106. However, the Authority has made a finding that adverse effects to built historic properties would occur under each of the B-P Build Alternatives.

Operations Impacts

Project operations would include train operations, temporary system termini, and maintenance.

This section assesses the temporary and permanent impacts to cultural resources resulting from the operations of the Bakersfield to Palmdale Project Section, which can involve direct or indirect operations impacts. Thus, interim operations impacts are not discussed further in this section. Intermittent operations impacts are not continuous, but recur during the operation of the system

[7] California High Speed Rail Authority; September 4, 2018; letter to CCNM Consulting Parties; Subject: Consultation Materials Related to César E. Chávez National Monument

on an episodic or occasional basis throughout the life of the system. None of the B-P Build Alternatives would have intermittent operations impacts on cultural resources. Permanent operations impacts continue over the long term and can include actions such as the generation of noise and vibration from passing trains.

Impact CUL-3: Permanent Operations—Potential Adverse Impacts on Archaeological Resources
Operation of the Bakersfield to Palmdale Project Section would not result in potential adverse effects or changes to archaeological properties or resources. Archaeological sites are not generally considered to be adversely impacted by noise such as that from the permanent operation of the HSR project. Archaeological resources would be subject to adverse impacts during construction activities, during which, in addition to ground-disturbing activities, may also increase public access to archaeological sites that can lead to the intentional or unintentional disturbance or destruction of previously inaccessible archaeological resources. In contrast, during operation of the project section, access would be restricted to maintenance persons or vehicles within the 100-foot fenced right-of-way.

Section 106 and CEQA Conclusion
It is unlikely that operation of the project section would impact archaeological sites or cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5. Therefore, permanent operations impacts to archaeological resources would not cause an adverse effect pursuant to Section 106, and a less than significant impact pursuant to CEQA.

Impact CUL-4: Permanent Operations—Potential Adverse Impacts on Built Resources
Operation of the Bakersfield to Palmdale Project Section would result in increased noise and vibration levels. The operational noise levels of this project are not anticipated to be sufficient to have a direct impact on built resources.

Section 106 and CEQA Conclusion
Operational vibration levels of 71 vibration velocity decibels (0.015 peak particle velocity) are projected, and these levels would not cause an adverse effect (Section 106) or significant impact (CEQA) to a historic property or historical resource (Authority 2017b).

Additionally, operational noise has the potential to cause adverse effects on historic properties that have an inherent quiet quality that is part of a property's historic character and significance (36 C.F.R. 800.5[a][2][iv] and [v]). The development of design solutions or construction methods to minimize adverse operational noise effects on historic properties that have qualities that make them sensitive noise receptors could reduce impacts to cultural resources. This includes La Paz, which is sensitive to noise impacts. However, project features in the CCNM Design Option would help to eliminate operational noise impacts. Some visual impacts may occur under the CCNM Design Option; however, CUL-MM#9 would ensure visual screening of appropriate parts of the HSR alignment. The Refined CCNM Design Option would not introduce noise impacts, while the visual alteration introduced by the project would be minimal, distant, and low within the viewsheds from La Paz, only visible from a few locations within the historic property, and would not reduce the isolation of the setting. Permanent operations impacts to cultural resources would not be an adverse effect pursuant to Section 106, and would be a less than significant impact pursuant to CEQA because the B-P Build Alternatives do not have the potential to cause an alteration in the immediate surroundings of a historical resource such that the significance of the historical resource would be materially impaired. No mitigation measures would apply under the Refined CCNM Design Option.

3.17.8 Mitigation Measures

In compliance with Section 106, mitigation measures are negotiated in consultation that may include federal, state, and local agencies, Native American tribes, and other interested parties. These measures are then memorialized in an MOA; agreed-upon mitigation would be implemented after the MOA is executed. The mitigation measures described below include mitigation measures and commitments that would occur prior to, during, and following construction.

Pre-construction mitigation measures may include moving historic built resources during construction and protecting them should they not be moved to their permanent locations until after construction. Post-construction mitigation measures may include restoration of affected landscape, buildings, or structures to pre-construction condition following the SOI's guidelines for the treatment of historic properties. This includes rehabilitation of properties that suffered unanticipated impacts, to the extent feasible. Mitigation measures that could take place prior to, during, or after construction may include implementation of interpretive programs, including displays, interpretive signage, etc.

Mitigation measures, along with the impact avoidance and minimization measures, would strive to provide the greatest level of protection feasible in light of project costs and logistics, and technological and environmental conditions. Preservation in place through methods such as project redesign of relevant facilities to avoid destruction or damage to eligible cultural resources, capping archaeological resources with fill, or deeding resources into conservation easements is always preferable if these methods are also compatible with project objectives. Extensive documentation of built environment resources that would be moved or demolished, or data recovery of significant archaeological sites where destruction is not avoidable, would be at the opposite end of this spectrum.

Under Section 106, regulatory requirements exist that must be followed in accordance with the PA. The PA stipulates that an MOA would be prepared for each section of the project to detail the project's commitments to implement these treatments. The Authority would develop the MOA for the Bakersfield to Palmdale Project Section in consultation with the SHPO, the Surface Transportation Board, and additional consulting parties: San Manuel Band of Mission Indians, Fernandeño Tataviam Band of Mission Indians, Tejon Indian Tribe, Tule River Tribe, Kern Valley Indian Council, Soboba Band of Luiseno Indians, National Park Service, and Nuestra Señora Reina de La Paz, Table Mountain Rancheria, Picayune Rancheria of Chukchansi Indians, Santa Rosa Rancheria Tachi-Yokut Tribe, National Park Conservation Association, National Trust for Historic Preservation, and Southern California Edison. The MOA includes input from the signatories and other interested members of the public in the development of treatment measures. The MOA would be executed by the time the ROD is issued for the Bakersfield to Palmdale Project Section.

The PA stipulates that two treatment plans be developed: an ATP and a BETP. These plans, prepared in consultation with the MOA signatories and concurring parties, provide specific performance standards that make sure each impact would be avoided, minimized, or mitigated to the extent possible and provide enforceable performance standards to follow the NRHP and the SOI standards when implementing the mitigation measures (Stipulations III and VIII in the PA). These treatment plans would include relevant mitigation measures for the purposes of NEPA and CEQA and would be implemented in compliance with Section 106; they would be coordinated with the measures included in this EIR/EIS.

Specifically, the ATP would focus on the treatment of known and unknown archaeological resources and would require the phased identification, evaluation, and mitigation of archaeological resources that may be located on parcels for which legal access has yet to be granted. The ATP would also provide requirements for procedures and protocols to be followed in the event of unanticipated discoveries during construction. Mitigation of effects to yet unknown archaeological sites would be negotiated among the Authority, the FRA, the SHPO, and consulting parties. This consultation would continue throughout construction and, should any eligible sites be discovered, mitigation appropriate to that specific site would be developed among the MOA signatories and consulting parties and memorialized in an addendum to the ATP.

The BETP would describe the treatments to be applied to adversely impacted resources in the built environment, as well as protection measures for properties to avoid adverse effects. The treatments and measures included would be specific to each property that would be, or has the potential to be, adversely impacted by the project.

The treatment plans would be approved and implemented before the start of construction activities that could adversely impact historic properties or historical resources. These requirements would be included in the construction contracts.

3.17.8.1 Fresno to Bakersfield Locally Generated Alternative Mitigation Measures from 34th Street and L Street to Oswell Street

The impacts analysis for the portion of the alignment from the F Street Station to Oswell Street, including applicable mitigation measures, has been incorporated by reference into this EIR/EIS from the *Fresno to Bakersfield Section Final Supplemental EIR* (Authority 2018) and the *Fresno to Bakersfield Section: Locally Generated Alternative Combined Supplemental Record of Decision and Final Supplemental EIS on the Locally Generated Alternative* (Authority 2019f). The following cultural resources-related mitigation measures applicable to the portion of the F-B LGA from 34th Street and L Street to Oswell Street:

- **F-B LGA CUL-MM #4:** Discoveries of human remains on private and state agency lands in California are governed by California Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.98. Native American remains discovered on federal lands are governed by the Native American Graves Protection and Repatriation Act (25 US Code Section 3001.

  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 an MLD. The MLD shall be empowered to re-inter the remains with appropriate dignity. If the MLD fails to make a recommendation, the remains shall be re-interred 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.

  If human remains are part of an archaeological site the Authority and contractor shall, in consultation with the MLD and other stakeholders, consider preservation in place as the first option, in the order of priority called for in CEQA Guidelines Section 15126.4(b)(3).

  In consultation with the relevant Native American stakeholders, the Authority may conduct scientific analysis on the human remains if called for under a data recovery plan and amenable to all stakeholders. The Authority will work with the MLD, to satisfy the requirements of California Public Resources Code Section 5097.98. Performance tracking of this mitigation measure will be based on successful implementation and approval of the documentation by the SHPO and appropriate consulting parties.
- **F-B LGA CUL-MM#5:** When access is obtained, conduct surveys, testing, and evaluation pursuant to the ATP. Follow treatments and data recovery, as required.
- **F-B LGA CUL-MM #12:** A BETP will identify specific historical resources that would be physically altered, damaged, relocated, or destroyed by the project that will be documented in detailed recordation that includes photography. This documentation may consist of preparation of updated recordation forms (DPR 523), or may be consistent with the Historic American Building Survey, 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 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.

Consultation with the SHPO and the consulting parties will be conducted for the historic architectural resources to be documented. Recordation documents will follow the appropriate guidance for the recordation format and program selected.

Copies of the documentation will be provided to the consulting parties and offered to the appropriate local governments, historical societies and agencies, or other public repositories, such as libraries. The documentation will 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.

- **F-B LGA CUL-MM #13:** Based on the finalization of design and the completed inventory, the BETP will identify historic properties and historical resources that will be subject to historic interpretation or preparation of educational materials. Interpretive and educational materials will provide information regarding specific historic properties or historical resources and will address the aspect of 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.

  Historic properties and historical resources subject to demolition by the project will be the subject of informative permanent metal plaques that will be installed at the site of the demolished historic property or at nearby public locations. Each plaque will provide a brief history of the subject property, its engineering/architectural features and characteristics, and the reasons for and the date of its demolition.

  The interpretive or educational materials will utilize images, narrative history, drawings, or other material produced for the mitigation described above, including the additional recordation prepared, or other archival sources. The interpretive or educational materials should be advertised, and made available to, and/or disseminated to the public. The interpretive materials may be made available in physical or digital formats at local libraries, historical societies, or public buildings.

3.17.8.2 Bakersfield to Palmdale Project Section Mitigation Measures

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 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:

- 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.

Impacts of Mitigation Measure CUL-MM#1

This mitigation measure would apply to the project site (entirely within the project footprint). This mitigation measure would not trigger additional ground-disturbing activities outside of the project footprint and would not change the character or significantly increase the overall amount of construction activity. Therefore, it is anticipated that the impacts of implementing this mitigation measure would be less than significant under CEQA.

CUL-MM#2: Halt Work in the Event of an Archaeological Discovery and Comply with the Programmatic Agreement (PA), Memorandum of Agreement (MOA), Archaeological Treatment Plan (ATP), and all State and Federal Laws, as applicable

During construction (any ground disturbing activities, including clearing and grubbing) should there be an unanticipated discovery, the Contractor shall follow the procedures for unanticipated discoveries as stipulated in the PA, MOA, and associated ATP. The procedures must also be consistent with the following: the SOI 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, the Authority, and the FRA shall comply with federal and state regulations and guidelines regarding the treatment of human remains, including relevant sections of the Native American Graves Protection and Repatriation Act (§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.

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 an historical resource or historic property. If, after documentation is reviewed and approved by the Authority, and they determine it is a historic property, 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 qualified Principal Investigator (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.

The contractor shall notify the Authority, who shall notify the California State Lands Commission (CSLC), if the find is a cultural resource on or in the submerged lands of California and consequently under the jurisdiction of the CSLC. The Authority would comply with all applicable rules and regulations promulgated by CSLC with respect to cultural resources in submerged lands.

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.

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).

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 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 acceptance of the documentation by the SHPO and appropriate consulting parties.

Impacts of Mitigation Measure CUL-MM#2

No ground-disturbing activities or property acquisition would be necessary to comply with this mitigation measure if the site can be preserved in place. In this case, there would be no impacts on other resources as a result of implementing this mitigation measure. If intentional burial is required, the new burial site would be selected in consultation with the most likely descendant, and surveyed by qualified archaeologists prior to excavation. A site would be selected that would not result in impacts to any other resource types (e.g., biological). Therefore, it is anticipated that the impacts of implementing this mitigation measure, should intentional burial be necessary, would be less than significant under CEQA.

CUL-MM#3: Other Mitigation for Effects to Pre-Contact Archaeological Sites

Due to limited access to private properties during the environmental review phase of this project, the FRA's and Authority's ability to fully identify and evaluate archaeological resources within the Area of Potential Effect (APE) has, correspondingly, also been limited. Thus, the majority of the project APE has not been subject to archaeological field inventories. As pedestrian field surveys are a necessary component of the archaeological resource identification and evaluation effort, the commitment to complete the field surveys, prior to ground disturbing activities associated with the project, are codified in the Memorandum of Agreement (MOA) that has been executed as a condition of this Final EIR/EIS.

Access to previously-inaccessible properties to complete the archaeological resource identification effort is expected to be available after the Record of Decision, during the design-build phase of the project. However, due to the design constraints associated with constructing a high-speed train, the ability to shift the alignment to avoid any newly-identified archaeological resources at this late phase of the project delivery process is substantially limited and/or unlikely, as the alignment is already established. As such, impacts/effects to as-yet-unidentified significant archaeological resources as a result of this project are anticipated; however, the nature and quantity of such effects remains unknown until completion of the archaeological field identification and evaluation effort.

Protocols for the identification, evaluation, treatment, and data-recovery mitigation of as-yet-unidentified archaeological resources are addressed in the MOA and Archaeological Treatment Plan (ATP). Efforts to develop meaningful mitigation measures for effects to as-yet-unidentified Native American archaeological resources that cannot be avoided will be negotiated with the tribal Consulting Parties. Measures that are negotiated among the MOA signatories and tribal Consulting Parties will be the responsibility of the Authority to implement.

Impacts of Mitigation Measure CUL-MM#3

If intentional burial is required, a new burial site would be selected that would not result in impacts on any other resource types, such as biological. Therefore, it is anticipated that the impacts of implementing this part of this mitigation measure, should intentional burial be necessary, would be less than significant under CEQA. Educational programs, internships, and curation are examples of mitigation measures that do not result in ground-disturbing activities or property acquisition. Therefore, there would be no impacts on other resources as a result of implementing these aspects of this mitigation measure.

CUL-MM#4: Minimize Adverse Effects through Relocation of Historic Buildings and Structures

The MOA and 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 1,000 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 reuse. 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.

Impacts of Mitigation Measure CUL-MM#4

Should any buildings have to be moved, the location would be selected that would ensure no other resources would be impacted. Therefore, other than the impacts to the moved buildings or structures, there would be no impacts to other resources as a result implementing this mitigation measure. Under Section 106 moving a historic building or structure to an appropriate location may be considered mitigation but still be considered an adverse effect; under CEQA, moving a historical building or structure to avoid demolition is considered mitigation that would result in a less than significant impact.

CUL-MM#5: Minimize Adverse Operational Noise Effects

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.

Impacts of Mitigation Measure CUL-MM#5

Any alterations to historic properties/historical resources would follow the SOI guidelines, and therefore, would result in less than significant impacts under CEQA. Should the measure require a sound wall, the visual effects of the sound wall would be analyzed to determine if its

construction would result in an adverse visual effect that might be greater than the introduction of operational noise, based on effects to the property's character-defining features. If a sound wall is determined to be the appropriate mitigation, a location would be selected that would ensure no other resources would be impacted. Therefore, there would be no impacts to other resources as a result of implementing this mitigation measure. Other than the potential effects on the sensitive noise receptor by adding the sound wall, this mitigation would result in a less than significant impact under CEQA.

CUL-MM#6: Prepare and Submit Additional Recordation and Documentation

The 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 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.

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.

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 National Park Service (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.

Impacts of Mitigation Measure CUL-MM#6

No ground-disturbing activities or property acquisition would be necessary to comply with this mitigation measure. Therefore, there would be no impacts under CEQA on other resources as a result of implementing this mitigation measure.

CUL-MM#7: Prepare Interpretive or Educational Materials

The 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 State Historic Preservation Officer (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.

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.

Impacts of Mitigation Measure CUL-MM#7

No ground-disturbing activities or property acquisition would be necessary to comply with this mitigation measure. Therefore, there would be no impacts under CEQA on other resources as a result of implementing this mitigation measure.

CUL-MM#8: Repair of Inadvertent Damage

The MOA and BETP would identify properties subject to the preparation of plans for the repair of inadvertent damage, plans to be developed prior to the start of construction in the immediate proximity of the historic properties; the HSR standard impact avoidance and minimization measures require the Contractor to prepare these plans. Should any of the properties or resources be damaged as a result of construction activities, the contractor would repair them in accordance with the approved plan and with the SOI Standards for Rehabilitation. Inadvertent damage is any damage that results in a significant impact to a historical resource within the meaning of CEQA Guidelines Section 15064.5(b)(2) or adverse effects to historic properties within the meaning of 36 C.F.R. Part 800.5(a)(1). All repairs would be reviewed and approved by the Authority prior to determining that the treatment has been adequately implemented.

There may be instances where a property or resource that is damaged during construction would be better served by temporary stabilization and protection, with final repairs occurring post construction. This would be determined by the Authority, in consultation with the MOA signatories. Should this be the preferred approach, the contractor would have their interdisciplinary team prepare plans for the temporary work, for approval by the Authority and MOA signatories prior to construction commencing in the area of the damaged property. Any emergency stabilization deemed necessary by the contractor prior to plan approval must be reversible.

Impacts of Mitigation Measure CUL MM #8

No ground-disturbing activities or property acquisition would be necessary to comply with this mitigation measure. Therefore, there would be no impacts under CEQA on other resources as a result of implementing this mitigation measure.

CUL-MM#9: Visual Screening

The MOA and BETP would identify historic properties and historical resources that would be subject to visual screening. Visual screening would be installed by the Contractor and consist of plant material that would minimize the view of the project from the property subject to mitigation. This treatment would minimize adverse effects on historic properties/historical resources. Plant species would be selected by the Contractor's interdisciplinary team of architectural historians and landscape architects based on species' mature size and shape, growth rate, appropriateness to the historic property, fire resistance, and drought tolerance. The design and recommended plant make-up of the screen would be reviewed and approved by the Authority in consultation with the MOA signatories and land owner or land-owning agency. No species that is listed on the Invasive Species Council of California's list of invasive species would be planted. The Contractor would arrange to have the landscaping continuously maintained for a period specified in the plan and appropriate irrigation systems would be installed if the landscape architect determines it is needed. The plan would define the terms of replacement should the plants die.

Impacts of Mitigation Measure CUL-MM#9

Any alterations to historic properties/historical resources would follow the SOI guidelines, and therefore, would result in less than significant impacts. Should a property require visual screening, the visual effects would be analyzed to determine if its planting would result in an adverse visual effect that might be greater than the introduction of the project visual impacts, based on effects to the property's character-defining features. If a plant screen is determined to be the appropriate mitigation, a location would be selected that would ensure no other resources would be impacted. Therefore, there would be no impacts to other resources as a result of implementing this mitigation measure. Other than the potential effects on the resource by adding a planting screen, this mitigation would result in a less than significant impact under CEQA.

CUL-MM#10: Station Design Consistent with the Secretary of Interior's Standards for the Treatment of Historic Properties

Prior to HSR station construction adjacent to or on a National Register of Historic Place (NRHP) and/or a California Register of Historical Resources (CRHR) site, the Contractor shall prepare a historic properties compatibility report for Authority review and approval. Several HSR stations would be constructed adjacent to or on the site of National Register of Historic Places/California Register of Historical Resources -listed or -eligible railroad stations, within historic districts, or in close proximity to other historic properties. At the time of the records of decision (ROD) for each project section, the station locations are identified as a footprint. Station design would be prepared post ROD. The Authority would be issuing requests for qualifications (RFQ) to receive statements of qualifications (SOQ) from qualified firms (contractor) for station designs and related services. Such firms would be contracted to provide professional consultant and design services for all design stages through final design. Selected firms would be responsible for ensuring their designs are context sensitive and meet the Secretary of the Interior's Standards (SOIS) for the treatment of historic properties. Stations that require this mitigation measure would be identified in the Section 106 Memorandum of Agreement (MOA) and Built Environment Treatment Plan (BETP) for each project section, as appropriate. The consultation roles of MOA signatories and interested parties in the design of the stations would also be specified in the MOAs and BETPs. At a minimum, the Authority/RDP professionally qualified architectural historians and the State Historic Preservation Officer (SHPO) would be given the opportunity to review and comment on the designs.

If the proposed location is on the site of or adjacent to historic properties, the contractor at a minimum would be required to include a professionally qualified architectural historian, and may also be required to include a historical architect, a landscape architect with experience related to historic properties, an archaeologist, or other historic preservation professionals on their team. The selected professionals' qualifications would be reviewed and approved by the Authority/RDP professionally qualified staff.

The contractor would be required by the Authority to provide three schemes for Authority review, including an evaluation of each scheme. The deliverables would also include drawings—sections,

plans, elevations, and renderings. The contractor would be required to include in each evaluation a historic property design compatibility report prepared by a qualified architectural historian describing how the scheme is consistent with the SOIS for Rehabilitation for infill designs or additions, and if any restoration or rehabilitation would be required of the historic buildings and structures and how such restoration is consistent with the SOIS Standards for Restoration. The report would reference applicable National Park Service Preservation Briefs, such as #14, New Exterior Additions to Historic Buildings, and discuss size, scale and massing of the proposed project and how it would be differentiated from the historic property, and include application of the criteria of adverse effect (36 C.F.R. § 800.5) to each proposed scheme, considering both direct and indirect effects to historic properties, to ensure that the selected design would not adversely affect historic properties. For the purposes of evaluating effects to historic properties, the contractor may be required to produce renderings that include adjacent properties. The report would be reviewed and approved by the Authority professionally qualified staff and may require revision prior to transmitting it to the SHPO and other MOA signatories and consulting parties, as specified in the MOA and BETP.

Impacts of Mitigation Measure CUL-MM#10

No ground-disturbing activities or property acquisition would be necessary to comply with this mitigation measure. Therefore, there would be no impacts under CEQA on other resources as a result of implementing this mitigation measure.

CUL-MM#11: Statewide Historical Interpretation Program

Prior to operation the Contractor shall provide the Authority with a cultural resources rail passenger visual and narrative electronic device application. Prior to preparing the application the Contractor shall obtain Authority approval of the application outline and content. The initial application shall be designed within a statewide context addressing the first operating segment with the ability to add future segments prior to their operation. Contractors of additional segments shall embellish the initial application and add relevant new segment cultural resource material. The cultural resources technical studies prepared to support the findings and effects identified in the environmental documents for each project section include prehistoric, Native American ethnographic, and historic contexts. The Authority is using these contexts as the foundation for a geographically referenced historical visual and narrative “application” for the total rail alignment, to be enjoyed by rail passengers through their smart phones or tablets, or other electronic devices.

The MOA and BETP for each project section would identify historic themes to be developed for the application, as well as identify any properties to be specifically referenced, as agreed upon in consultation with the SHPO, MOA signatories, and consulting parties. In consultation with the Authority, the Contractor would be responsible for assembling the appropriate interdisciplinary team to synthesize the information and provide electronic files of exhibits found in the cultural resources studies that may be used for such a program. The required professionals and their qualifications would be specified in the BETP, as would the number, type, and format of required exhibits. Bibliographies for the technical documents may be used as a tool to locate additional visual material for the application. In the gathering of visual materials, the Contractor’s team would also utilize any research, as appropriate, included in material produced for other interpretive mitigation. The contractor would ensure that all exhibits provided as recommended for use in the application be licensed or otherwise legally reproducible for such use.

Impacts of Mitigation Measure CUL-MM#11

No ground-disturbing activities or property acquisition would be necessary to comply with this mitigation measure. Therefore, there would be no impacts under CEQA on other resources as a result of implementing this mitigation measure.

As described above, the Contractor would work with the Authority and the Authority’s program consultant, and would provide materials needed to ensure consistency and quality in the fulfillment of this statewide program.

3.17.9 NEPA Impact Summary

The following section summarizes the impacts of the Bakersfield to Palmdale Project Section B-P Build Alternatives and compares them to the anticipated impacts of the No Project Alternative. Table 3.17-16 provides a comparison of the potential impacts of the B-P Build Alternatives to cultural resources, summarizing the more detailed information provided in Section 3.17.7, Environmental Consequences.

Table 3.17-16 Comparison of Bakersfield to Palmdale Project Section Build Alternative Effects on Historic Properties

Property	B-P Build Alternatives			
	Alternative 1	Alternative 2	Alternative 3	Alternative 5
Construction Impacts				
Archaeological Properties				
P-15-002959/CA-KER-2959	Phased	Phased	Phased	Phased
P-15-010030/CA-KER-5917	Phased	Phased	Phased	Phased
BP-JS-1 (P-15-019272/CA-KER-10546)	Phased	Phased	Phased	Phased
BP-IS-1 (P-15-019263/CA-KER-10537)	Phased	Phased	Phased	Phased
P-15-018645 (CA-KER-10171)	Phased	Phased	Phased	Phased
BP-IS-2 (P-15-019264/CA-KER-10538)	Phased	Phased	Phased	Phased
BP-LH-7 (P-15-019281/CA-KER-10555)	Phased	Phased	Phased	Phased
BP-IS-3 (P-15-019265/CA-KER-10539)	No Effect/No Impact	No Effect/No Impact	No Effect/No Impact	No Effect/No Impact
BP-JS-3 (P-15-019274/CA-KER-10548)	No Effect/ No Impact	No Effect/No Impact	No Effect/No Impact	No Effect/No Impact
P-15-010031 (CA-KER-5918)	Phased	Phased	Phased	Phased
P-15-002750 (CA-KER-2750)	No Effect/No Impact	No Effect/No Impact	No Effect/No Impact	No Effect/No Impact
P-15-002189 (CA-KER-2189)	Phased	Phased	Phased	Phased
P-15-002954 (CA-KER-2954)	No Effect/No Impact	No Effect/No Impact	No Effect/No Impact	No Effect/No Impact
BP-IS-4 (P-15-019266/CA-KER-10540)	Phased	Phased	Phased	Phased
P-15-012809 (CA-KER-7230H)	Phased	Phased	Phased	Phased
P-15-007681 (CA-KER-7681)	Phased	Phased	Phased	Phased
P-15-012810 (CA-KER-7231)	Phased	Phased	Phased	Phased
P-15-015559 (CA-KER-8592)	Phased	Phased	Phased	Phased
P-15-012811 (CA-KER-7232)	Phased	Phased	Phased	Phased
P-15-001615 (CA-KER-1615)	Phased	Phased	No Effect/No Impact	Phased
P-15-013689 (CA-KER-7690H)	Phased	Phased	Phased	Phased

Property	B-P Build Alternatives			
	Alternative 1	Alternative 2	Alternative 3	Alternative 5
P-15-013931 (CA-KER-7815H)	Phased	Phased	Phased	Phased
P-15-013841 (CA-KER-7749)	Phased	Phased	Phased	Phased
P-15-016251 (CA-KER-8784H)	Phased	Phased	Phased	Phased
P-15-016252 (CA-KER-8785H)	No Effect/No Impact[1]	No Effect/No Impact[1]	Phased	No Effect/No Impact[1]
P-15-012714 (CA-KER-7172H)	Phased	Phased	Phased	Phased
P-15-010951 (CA-KER-6340)	No Effect/No Impact[1]	No Effect/No Impact[1]	Phased	No Effect/No Impact[1]
P-15-013690 (CA-KER-7691H)	Phased	Phased	Phased	Phased
P-15-016534 (CA-KER-9114)	Phased	Phased	Phased	Phased
P-15-016248 (CA-KER-8981H)	Phased	Phased	Phased	Phased
P-15-002539 (CA-KER-2539)	Phased	Phased	Phased	Phased
BP-IS-10 (P-15-019271/CA-KER-10545)	Phased	Phased	No Effect/No Impact[1]	Phased
BP-JS-7 (P-15-019276/CA-KER-10550)	Phased	Phased	Phased	Phased
BP-IS-6 (P-15-019267/CA-KER-10541)	Phased	Phased	No Effect/ No Impact	Phased
BP-JS-6 (P-15-019275/CA-KER-10549)	Phased	Phased	Phased	Phased
BP-TJ-2 (P-15-019283/CA-KER-10557)	Phased	Phased	Phased	Phased
BP-IS-7 (P-15-019268/CA-KER-10542)	Phased	Phased	Phased	Phased
BP-JS-8 (P-15-019277/CA-KER-10551)	Phased	Phased	Phased	Phased
BP-IS-8 (P-15-019269/CA-KER-10543)	Phased	Phased	Phased	Phased
BP-JS-9 (P-15-019278/CA-KER-10552)	Phased	Phased	Phased	Phased
BP-IS-9 (P-15-019270/CA-KER-10544)	Phased	Phased	Phased	Phased
P-15-010955 (CA-KER-6344)	Phased	Phased	Phased	Phased
P-15-000522 (CA-KER-522)	Phased	Phased	Phased	Phased
P-15-012466 (CA-KER-7031H)	Phased	Phased	Phased	Phased
P-19-002396 (CA-LAN-2396H)	Phased	Phased	Phased	Phased
P-19-003819	Phased	Phased	Phased	Phased
P-19-002183 (CA-LAN-2183H)	Phased	Phased	Phased	Phased
P-19-002215 (CA-LAN-2215H)	Phased	Phased	Phased	Phased
P-19-002461 (CA-LAN-2461H)	Phased	Phased	Phased	No Effect

Property	B-P Build Alternatives			
	Alternative 1	Alternative 2	Alternative 3	Alternative 5
BP-CJ-9 (P-19-004790/CA-LAN-4790H)	Phased	Phased	Phased	Phased
P-19-002039 (CA-LAN-2039H)	Phased	Phased	Phased	Phased
Architectural Properties (Built Resources)				
Big Creek Hydroelectric System Historic District[2]	Adverse Effect	Adverse Effect	Adverse Effect	Adverse Effect
César E. Chávez National Monument/ Nuestra Señora Reina de la Paz/(La Paz) with Build Alternatives	Adverse Effect—Visual	Adverse Effect—Visual	Adverse Effect—Visual	Adverse Effect—Visual
La Paz with CCNM Design Option	Adverse Effect—Visual	Adverse Effect—Visual	Adverse Effect—Visual	Adverse Effect—Visual
La Paz with Refined CCNM Design Option	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Adverse Effect
Keene Fire Station	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Adverse Effect
First Los Angeles Aqueduct	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Adverse Effect
Willow Springs International Raceway	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Adverse Effect
Lancaster Post Office	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Adverse Effect
Western Hotel	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Adverse Effect
Denny's Restaurant #30 (aka Village Grille Diner)	No Adverse Effect	No Adverse Effect	No Adverse Effect	Adverse Effect
Operations Impacts				
Archaeological Properties				
▪ Impacts to archaeological resources would be permanent and would occur only during the construction phase. No impacts would be carried into the operational phase.				
Architectural Properties (Built Resources)				
La Paz	Adverse Effect	Adverse Effect	Adverse Effect	Adverse Effect
La Paz with CCNM Design Option	Adverse Effect	Adverse Effect	Adverse Effect	Adverse Effect
La Paz with Refined CCNM Design Option	No Effect	No Effect	No Effect	No Effect

Source: California High-Speed Rail Authority, 2019a

[1] These archaeological properties show "no effect/no impact" because they are outside the B-P Build Alternative boundaries respective to the column indicated.

[2] Contributing elements to the Big Creek Hydroelectric System Historic District were analyzed separately in the Draft FOE (Authority 2019a).

Locations of archaeological resources are confidential.

Alt = Alternative

B-P = Bakersfield to Palmdale Project Section

CCNM = César E. Chávez National Monument

FOE = Finding of Effect

NHL = National Historic Landmark

Under the No Project Alternative, growth and development would continue and the resulting direct and indirect impacts on cultural resources would still occur. Development activities and ongoing infrastructure maintenance (e.g., continued operation of existing roads, highways, utilities, airports, and railways) would continue to result in impacts, including construction-related disturbance to unknown archaeological sites, increased public access leading to site disturbance, and possible impacts to historic built resources.

Pursuant to NEPA regulations (40 C.F.R. Parts 1500–1508), project effects under NEPA are generally evaluated based on the criteria of context, intensity, and duration (short- or long-term), along with implementation of mitigation measures. Context means the affected environment in which a proposed project occurs. Intensity refers to the severity of the effect, which is examined in terms of the type, quality, and sensitivity of the resource involved, and the location and extent of the effect. Beneficial effects are identified and described where applicable. When there is no measurable effect, an impact is found not to occur. An adverse effect would be identified and described according to the intensity of effects caused by the project after consideration of mitigation measures.

Each of the B-P Build Alternatives (Alternatives 1, 2, 3, and 5) would result in impacts to archaeological and built resources from implementation of the alternatives. Direct impacts include the permanent effects or changes to the significance of both types of resources, including potential impacts on unknown archaeological resources during construction and the relocation of built resources. Indirect impacts to built resources include those that occur later in time or that are farther removed in distance. The B-P Build Alternatives also incorporate IAMFs that would reduce impacts to cultural resources. These IAMFs include design features such as pre-construction cultural resource surveys and WEAPs, as well as a built environment monitoring plan and features to help implement protection and/or stabilization measures for built environment resources. However, impacts to archaeological and built resources from each of the B-P Build Alternatives would still occur.

Approximately 1,700 acres of the total APE has been subjected to archaeological survey, accounting for about 16 percent of the total APE. As the PA, MOA, and other treatment plans are implemented, the remaining area would be inventoried for archaeological resources, and any resources identified would be treated in compliance with the stipulations of the MOA and treatment plans. Impacts on all archaeological resources identified through intensive records searches, background research, and field surveys from the B-P Build Alternatives that remain adverse pursuant to NEPA would be addressed through the Section 106 process, and implementation of the recommended mitigation measures would bring impacts to the significance levels outlined in Table 3.17-16. A discussion of the impacts to archaeological resources and built resources follows the table.

3.17.9.1 Archaeological Resources

The geographic distribution of existing, known archaeological resources is largely the same for all B-P Build Alternatives. Therefore, the intensity, context, and duration of impacts to archaeological resources are generally the same for all B-P Build Alternatives. There are 49 total archaeological resources within the APE that are assumed to be historic properties under the NHPA for the purpose of this study (Authority and FRA 2017b). All 49 known archaeological properties within the APE are considered eligible for listing in the NRHP under Criterion D for project planning purposes due to the potential that these properties may yield information important in prehistory or history. The partial or complete destruction or removal of 45 of these sites by the project would effectively eliminate the ability of these properties to yield such information by compromising those aspects of their integrity critical to conveying their significance, including integrity of materials and association. Four archaeological historic properties are above underground sections of the B-P Build Alternatives, and the project would have no effect and less than significant impacts on these sites. Refer to Table 3.17-14 for more detail.

Because of limited access to private lands in the APE for all B-P Build Alternatives, it is possible that as-yet-unknown NRHP-eligible archaeological sites could be identified within the APE as part of the Section 106 phased historic properties identification effort that would be conducted when

property access becomes available, prior to ground-disturbing activities. If such sites are identified and cannot be avoided, significant impacts on archaeological properties could occur. All B-P Build Alternatives also have the potential to damage previously unidentified archaeological sites that may not be identified through surveying prior to construction. While cultural resource inventories would be completed once legal access is secured, no inventory can ensure that all resources are identified. Because these sites may be historic properties, damage to them may diminish their integrity. Additionally, given the nature of the HSR project and the design requirements, an established alignment may not be able to be altered to avoid archaeological sites discovered by the time property access is granted.

However, the mitigation measures will lessen the potential for ground disturbance-related impacts to known and as-yet undiscovered archaeological sites to occur before and during construction.

Mitigation measures developed to reduce impacts prior to construction include:

- CUL-MM#1 mitigation of adverse effects to properties identified during phased identification.

During construction:

- CUL-MM#2 requires that work be halted in the event of an archaeological discovery.

Conditions and Treatments Proposed

Because the differences in proposed treatments to each of the archaeological historic properties vary minimally, the conditions and treatments proposed for archaeological historic properties are combined and discussed in general terms in the subsequent discussion. For more information regarding specific archaeological resources, refer to the *Bakersfield to Palmdale Project Section Section 106 Finding of Effect* (Authority 2019d).

CUL-IAMF#2 through CUL-IAMF#6 and standardized Mitigation Measures CUL-MM#2, CUL-MM#3, and CUL-MM#4 will be applied during Bakersfield to Palmdale Project Section construction and operation. In addition, the following conditions or treatments could avoid, minimize, or mitigate adverse effects on the 49 archaeological historic properties in the APE. The details of the specific conditions and treatment measures, as well as their implementation, would be stipulated in the MOA and described in detail in the ATP.

1. **Archaeological Testing Before Project Construction:** 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 document 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). These excavations will be done to determine the extent, density, and NRHP eligibility of archaeological deposits in the APE. This testing will be done at the request of, and in coordination with, the SHPO, the Authority, the FRA, and tribal consulting parties. This measure will ensure that adverse effects on archaeological historic properties will be avoided to the extent possible through project redesign or other avoidance measures, including establishment of temporary Environmentally Sensitive Areas during construction.
2. **Project Redesign:** Once the spatial limits of an archaeological historic property have been established, project impacts will be reviewed and the project designs in that specific location will be examined to see if it will 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 impact a small portion of the site, rather than crossing through the center. Mitigation of the remaining impacts on the property will be required.

Project redesign 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.

3. **Intentional Site Burial for Preservation In-Place:** If project engineering concludes that avoidance is not feasible, a process to determine whether the site can be preserved through intentional site burial will be considered. When complete avoidance is not possible, preservation in-place is the preferred form of mitigation, pursuant to Cal. Public Res. 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, Intentional Site Burial: A Technique to Protect Against Natural or Mechanical Loss (Thorne 1989). Among the requirements of an effective capping, the mechanical process of burying the site must be designed in a manner that will ensure the site matrix is protected during the placement process and during operation of the HSR. The ATP will 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 will seek input from tribal consulting parties in the evaluation and implementation of this mitigation measure.
4. **Archaeological Data Recovery Program:** If through consultation or NRHP evaluation testing it is determined that an archaeological historic property is present in the APE that could be adversely impacted by the project and that the site cannot be completely avoided, implementation of an Archaeological Data Recovery Plan would be required. The ATP will contain the broad programmatic steps that would be taken in the event that a data recovery investigation is required. The Archaeological Data Recovery Plan will 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 will address the applicable research questions. All significant cultural materials recovered will be, as necessary and according to the Archaeological Data Recovery Plan, 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 and FRA will seek input from the consulting parties in the evaluation and implementation of this mitigation measure.

3.17.9.2 Built Resources

Similar to the discussion of archaeological resources, an impact to historic built resources pursuant to NEPA is also measured by the context, intensity, and duration of impacts to built resources associated with implementation of the B-P Build Alternatives. Impacts to historic built resources are informed through the Section 106 process. The context for analyzing built resources is the same for all B-P Build Alternatives because built resources are generally analyzed with regard for the known historic resources in Kern and Los Angeles Counties. However, for the purposes of built resources, the intensity and duration of impacts varies among the B-P Build Alternatives. Alternatives 1, 2, and 3 are largely similar in their intensity and duration of impacts to built resources, while Alternative 5 differs in its impacts and their attending intensity and duration.

Surveys identified eight built resources listed or determined eligible for listing in the NRHP (Authority and FRA 2016b). These are considered historic properties. One of these historic properties is an historic district with several contributing elements: the Big Creek Hydroelectric System Historic District is considered one historic property, of which three contributors to the district are in the APE and would be impacted by all B-P Build Alternatives. Furthermore, all B-P Build Alternatives, including the CCNM Design Option, would result in impacts to La Paz in the form of adverse visual effects; however, the Refined CCNM Design Option would result in no adverse effects to La Paz. The implementation of Alternative 5 would result in all the same effects as the other B-P Build Alternatives but with the addition of impacts related to the demolition of the Denny's Restaurant #30 historic property. The demolition of this historic property would also be

considered an adverse effect. Construction of the Bakersfield to Palmdale Project Section would have an adverse effect on two historic properties (Big Creek Hydroelectric System Historic District and the National Chavez Center) if B-P Build Alternative 1, 2, 3 or the CCNM Design Option is selected, and three historic properties (Big Creek Hydroelectric System Historic District, National Chavez Center, and Denny's restaurant #30) if B-P Build Alternative 5 is selected. Operation of the Bakersfield to Palmdale Project Section would have an adverse effect on one built historic property (La Paz) under each of the B-P Build Alternatives and the CCNM Design Option, but not under the Refined CCNM Design Option.

Conditions and Treatments Proposed

Described below are the specific conditions and treatments proposed for each of the eight built historic properties that would be impacted by Alternatives 1, 2, 3, and 5, as well as the CCNM Design Option and Refined CCNM Design Option. Additional mitigation measures may continue to be developed in consultation with the interested parties and signatories. For more detail regarding specific built resources, refer to the *Bakersfield to Palmdale Project Section Section 106 Finding of Effect* (Authority 2019d).

Big Creek Hydroelectric System Historic District

Alternatives 1, 2, 3, and 5 would each result in direct adverse effects to the Big Creek Hydroelectric System Historic District. However, mitigation measures could mitigate adverse effects to this historic district. Additionally, through working with Southern California Edison, the project might be able to retain the towers proposed to be removed. Specifically, for this historic property, the following mitigation measure could be used:

- 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.

Keene Fire Station

No adverse effect to the Keene Fire Station historic property would occur as a result of any of the B-P Build Alternatives (Alternatives 1, 2, 3, or 5). However, this resource remains within the APE of each of the B-P Build Alternatives. Therefore, to ensure that unanticipated effects to the property are prevented, appropriate standardized IAMFs would be applied.

Nuestra Señora Reina de la Paz

Alternatives 1, 2, 3, and 5, as well as the CCNM Design Option, would each result in adverse visual effects to La Paz historic property. The CCNM Design Option would reduce effects on La Paz, specifically in regard to noise and visual impacts. The inclusion of a soundwall as a project feature would reduce the noise levels to ensure the property would not be adversely affected. However, implementation of the following mitigation measures could further avoid, minimize, or mitigate adverse effects to this historic property:

- CUL-MM#9: Visual Screening
  - To minimize and mitigate visual effects, the Authority may consider design refinements and project features that could reduce visual effects at the historic property.

Further mitigation specific to noise (N&V-MM#1 through N&V-MM#6) and visual impacts (AVQ-MM#1 through AVQ-MM#7) is also applicable to La Paz. The Authority has worked with consulting parties to identify other opportunities to avoid and minimize the project's effects.[8] This could include visual minimizations such as the color of the viaduct and plant screening use in

[8] In addition, in response to comments from consulting parties on the Section 106 Findings of Effect report, the Authority has undertaken further analysis of potential avoidance alignments for the CCNM as part of the Section 106 consultation process.

addition to the above mitigation, which would be project features of the CCNM Design Option, rather than mitigation.

However, under the Refined CCNM Design Option, none of the characteristics of the historic property that qualify it for inclusion in the NRHP would be affected in a manner that would diminish the integrity of the property's location, design, materials, workmanship, feeling, or association. Although the setting outside of La Paz would be altered, the alteration would be minimal, distant, and low on the horizon, only visible from a few locations within the historic property, and would not make the setting any less isolated. With the inclusion of the berm and soundwall as project features, audible effects would be avoided. The Refined CCNM Design Option would result in No Adverse Effect to La Paz (Authority 2019a, Appendix C).

First Los Angeles Aqueduct

This historic property is within the APE and could be impacted by each of the B-P Build Alternatives. However, no adverse effect to the First Los Angeles Aqueduct historic property would occur as a result of any of the B-P Build Alternatives (Alternatives 1, 2, 3, or 5) because appropriate standardized IAMFs would be implemented.

Willow Springs International Raceway

No adverse effect to the Willow Springs International Raceway historic property would occur as a result of any of the B-P Build Alternatives (Alternatives 1, 2, 3, or 5). Because none of the B-P Build Alternatives would cause an adverse effect on this historic property, no conditions or treatment measures are required or proposed.

Lancaster Post Office

No adverse effect to the Lancaster Post Office historic property would occur as a result of any of the B-P Build Alternatives (Alternatives 1, 2, 3, or 5). Because none of the B-P Build Alternatives would cause an adverse effect on this historic property, no conditions or treatment measures are required or proposed.

Western Hotel

No adverse effect to the Western Hotel historic property would occur as a result of any of the B-P Build Alternatives (Alternatives 1, 2, 3, or 5). Because none of the B-P Build Alternatives would cause an adverse effect on this historic property, no conditions or treatment measures are required or proposed.

Denny's Restaurant #30 (aka Village Grill Diner)

Under Alternatives 1, 2, and 3, no adverse effect to Denny's Restaurant #30 would occur. Therefore, under these alternatives, no conditions or treatment measures are required or proposed.

Alternative 5, however, would result in adverse effects to Denny's Restaurant #30. 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. Implementation of the following mitigation measures could mitigate adverse effects to this historic property under Alternative 5; however, the effects to Denny's Restaurant #30 would remain adverse even after application of these measures. Standardized mitigation measures proposed would include:

- CUL-MM#4: 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 reuse 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.

3.17.10 CEQA Significance Conclusions

This section summarizes the impacts discussed in Section 3.17.7, Environmental Consequences; reports the level of significance prior to mitigation; indicates mitigation measures available to reduce the level of significance for each impact; and concludes by reporting on the level of significance after mitigation is implemented. If implementing a measure would reduce the potential impact below the applicable significance threshold, the impact would be considered less than significant. This section summarizes the project impacts pursuant to CEQA thresholds for cultural resources and identifies the CEQA level of significance before and after mitigation.

Under the No Project Alternative, the Bakersfield to Palmdale Project Section would not be constructed. However, implementing the No Project Alternative is not equivalent to no impacts to cultural resources. Although the project section would not be constructed under the No Project Alternative, existing and planned improvements to the highway, aviation, conventional passenger rail, and freight rail systems would still be constructed to accommodate planned growth through the 2040 time horizon. Therefore, for the purpose of assessing future conditions under the No Project Alternative, 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 identified) would be developed by 2040. Therefore, although impacts to cultural resources and the quantity of cultural resources impacted would be different because the planned improvements are not necessarily located on the same land as that which is planned for the project section, the No Project Alternative would result in a significant impact pursuant to CEQA. Because the cultural resources in the project vicinity are distinct and irreplaceable archaeological and built resources within Kern and Los Angeles Counties, the incremental impact to cultural resources from the No Project Alternative would result also in a significant impact pursuant to CEQA.

Generally, the geographic distribution of the existing cultural resources the project would traverse is largely the same for Alternatives 1, 2, 3, the CCNM Design Option, and the Refined CCNM Design Option, with only Alternative 5 differing notably in its potential effects to cultural resources. Therefore, the significance of impacts to cultural resources is largely the same for Alternatives 1, 2, and 3. All potential impacts from the B-P Build Alternatives, as well as the level of significance pursuant to CEQA prior to and after implementation of mitigation measure(s) and the applicable mitigation measure for each impact, are outlined in Table 3.17-17.

Table 3.17-17 Summary of CEQA Significance Conclusions and Mitigation Measures for Cultural Resources

Impact/ Resource Name	B-P Build Alternative				CEQA Level of Significance Before Mitigation	Mitigation Measure	CEQA Level of Significance After Mitigation
	Alternative 1	Alternative 2	Alternative 3	Alternative 5			
Impact CUL-1: Permanent Construction-Period Potential Adverse Impacts on Archaeological Resources Due to Construction Activities							
Unknown Resources	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Significant: The construction of surface alignments and access roads associated with the proposed project would result in a finding of Substantial Adverse Change under all the B-P Build Alternatives. A treatment plan would be prepared in consultation with the parties listed in the MOA that would provide additional detail regarding the methods and implementation of the mitigation measures described herein.	CUL-MM#1 requires mitigation of adverse effects to properties identified during phased identification. CUL-MM#2 requires that work be halted in the event of an archaeological discovery. CUL-MM#3 requires specialized mitigation for effects to pre-contact archaeological sites when applicable	Less than Significant
P-15-002959/ CA-KER-2959	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Significant: The construction of surface alignments and access roads associated with the proposed project would result in a finding of Substantial Adverse Change under all the B-P Build Alternatives. A treatment plan would be prepared in consultation with the parties listed in the MOA that would provide additional detail regarding the methods and implementation of the mitigation measures described herein.	CUL-MM#1 requires mitigation of adverse effects to properties identified during phased identification. CUL-MM#2 requires that work be halted in the event of an archaeological discovery. CUL-MM#3 requires specialized mitigation for effects to pre-contact archaeological sites when	Less than Significant
P-15-010030/ CA-KER-5917	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Significant: The construction of surface alignments and access roads associated with the proposed project would result in a finding of Substantial Adverse Change under all the B-P Build Alternatives. A treatment plan would be prepared in consultation with the parties listed in the MOA that would provide additional detail regarding the methods and implementation of the mitigation measures described herein.	CUL-MM#1, CUL-MM#2, and CUL-MM#3 (where applicable	Less than Significant

Impact/ Resource Name	B-P Build Alternative				CEQA Level of Significance Before Mitigation	Mitigation Measure	CEQA Level of Significance After Mitigation
	Alternative 1	Alternative 2	Alternative 3	Alternative 5			
BP-JS-1 (P-15-019272/CA-KER-10546)	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Significant: The construction of surface alignments and access roads associated with the proposed project would result in a finding of Substantial Adverse Change under all the B-P Build Alternatives. A treatment plan would be prepared in consultation with the parties listed in the MOA that would provide additional detail regarding the methods and implementation of the mitigation measures described herein.	CUL-MM#1, CUL-MM#2, and CUL-MM#3 (where applicable	Less than Significant
BP-IS-1 (P-15-019263/CA-KER-10537)	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Significant: The construction of access roads associated with the proposed project would result in a finding of Significant Adverse Change under all the B-P Build Alternatives. A treatment plan would be prepared in consultation with the parties listed in the MOA that would provide additional detail regarding the methods and implementation of the mitigation measures described herein.	CUL-MM#1, CUL-MM#2, and CUL-MM#3 (where applicable)	Less than Significant
P-15-018645 (CA-KER-10171)	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Significant: The construction of surface alignments associated with the proposed project would result in a finding of Significant Adverse Change under all the B-P Build Alternatives. A treatment plan would be prepared in consultation with the parties listed in the MOA that would provide additional detail regarding the methods and implementation of the mitigation measures described herein.	CUL-MM#1, CUL-MM#2, and CUL-MM#3 (where applicable)	Less than Significant

Impact/ Resource Name	B-P Build Alternative				CEQA Level of Significance Before Mitigation	Mitigation Measure	CEQA Level of Significance After Mitigation
	Alternative 1	Alternative 2	Alternative 3	Alternative 5			
BP-IS-2 (P-15-019264/CA-KER-10538)	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Significant: The construction of surface alignments associated with the proposed project would result in a finding of Significant Adverse Change under all the B-P Build Alternatives. A treatment plan would be prepared in consultation with the parties listed in the MOA that would provide additional detail regarding the methods and implementation of the mitigation measures described herein.	CUL-MM#1, CUL-MM#2, and CUL-MM#3 (where applicable)	Less than Significant
BP-LH-7 (P-15-019281/CA-KER-10555)	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Significant: The construction of surface alignments associated with the proposed project would result in a finding of Significant Adverse Change under all the B-P Build Alternatives. A treatment plan would be prepared in consultation with the parties listed in the MOA that would provide additional detail regarding the methods and implementation of the mitigation measures described herein.	CUL-MM#1, CUL-MM#2, and CUL-MM#3 (where applicable)	Less than Significant
BP-IS-3 (P-15-019265/CA-KER-10539)	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Significant: The construction of underground alignments associated with the proposed project would result in a finding of Substantial Adverse Change under all the B-P Build Alternatives. A treatment plan would be prepared in consultation with the parties listed in the MOA that would provide additional detail regarding the methods and implementation of the mitigation measures described herein.	CUL-MM#1, CUL-MM#2, and CUL-MM#3 (where applicable)	Less than Significant

Impact/ Resource Name	B-P Build Alternative				CEQA Level of Significance Before Mitigation	Mitigation Measure	CEQA Level of Significance After Mitigation
	Alternative 1	Alternative 2	Alternative 3	Alternative 5			
BP-JS-3 (P-15-019274/CA-KER-10548)	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Significant: The construction of underground alignments associated with the proposed project would result in a finding of Substantial Adverse Change under all the B-P Build Alternatives. A treatment plan would be prepared in consultation with the parties listed in the MOA that would provide additional detail regarding the methods and implementation of the mitigation measures described herein.	CUL-MM#1, CUL-MM#2, and CUL-MM#3 (where applicable)	Less than Significant
P-15-010031 (CA-KER-5918)	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Significant: The construction of elevated alignments associated with the proposed project would result in a finding of Substantial Adverse Change under all the B-P Build Alternatives. A treatment plan would be prepared in consultation with the parties listed in the MOA that would provide additional detail regarding the methods and implementation of the mitigation measures described herein.	CUL-MM#1, CUL-MM#2, and CUL-MM#3 (where applicable)	Less than Significant
P-15-002750 (CA-KER-2750)	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Significant: The construction of underground alignments associated with the proposed project would result in a finding of Substantial Adverse Change under all the B-P Build Alternatives. A treatment plan would be prepared in consultation with the parties listed in the MOA that would provide additional detail regarding the methods and implementation of the mitigation measures described herein.	CUL-MM#1, CUL-MM#2, and CUL-MM#3 (where applicable)	Less than Significant

Impact/ Resource Name	B-P Build Alternative				CEQA Level of Significance Before Mitigation	Mitigation Measure	CEQA Level of Significance After Mitigation
	Alternative 1	Alternative 2	Alternative 3	Alternative 5			
P-15-002189 (CA-KER-2189)	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Significant: The construction of access roads associated with the proposed project would result in a finding of Substantial Adverse Change under all the B-P Build Alternatives. A treatment plan would be prepared in consultation with the parties listed in the MOA that would provide additional detail regarding the methods and implementation of the mitigation measures described herein.	CUL-MM#1, CUL-MM#2, and CUL-MM#3 (where applicable)	Less than Significant
P-15-002954 (CA-KER-2954)	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Significant: The construction of underground alignments associated with the proposed project would result in a finding of Substantial Adverse Change under all the B-P Build Alternatives. A treatment plan would be prepared in consultation with the parties listed in the MOA that would provide additional detail regarding the methods and implementation of the mitigation measures described herein.	CUL-MM#1, CUL-MM#2, and CUL-MM#3 (where applicable)	Less than Significant
BP-IS-4 (P-15-019266/CA-KER-10540)	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Significant: The construction of surface and elevated alignments associated with the proposed project would result in a finding of Substantial Adverse Change under all the B-P Build Alternatives. A treatment plan would be prepared in consultation with the parties listed in the MOA that would provide additional detail regarding the methods and implementation of the mitigation measures described herein.	CUL-MM#1, CUL-MM#2, and CUL-MM#3 (where applicable)	Less than Significant

Impact/ Resource Name	B-P Build Alternative				CEQA Level of Significance Before Mitigation	Mitigation Measure	CEQA Level of Significance After Mitigation
	Alternative 1	Alternative 2	Alternative 3	Alternative 5			
P-15-012809 (CA-KER-7230H)	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Significant: The construction of access roads associated with the proposed project would result in a finding of Substantial Adverse Change under all the B-P Build Alternatives. A treatment plan would be prepared in consultation with the parties listed in the MOA that would provide additional detail regarding the methods and implementation of the mitigation measures described herein.	CUL-MM#1, CUL-MM#2, and CUL-MM#3 (where applicable)	Less than Significant
P-15-007681 (CA-KER-7681)	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Significant: The construction of surface alignments and utility installation associated with the proposed project would result in a finding of Substantial Adverse Change under all the B-P Build Alternatives. A treatment plan would be prepared in consultation with the parties listed in the MOA that would provide additional detail regarding the methods and implementation of the mitigation measures described herein.	CUL-MM#1, CUL-MM#2, and CUL-MM#3 (where applicable)	Less than Significant
P-15-012810 (CA-KER-7231)	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Significant: The construction of surface alignments and utility installation associated with the proposed project would result in a finding of Substantial Adverse Change under all the B-P Build Alternatives. A treatment plan would be prepared in consultation with the parties listed in the MOA that would provide additional detail regarding the methods and implementation of the mitigation measures described herein.	CUL-MM#1, CUL-MM#2, and CUL-MM#3 (where applicable)	Less than Significant

Impact/ Resource Name	B-P Build Alternative				CEQA Level of Significance Before Mitigation	Mitigation Measure	CEQA Level of Significance After Mitigation
	Alternative 1	Alternative 2	Alternative 3	Alternative 5			
P-15-015559 (CA-KER-8592)	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Significant: The construction of surface alignments associated with the proposed project would result in a finding of Substantial Adverse Change under all the B-P Build Alternatives. A treatment plan would be prepared in consultation with the parties listed in the MOA that would provide additional detail regarding the methods and implementation of the mitigation measures described herein.	CUL-MM#1, CUL-MM#2, and CUL-MM#3 (where applicable)	Less than Significant
P-15-012811 (CA-KER-7232)	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Significant: The construction of utility installation associated with the proposed project would result in a finding of Substantial Adverse Change under all the B-P Build Alternatives. A treatment plan would be prepared in consultation with the parties listed in the MOA that would provide additional detail regarding the methods and implementation of the mitigation measures described herein.	CUL-MM#1, CUL-MM#2, and CUL-MM#3 (where applicable)	Less than Significant
P-15-001615 (CA-KER-1615)	Substantial Adverse Change	Substantial Adverse Change	No Effect/ No Impact	Substantial Adverse Change	Significant: The construction of surface alignments and utility installation associated with the proposed project would result in a finding of Substantial Adverse Change under Alternatives 1, 2, and 5. A treatment plan would be prepared in consultation with the parties listed in the MOA that would provide additional detail regarding the methods and implementation of the mitigation measures described herein.	CUL-MM#1, CUL-MM#2, and CUL-MM#3 (where applicable)	Less than Significant

Impact/ Resource Name	B-P Build Alternative				CEQA Level of Significance Before Mitigation	Mitigation Measure	CEQA Level of Significance After Mitigation
	Alternative 1	Alternative 2	Alternative 3	Alternative 5			
P-15-013689 (CA-KER-7690H)	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Significant: The construction of utility installations associated with the proposed project would result in a finding of Substantial Adverse Changes under all the B-P Build Alternatives. A treatment plan would be prepared in consultation with the parties listed in the MOA that would provide additional detail regarding the methods and implementation of the mitigation measures described herein.	CUL-MM#1, CUL-MM#2, and CUL-MM#3 (where applicable)	Less than Significant
P-15-013931 (CA-KER-7815H)	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Significant: The construction of utility installations associated with the proposed project would result in a finding of Substantial Adverse Changes under all the B-P Build Alternatives. A treatment plan would be prepared in consultation with the parties listed in the MOA that would provide additional detail regarding the methods and implementation of the mitigation measures described herein.	CUL-MM#1, CUL-MM#2, and CUL-MM#3 (where applicable)	Less than Significant
P-15-013841 (CA-KER-7749)	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Significant: The construction of utility installations associated with the proposed project would result in a finding of Substantial Adverse Change under all the B-P Build Alternatives. A treatment plan would be prepared in consultation with the parties listed in the MOA that would provide additional detail regarding the methods and implementation of the mitigation measures described herein.	CUL-MM#1, CUL-MM#2, and CUL-MM#3 (where applicable)	Less than Significant

Impact/ Resource Name	B-P Build Alternative				CEQA Level of Significance Before Mitigation	Mitigation Measure	CEQA Level of Significance After Mitigation
	Alternative 1	Alternative 2	Alternative 3	Alternative 5			
P-15-016251 (CA-KER-8784H)	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Significant: The construction of access roads associated with the proposed project would result in a finding of Substantial Adverse Change under all the B-P Build Alternatives. A treatment plan would be prepared in consultation with the parties listed in the MOA that would provide additional detail regarding the methods and implementation of the mitigation measures described herein.	CUL-MM#1, CUL-MM#2, and CUL-MM#3 (where applicable)	Less than Significant
P-15-016252 (CA-KER-8785H)	No Effect/ No Impact	No Effect/ No Impact	Substantial Adverse Change	No Effect/ No Impact	Significant: The construction of elevated alignment associated with the proposed project would result in a finding of Substantial Adverse Change under Alternative 3. A treatment plan would be prepared in consultation with the parties listed in the MOA that would provide additional detail regarding the methods and implementation of the mitigation measures described herein.	CUL-MM#1, CUL-MM#2, and CUL-MM#3 (where applicable)	Less than Significant
P-15-012714 (CA-KER-7172H)	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Significant: The construction of elevated alignments associated with the proposed project would result in a finding of Substantial Adverse Change under all the B-P Build Alternatives. A treatment plan would be prepared in consultation with the parties listed in the MOA that would provide additional detail regarding the methods and implementation of the mitigation measures described herein.	CUL-MM#1, CUL-MM#2, and CUL-MM#3 (where applicable)	Less than Significant

Impact/ Resource Name	B-P Build Alternative				CEQA Level of Significance Before Mitigation	Mitigation Measure	CEQA Level of Significance After Mitigation
	Alternative 1	Alternative 2	Alternative 3	Alternative 5			
P-15-010951 (CA-KER-6340)	No Effect/ No Impact	No Effect/ No Impact	Substantial Adverse Change	No Effect/ No Impact	Significant: The construction of elevated alignments associated with the proposed project would result in a finding of Substantial Adverse Change under Alternative 3. A treatment plan would be prepared in consultation with the parties listed in the MOA that would provide additional detail regarding the methods and implementation of the mitigation measures described herein.	CUL-MM#1, CUL-MM#2, and CUL-MM#3 (where applicable)	Less than Significant
P-15-013690 (CA-KER-7691H)	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Significant: The construction of utility installations associated with the proposed project would result in a finding of Substantial Adverse Change under all the B-P Build Alternatives. A treatment plan would be prepared in consultation with the parties listed in the MOA that would provide additional detail regarding the methods and implementation of the mitigation measures described herein.	CUL-MM#1, CUL-MM#2, and CUL-MM#3 (where applicable)	Less than Significant
P-15-016534 (CA-KER-9114)	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Significant: The construction of utility installations associated with the proposed project would result in a finding of Substantial Adverse Change under all the B-P Build Alternatives. A treatment plan would be prepared in consultation with the parties listed in the MOA that would provide additional detail regarding the methods and implementation of the mitigation measures described herein.	CUL-MM#1, CUL-MM#2, and CUL-MM#3 (where applicable)	Less than Significant

Impact/ Resource Name	B-P Build Alternative				CEQA Level of Significance Before Mitigation	Mitigation Measure	CEQA Level of Significance After Mitigation
	Alternative 1	Alternative 2	Alternative 3	Alternative 5			
P-15-016248 (CA-KER-8981H)	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Significant: The construction of access roads associated with the proposed project would result in a finding of Substantial Adverse Change under all the B-P Build Alternatives. Additionally, Alternative 3 would result in impacts during construction of elevated alignments. A treatment plan would be prepared in consultation with the parties listed in the MOA that would provide additional detail regarding the methods and implementation of the mitigation measures described herein.	CUL-MM#1, CUL-MM#2, and CUL-MM#3 (where applicable)	Less than Significant
P-15-002539 (CA-KER-2539)	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Significant: The construction of surface and elevated alignments associated with the proposed project would result in a finding of Substantial Adverse Change under all the B-P Build Alternatives. A treatment plan would be prepared in consultation with the parties listed in the MOA that would provide additional detail regarding the methods and implementation of the mitigation measures described herein.	CUL-MM#1, CUL-MM#2, and CUL-MM#3 (where applicable)	Less than Significant
BP-IS-10 (P-15-019271/CA-KER-10545)	Substantial Adverse Change	Substantial Adverse Change	No Effect/No Impact	Substantial Adverse Change	Significant: The construction of surface alignments associated with the proposed project would result in a finding of Substantial Adverse Change under Alternatives 1, 2, and 5. A treatment plan would be prepared in consultation with the parties listed in the MOA that would provide additional detail regarding the methods and implementation of the mitigation measures described herein.	CUL-MM#1, CUL-MM#2, and CUL-MM#3 (where applicable)	Less than Significant

Impact/ Resource Name	B-P Build Alternative				CEQA Level of Significance Before Mitigation	Mitigation Measure	CEQA Level of Significance After Mitigation
	Alternative 1	Alternative 2	Alternative 3	Alternative 5			
BP-JS-7 (P-15-019276/CA-KER-10550)	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Significant: The construction of surface alignments associated with the proposed project would result in a finding of Substantial Adverse Change under all the B-P Build Alternatives. A treatment plan would be prepared in consultation with the parties listed in the MOA that would provide additional detail regarding the methods and implementation of the mitigation measures described herein.	CUL-MM#1, CUL-MM#2, and CUL-MM#3 (where applicable)	Less than Significant
BP-IS-6 (P-15-019267/CA-KER-10541)	Substantial Adverse Change	Substantial Adverse Change	No Effect/No Impact	Substantial Adverse Change	Significant: The construction of surface alignments associated with the proposed project would result in a finding of Substantial Adverse Change under Alternatives 1, 2, and 5. A treatment plan would be prepared in consultation with the parties listed in the MOA that would provide additional detail regarding the methods and implementation of the mitigation measures described herein.	CUL-MM#1, CUL-MM#2, and CUL-MM#3 (where applicable)	Less than Significant
BP-JS-6 (P-15-019275/CA-KER-10549)	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Significant: The construction of surface alignments associated with the proposed project would result in a finding of Substantial Adverse Change under all the B-P Build Alternatives. A treatment plan would be prepared in consultation with the parties listed in the MOA that would provide additional detail regarding the methods and implementation of the mitigation measures described herein.	CUL-MM#1, CUL-MM#2, and CUL-MM#3 (where applicable)	Less than Significant

Impact/ Resource Name	B-P Build Alternative				CEQA Level of Significance Before Mitigation	Mitigation Measure	CEQA Level of Significance After Mitigation
	Alternative 1	Alternative 2	Alternative 3	Alternative 5			
BP-TJ-2 (P-15-019283/CA-KER-10557)	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Significant: The construction of surface alignments associated with the proposed project would result in a finding of Substantial Adverse Change under all the B-P Build Alternatives. A treatment plan would be prepared in consultation with the parties listed in the MOA that would provide additional detail regarding the methods and implementation of the mitigation measures described herein.	CUL-MM#1, CUL-MM#2, and CUL-MM#3 (where applicable)	Less than Significant
BP-IS-7 (P-15-019268/CA-KER-10542)	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Significant: The construction of surface alignments associated with the proposed project would result in a finding of Substantial Adverse Change under all the B-P Build Alternatives. A treatment plan would be prepared in consultation with the parties listed in the MOA that would provide additional detail regarding the methods and implementation of the mitigation measures described herein.	CUL-MM#1, CUL-MM#2, and CUL-MM#3 (where applicable)	Less than Significant
BP-JS-8 (P-15-019277/CA-KER-10551)	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Significant: The construction of surface alignments associated with the proposed project would result in a finding of Substantial Adverse Change under all the B-P Build Alternatives. A treatment plan would be prepared in consultation with the parties listed in the MOA that would provide additional detail regarding the methods and implementation of the mitigation measures described herein.	CUL-MM#1, CUL-MM#2, and CUL-MM#3 (where applicable)	Less than Significant

Impact/ Resource Name	B-P Build Alternative				CEQA Level of Significance Before Mitigation	Mitigation Measure	CEQA Level of Significance After Mitigation
	Alternative 1	Alternative 2	Alternative 3	Alternative 5			
BP-IS-8 (P-15-019269/CA-KER-10543)	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Significant: The construction of surface alignments associated with the proposed project would result in a finding of Substantial Adverse Change under all the B-P Build Alternatives. A treatment plan would be prepared in consultation with the parties listed in the MOA that would provide additional detail regarding the methods and implementation of the mitigation measures described herein.	CUL-MM#1, CUL-MM#2, and CUL-MM#3 (where applicable)	Less than Significant
BP-JS-9 (P-15-019278/CA-KER-10552)	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Significant: The construction of surface alignments associated with the proposed project would result in a finding of Substantial Adverse Change under all the B-P Build Alternatives. A treatment plan would be prepared in consultation with the parties listed in the MOA that would provide additional detail regarding the methods and implementation of the mitigation measures described herein.	CUL-MM#1, CUL-MM#2, and CUL-MM#3 (where applicable)	Less than Significant
BP-IS-9 (P-15-019270/CA-KER-10544)	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Significant: The construction of surface alignments associated with the proposed project would result in a finding of Substantial Adverse Change under all the B-P Build Alternatives. A treatment plan would be prepared in consultation with the parties listed in the MOA that would provide additional detail regarding the methods and implementation of the mitigation measures described herein.	CUL-MM#1, CUL-MM#2, and CUL-MM#3 (where applicable)	Less than Significant

Impact/ Resource Name	B-P Build Alternative				CEQA Level of Significance Before Mitigation	Mitigation Measure	CEQA Level of Significance After Mitigation
	Alternative 1	Alternative 2	Alternative 3	Alternative 5			
P-15-010955 (CA-KER-6344)	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Significant: The construction of access roads associated with the proposed project would result in a finding of Substantial Adverse Change under all the B-P Build Alternatives. A treatment plan would be prepared in consultation with the parties listed in the MOA that would provide additional detail regarding the methods and implementation of the mitigation measures described herein.	CUL-MM#1, CUL-MM#2, and CUL-MM#3 (where applicable)	Less than Significant
P-15-000522 (CA-KER-522)	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Significant: The construction of elevated alignments associated with the proposed project would result in a finding of Substantial Adverse Change under all the B-P Build Alternatives. A treatment plan would be prepared in consultation with the parties listed in the MOA that would provide additional detail regarding the methods and implementation of the mitigation measures described herein.	CUL-MM#1, CUL-MM#2, and CUL-MM#3 (where applicable)	Less than Significant
P-15-012466 (CA-KER-7031H)	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Significant: The construction of surface alignments associated with the proposed project would result in a finding of Substantial Adverse Change under all the B-P Build Alternatives. A treatment plan would be prepared in consultation with the parties listed in the MOA that would provide additional detail regarding the methods and implementation of the mitigation measures described herein.	CUL-MM#1, CUL-MM#2, and CUL-MM#3 (where applicable)	Less than Significant

Impact/ Resource Name	B-P Build Alternative				CEQA Level of Significance Before Mitigation	Mitigation Measure	CEQA Level of Significance After Mitigation
	Alternative 1	Alternative 2	Alternative 3	Alternative 5			
P-19-002396 (CA-LAN-2396H)	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Significant: The construction of access roads associated with the proposed project would result in a finding of Substantial Adverse Change under all the B-P Build Alternatives. A treatment plan would be prepared in consultation with the parties listed in the MOA that would provide additional detail regarding the methods and implementation of the mitigation measures described herein.	CUL-MM#1, CUL-MM#2, and CUL-MM#3 (where applicable)	Less than Significant
P-19-003819	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Significant: The construction of access roads associated with the proposed project would result in a finding of Substantial Adverse Change under all the B-P Build Alternatives. A treatment plan would be prepared in consultation with the parties listed in the MOA that would provide additional detail regarding the methods and implementation of the mitigation measures described herein.	CUL-MM#1, CUL-MM#2, and CUL-MM#3 (where applicable)	Less than Significant
P-19-002183 (CA-LAN-2183H)	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Significant: The construction of the roadway crossing associated with the proposed project would result in a finding of Substantial Adverse Change under all the B-P Build Alternatives. A treatment plan would be prepared in consultation with the parties listed in the MOA that would provide additional detail regarding the methods and implementation of the mitigation measures described herein.	CUL-MM#1, CUL-MM#2, and CUL-MM#3 (where applicable)	Less than Significant

Impact/ Resource Name	B-P Build Alternative				CEQA Level of Significance Before Mitigation	Mitigation Measure	CEQA Level of Significance After Mitigation
	Alternative 1	Alternative 2	Alternative 3	Alternative 5			
P-19-002215 (CA-LAN-2215H)	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Significant: The construction of surface alignments associated with the proposed project would result in a finding of Substantial Adverse Change under all the B-P Build Alternatives. A treatment plan would be prepared in consultation with the parties listed in the MOA that would provide additional detail regarding the methods and implementation of the mitigation measures described herein.	CUL-MM#1, CUL-MM#2, and CUL-MM#3 (where applicable)	Less than Significant
P-19-002461 (CA-LAN-2461H)	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	No Effect/ No Impact	Significant: The construction of roadway overcrossings associated with the proposed project would result in a finding of Substantial Adverse Change under Alternatives 1, 2, and 3. A treatment plan would be prepared in consultation with the parties listed in the MOA that would provide additional detail regarding the methods and implementation of the mitigation measures described herein.	CUL-MM#1, CUL-MM#2, and CUL-MM#3 (where applicable)	Less than Significant
BP-CJ-9 (P-19-004790/CA-LAN-4790H)	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Significant: The construction of road realignments associated with the proposed project would result in a finding of Substantial Adverse Change under all the B-P Build Alternatives. A treatment plan would be prepared in consultation with the parties listed in the MOA that would provide additional detail regarding the methods and implementation of the mitigation measures described herein.	CUL-MM#1, CUL-MM#2, and CUL-MM#3 (where applicable)	Less than Significant

Impact/ Resource Name	B-P Build Alternative				CEQA Level of Significance Before Mitigation	Mitigation Measure	CEQA Level of Significance After Mitigation
	Alternative 1	Alternative 2	Alternative 3	Alternative 5			
P-19-002039 (CA-LAN-2039H)	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Significant: The construction of road realignments associated with the proposed project would result in a finding of Substantial Adverse Change under all the B-P Build Alternatives. A treatment plan would be prepared in consultation with the parties listed in the MOA that would provide additional detail regarding the methods and implementation of the mitigation measures described herein.	CUL-MM#1, CUL-MM#2, and CUL-MM#3 (where applicable)	Less than Significant
Impact CUL-2: Permanent Construction-Period Potential Adverse Impacts on Built Resources due to Construction Activities							
Big Creek Hydroelectric System Historic District	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Substantial Adverse Change	Significant. The construction of the proposed project would result in the removal of some of the district's contributing resources, which would cause a Substantial Adverse Change to the Big Creek Hydroelectric System. However, as a whole, none of the direct and substantial adverse changes to individual contributors render the resources ineligible for the NRHP as contributors to the historic district.	CUL-MM#7—Prepare Interpretive or Educational Materials	Less than Significant
Nuestra Señora Reina de la Paz (La Paz) with the CCNM Design Option	Substantial Adverse Change—Visual	Substantial Adverse Change—Visual	Substantial Adverse Change—Visual	Substantial Adverse Change—Visual	Significant: The proposed project would result in a substantial adverse change to La Paz. Although visual and noise screening of the viaduct, as well as potential coloring of the viaduct, would minimize visual and audible impacts, the impact after mitigation would still remain significant. Under the CCNM Design Option, given the increased distance in combination with visual screening under CUL-MM#9 as well as potential coloring of the viaduct, visual impacts would be reduced but remain significant.	CUL-MM#9—Visual Screening AVQ-MM#3 –Visual Design Enhancements	Significant

Impact/ Resource Name	B-P Build Alternative				CEQA Level of Significance Before Mitigation	Mitigation Measure	CEQA Level of Significance After Mitigation
	Alternative 1	Alternative 2	Alternative 3	Alternative 5			
Nuestra Señora Reina de la Paz (La Paz) with the Refined CCNM Design Option	Less than Significant	Less than Significant	Less than Significant	Less than Significant	Less than Significant: Under the Refined CCNM Design Option, visual elements introduced by the project would be minimal, distant, and low within the viewsheds from La Paz, only visible from a few locations within the historic property, and would not reduce the isolation of the setting. Visual screening in the form of a berm would still be applied as part of the project design. Therefore, impacts would be reduced to a less than significant level.	CUL-MM#9—Visual Screening	Less than Significant
Keene Fire Station	No Impact	No Impact	No Impact	No Impact	No Impact: The construction of the proposed project would not result in Substantial Adverse Changes to Keene Fire Station.	N/A	No Impact (no mitigation applied)
First Los Angeles Aqueduct	No Impact	No Impact	No Impact	No Impact	No Impact: The construction of the proposed project would not result in Substantial Adverse Changes to the First Los Angeles Aqueduct.	N/A	No impact (no mitigation applied)
Willow Springs International Raceway	No Impact	No Impact	No Impact	No Impact	No Impact: The construction of the proposed project would not result in any Substantial Adverse Changes to the Willow Springs International Raceway.	N/A	No impact (no mitigation applied)
Lancaster Post Office	No Impact	No Impact	No Impact	No Impact	No Impact: The construction of the proposed project would not result in any Substantial Adverse Changes to the Lancaster Post Office.	N/A	No impact (no mitigation applied)
Western Hotel	No Impact	No Impact	No Impact	No Impact	No Impact: The construction of the proposed project would not result in any Substantial Adverse Changes to the Western Hotel.	N/A	No impact (no mitigation applied)

Impact/ Resource Name	B-P Build Alternative				CEQA Level of Significance Before Mitigation	Mitigation Measure	CEQA Level of Significance After Mitigation
	Alternative 1	Alternative 2	Alternative 3	Alternative 5			
Denny's Restaurant #30 (aka Village Grille Diner)	No Impact	No Impact	No Impact	Substantial Adverse Change	Significant: The construction of Alternative 5 would result in demolition of the former Denny's Restaurant. Alternatives 1, 2, and 3 would result in no impact.	CUL-MM#4—Minimize Adverse Effects through Relocation of Historic Buildings and Structures CUL-MM#6—Prepare and Submit Additional Recordation and Documentation CUL-MM#7—Prepare Interpretive or Educational Materials	No Impact (no mitigation applied) under Alternatives 1, 2, and 3. Significant and Unavoidable impact under Alternative 5.
Impact CUL-3: Permanent Operations—Potential Adverse Impacts on Archaeological Resources							
–	–	–	–	–	No Impact: Impacts to any archaeological resources would be permanent and would occur only during the construction phase. No impacts would be carried into the operational phase.	N/A	No impact (no mitigation applied)
Impact CUL-4: Permanent Operations—Potential Adverse Impacts on Built Resources							
Big Creek Hydroelectric System Historic District	No Impact	No Impact	No Impact	No Impact	No Impact. The operation of the proposed project would not result in substantial adverse changes to the Big Creek Hydroelectric System. No operations impacts are anticipated.	N/A	No impact (no mitigation applied)
Nuestra Señora Reina de la Paz (La Paz) with the CCNM Design Option	Substantial Adverse Change–Visual	Substantial Adverse Change–Visual	Substantial Adverse Change–Visual	Substantial Adverse Change–Visual	Significant: The operation of the proposed project would result in an adverse visual effect to La Paz.	CUL-MM #7—Prepare Interpretive or Educational Materials CUL-MM#9—Visual Screening	Less than Significant
Nuestra Señora Reina de la Paz (La Paz) with the Refined CCNM Design Option	No Impact	No Impact	No Impact	No Impact	No Impact: The operation of the proposed project would not result in impacts to La Paz because of design features of the proposed project that would eliminate operational noise impacts.	N/A	No impact (no mitigation applied)
Keene Fire Station	No Impact	No Impact	No Impact	No Impact	No Impact: The operation of the proposed project would not result in impacts to Keene Fire Station.	N/A	No impact (no mitigation applied)

Impact/ Resource Name	B-P Build Alternative				CEQA Level of Significance Before Mitigation	Mitigation Measure	CEQA Level of Significance After Mitigation
	Alternative 1	Alternative 2	Alternative 3	Alternative 5			
First Los Angeles Aqueduct	No Impact	No Impact	No Impact	No Impact	No Impact: The operation of the proposed project would not result in impacts on the First Los Angeles Aqueduct	N/A	No impact (no mitigation applied)
Willow Springs International Raceway	No Impact	No Impact	No Impact	No Impact	No Impact: The operation of the proposed project would result in no impacts to the Willow Springs International Raceway	N/A	No impact (no mitigation applied)
Lancaster Post Office	No Impact	No Impact	No Impact	No Impact	No Impact: The operation of the proposed project would result in no impacts for the Lancaster Post Office	N/A	No impact (no mitigation applied)
Western Hotel	No Impact	No Impact	No Impact	No Impact	No Impact: The operation of the proposed project would result in no impacts for the Western Hotel	N/A	No impact (no mitigation applied)
Denny's Restaurant #30 (aka Village Grille Diner)	No Impact	No Impact	No Impact	No Impact	No Impact: The operation of the proposed project under Alternative 5 would not result in any additional impacts, because the former Denny's Restaurant would no longer be extant. The operation of the proposed project under Alternatives 1, 2, and 3 would result in no impact on the former Denny's Restaurant.	N/A	No impact (no mitigation applied)

Source: California High-Speed Rail Authority, 2016c
Locations of archaeological resources are confidential.
aka = also known as
B-P = Bakersfield to Palmdale Project Section
CEQA = California Environmental Quality Act
CCNM = César E. Chávez National Monument
MOA = memorandum of agreement
N/A= not applicable
NRHP = National Register of Historic Places