4 DRAFT SECTION 4(F) AND SECTION 6(F) EVALUATIONS

4.1 Introduction

This section provides the analysis to support the California High-Speed Rail Authority's (Authority) compliance with the provisions of 23 United States Code (U.S.C.) 138 and 49 U.S.C. 303.4(f) (Section 4[f]), and applicable sections of the Land and Water Conservation Fund (LWCF) Act of 1965 (Section 6[f]). Based on a thorough investigation of properties, no LWCF monies were used to acquire or develop any of the recreational resources in the Palmdale to Burbank Project Section's Section 4(f) resource study area (RSA). The Authority is responsible for compliance with Section 4(f) and Section 106, of the National Historic Preservation Act (NHPA), in lieu of the Federal Railroad Administration (FRA), pursuant to a memorandum of understanding (MOU) under which FRA assigned those responsibilities to the Authority in accordance with 23 U.S.C. 327.[1]

Section 4(f)

The United States Department of Transportation Act of 1966 includes special provisions for the approval of a transportation program or project that uses land from publicly owned parks, recreational areas, wildlife and waterfowl refuges, or public and private historical sites. Effects on Section 4(f)-protected resources resulting from federally funded transportation projects are regulated. These regulations require the project to include a full evaluation to avoid impacts to these resources. If effects are unavoidable, further planning must be completed to try to minimize harm.

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

Under Section 4(f), an operating administration of the U.S. DOT may not approve a project that uses protected resources, unless one of the following conditions is met:

- There is a finding of *de minimis* impact for use of a resource
- If there are no prudent or feasible alternatives to such use, and the project includes all possible planning to minimize harm to such resources

Section 4(f) resources are publicly owned lands of a park, recreation area, wildlife, or waterfowl refuge; or a historical site of national, state, or local significance that is listed on or eligible for listing on the National Register of Historic Places (NRHP) as determined by the federal, state, regional, or local officials with jurisdiction (OWJ) over the resource. The State Historic Preservation Officer (SHPO) is the OWJ over historic properties. Historic properties, including archeological resources, may be publicly or privately owned. The information contained in this chapter demonstrates the Authority's compliance with Section 4(f), as follows:

- Describes the statutory requirements associated with Section 4(f)
- Identifies the resources protected by Section 4(f) in the RSA
- Preliminarily determines whether the Palmdale to Burbank Project Section would result in the use of those resources

If a Section 4(f) protected property is subject to permanent use or constructive use (see Section 4.1.3), the following are required for compliance with Section 4(f):

- Identification of feasible and prudent alternatives, to the extent any exist, that would avoid or minimize use of the resources
- Identification of measure to minimize harm

[1] Memorandum of Understanding for the National Environmental Policy Act Assignment (Authority 2019b)

- A preliminary least harm analysis for the Build Alternatives that would result in the use of Section 4(f) resources

These analyses are not included in this chapter because there are no properties that are subject to permanent use or constructive use in the Palmdale to Burbank Project Section. The Authority proposes to classify identified property uses as *de minimis*; therefore, further analysis of feasible and prudent Build Alternatives and measures to minimize harm and a least harm analysis have not been prepared.

Section 6(f) resources are recreation resources created or improved with funds from the LWCF. Land purchased with these funds cannot be converted to nonrecreational use without coordination with the California Department of Parks and Recreation and the U.S. Department of the Interior National Park Service (NPS), and mitigation that includes replacement of the quality and quantity of land used. There are no Section 6(f) resources in the Palmdale to Burbank Project Section RSA.

Additional information on publicly owned parks, recreation lands, wildlife and waterfowl refuges, and historic sites, as well as public concern regarding these resources, is provided in the following Draft Environmental Impact Report/Environmental Impact Statement (EIR/EIS) sections:

- Section 3.7, Biological Resources and Wetlands, evaluates biological resources within the parks, recreation lands, wildlife and waterfowl refuges discussed in this section.
- Section 3.15, Parks, Recreation, and Open Space, evaluates parks, recreation, and open space resources within 1,000 feet from the edge of the Build Alternatives' footprint, or further for exceptionally sensitive resources.
- Section 3.17, Cultural Resources, evaluates historic built resources and archaeological resources in the area of potential effects (APE).

In addition, the following technical reports provide more detailed information:

- *Palmdale to Burbank Project Section: Historic Architectural Survey Report* (Authority 2019a) identifies and evaluates built resources in the historic built resources APE.
- *Palmdale to Burbank Project Section Finding of Effect* (FOE) (Authority 2021), evaluates impacts of the High-Speed Rail (HSR) Preferred Alternative to cultural resources.
- Appendix 2-E, Impact Avoidance and Minimization Features (IAMFs), lists IAMFs included as applicable in each of the Build Alternatives for purposes of the environmental impact analysis.
- Appendix 3.1-B, United State Forest Service (USFS) Policy Consistency Analysis, assesses the consistency of the Palmdale to Burbank Project Section with applicable laws, regulations, plans, and policies governing proposed uses and activities within the Angeles National Forest (ANF), including the San Gabriel Mountains National Monument (SGMNM).

4.1.1 Laws, Regulations, and Orders

The Palmdale to Burbank Project Section is an intercity passenger rail project that is receiving federal funding through FRA, which therefore requires the project to comply with Sections 4(f) and 6(f). Whereas Section 4(f) applies only to programs and policies undertaken by the U.S. DOT, Section 6(f) compliance applies to programs and policies of any federal agency.

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

Projects undertaken by an operating administration of the U.S. DOT or projects that may receive federal funding or discretionary approvals from such an operating administration of the U.S. DOT must demonstrate compliance with Section 4(f). Section 4(f) protects publicly owned parks, recreational areas, and wildlife and waterfowl refuges. Section 4(f) also protects historic sites of national, state, or local significance located on public or private land that are listed on or eligible for listing on the NRHP.

FRA's *Procedures for Considering Environmental Impacts* (64 *Federal Register* 25445) contains FRA processes and protocols for compliance with NEPA and other federal laws, including Section 4(f). As of November 28, 2018, FRA adopted the regulations in 23 Code of Federal Regulations (C.F.R.) Part 774 as FRA's Section 4(f) implementing regulations. FRA also considers the interpretations provided in the Federal Highway Administration's (FHWA) Section 4(f) Policy Paper (FHWA 2012) when implementing these regulations. Pursuant to U.S.C. Title 23 Section 237, under the NEPA Assignment MOU between FRA and the State of California, effective July 23, 2019, the Authority is the federal lead agency and is responsible for compliance with NEPA and other federal environmental laws, including Section 4(f) (49 U.S.C. 303) and related U.S. DOT orders and guidance. The Authority is releasing this draft Section 4(f) statement for comment pursuant to 23 U.S.C. 237, 23 C.F.R. Part 774, and the NEPA Assignment MOU.[2]

The Authority may not approve the use of a Section 4(f) property, as described in 49 U.S.C. 303(c), unless it determines that there is no feasible and prudent alternative to avoid the use of the property and the action includes all possible planning to minimize harm resulting from such use, or the project has a *de minimis* impact consistent with the requirements of 49 U.S.C. 303(d) (see Section 4.1.4.4 for a definition of *de minimis* impacts). An alternative is not feasible if it cannot be built as a matter of sound engineering judgment. In determining whether an alternative is prudent, the Authority may consider if the alternative would result in any of the following:

- The alternative does not meet the project's stated Purpose and Need
- The alternative would entail unacceptable safety or operational problems
- After reasonable mitigation, the alternative would result in severe social, economic, or environmental impacts; severe disruption to established communities; severe disproportionate impacts on minority or low-income populations; or severe impacts on environmental resources protected under other federal statutes
- The alternative would require additional construction, maintenance, or operational costs of an extraordinary magnitude
- The alternative would pose other unique problems or unusual factors
- The project would entail multiple factors that, while individually minor, cumulatively cause unique problems or impacts of extraordinary magnitude

If the Authority determines there is both the use of a Section 4(f) property and that there is no prudent and feasible alternative to the use of a Section 4(f) resource, the Authority must ensure the project includes all possible planning (including coordination with and concurrence of the OWJ over the property) to minimize harm to the property, which includes all reasonable measures to minimize harm or mitigate impacts (49 U.S.C. 303(c)(2)). OWJ are defined in 23 C.F.R. 774.17.

When determining if Section 4(f) approval is necessary for the use of a trail, path, bikeway, or sidewalk, the Authority must comply with 23 C.F.R. 774.13(f). If the publicly owned facility is primarily used for transportation and is an integral part of the local transportation system, the requirements of Section 4(f) would not apply since it is not a recreational area. Section 4(f) would apply to a publicly owned, shared use path or similar facility (or portion thereof) designated or functioning primarily for recreation, unless the OWJ determines that it is not significant for such purpose.

After making a Section 4(f) determination and identifying the reasonable measures to minimize harm, if there is more than one alternative that results in the use of a Section 4(f) resource, the

[2] The Authority cannot make any determination that an action constitutes a constructive use of a publicly owned park, public recreation area, wildlife refuge, waterfowl refuge, or historic site under Section 4(f) without first consulting with FRA and obtaining FRA's views on such determination. Thus, any determinations of a constructive use by the Authority would be preliminary only. The Authority will provide FRA written notice of any proposed constructive use determination, and FRA will have thirty (30) calendar days to review and provide comment. If FRA objects to the constructive use determination, the Authority will not proceed with the determination.

FRA must also compare the alternatives to determine which alternative has the potential to cause the least overall harm in light of the preservationist purpose of the statute. The least overall harm may be determined by balancing the following factors:

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

4.1.1.2 Section 6(f) of the Land and Water Conservation Fund Act (16 U.S.C. 460l-8(f) and 36 C.F.R. Part 59.1) of 1965

State and local governments often obtain grants through the LWCF Act to acquire or make improvements to parks and recreation areas. Section 6(f) of the act prohibits the conversion of property acquired or developed with these grants to a nonrecreational purpose without the approval of the NPS. Section 6(f) directs the NPS to ensure that replacement lands of comparable value and function, or monetary compensation (used to enhance the remaining land), location, and usefulness are provided as conditions to such conversions. There are no Section 6(f) properties within the Palmdale to Burbank Project Section RSA.

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

The NHPA, as amended, establishes the federal government's 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. National Historic Landmarks are nationally significant historic places designated by the Secretary of the Interior because they possess exceptional value or quality in illustrating or interpreting U.S. heritage. A property is considered historically significant if it meets one or more of the NRHP criteria and retains sufficient historic integrity to convey its significance. This act also established the Advisory Council on Historic Preservation, an independent agency responsible for implementing Section 106 of the NHPA by developing procedures to protect cultural resources included in, or eligible for inclusion in, the NRHP. Regulations are published in 36 C.F.R. Parts 60, 63, and 800.

4.1.1.4 United States Forest Service Authorities

Section 4(f) and Section 6(f) resources within the ANF, including the SGMNM, are protected by several laws and their implementing regulations, as well as policies, plans, and orders. The primary laws governing Sections 4(f) and 6(f) are the Federal Land Policy and Management Act, the National Forest Management Act, and the Antiquities Act of 1906. Appendix 3.1-B, USFS Policy Consistency Analysis, provides an analysis of the consistency of the six Build Alternatives with these laws, regulations, policies, plans, and orders.

4.1.2 Definition of Resource Study Area

The Resource Study Area (RSA) for publicly owned parks, recreation resources, and wildlife and waterfowl refuges is defined as 1,000 feet from the edge of the proposed Build Alternative footprint. The RSA for cultural resources is the historic resources Area of Potential Effect.

As defined in Section 3.1, Introduction, of Chapter 3, Affected Environment, Environmental Consequences, and Mitigation Measures, RSAs are the geographic boundaries in which the environmental investigations specific to each resource topic were conducted. The Section 4(f) RSA comprises the geographic boundary in which the environmental investigations specific to each resource topic were conducted.[3] The Section 4(f) RSA, as defined below, identifies the Section 4(f) resources considered for evaluation.For temporary laydown areas, utility relocations, or any other land used temporarily to implement the California HSR System that would be returned to its original condition, the RSA for Section 4(f) use is the area of direct impact unless the temporary use prevents access to a potential Section 4(f) protected property. Section 4.5 provides a detailed discussion of each of the resources evaluated and figures showing the specific locations of the resources evaluated within the RSA in relation to the physical extent of the Palmdale to Burbank Project Section.

4.1.2.1 Public Park and Recreation Lands, and Wildlife and Waterfowl Refuges

The Section 4(f) RSA for publicly owned parks, recreational facilities, and wildlife and waterfowl refuges includes the footprint for each of the Build Alternatives, as described in Chapter 2, including the Burbank Airport Station, road construction, temporary laydown areas, or other land used temporarily or permanently required to implement the California HSR System.

As a means to address nonphysical impacts (i.e., noise, visual, and air quality), the Section 4(f) RSA also includes resources within 1,000 feet from the edge of the proposed Build Alternative footprint. This analysis also considers parks, recreation facilities, and wildlife and waterfowl refuges that are more than 1,000 feet from the Build Alternative footprint (as described in Chapter 2, Alternatives) that may be exceptionally sensitive to noise or visual impacts. Figure 4-1 through Figure 4-4 illustrate in detail the Section 4(f) RSA for parks and recreation resources. This RSA is inclusive of parks, recreation facilities, school play areas, trails, and wildlife and waterfowl refuges.

[3] Section 3.8, Hydrology and Water Resources, includes a tunnel construction RSA to analyze indirect hydrologic effects within the ANF, including the SGMNM, and associated hydrogeological conditions caused by tunnel construction. Hydrogeological changes that could result in surface effects to resources are analyzed in full in Section 3.8, Hydrology and Water Resources.

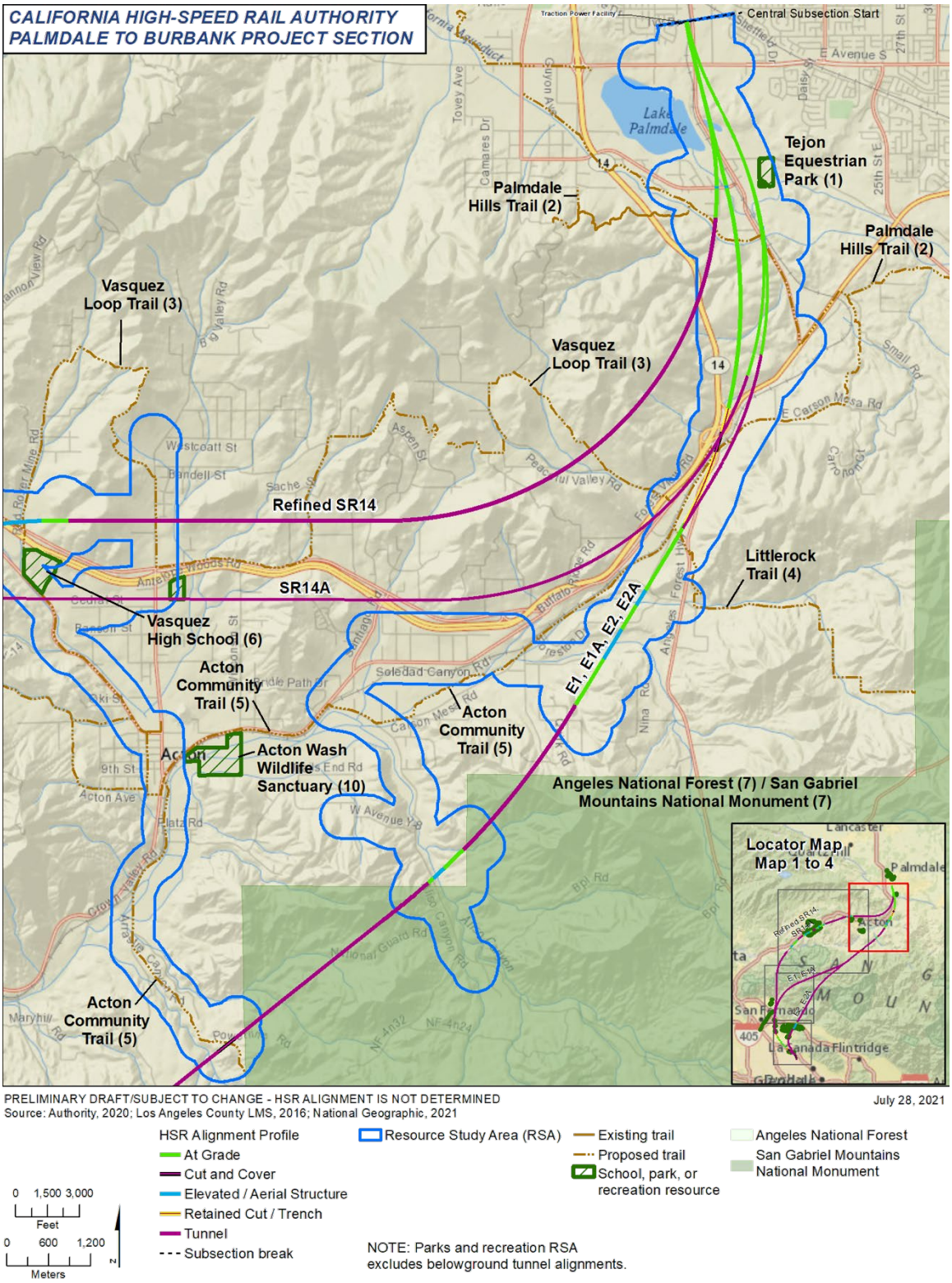


Figure 4-1 Parks and Recreation Resource Study Area (Map 1 of 4)

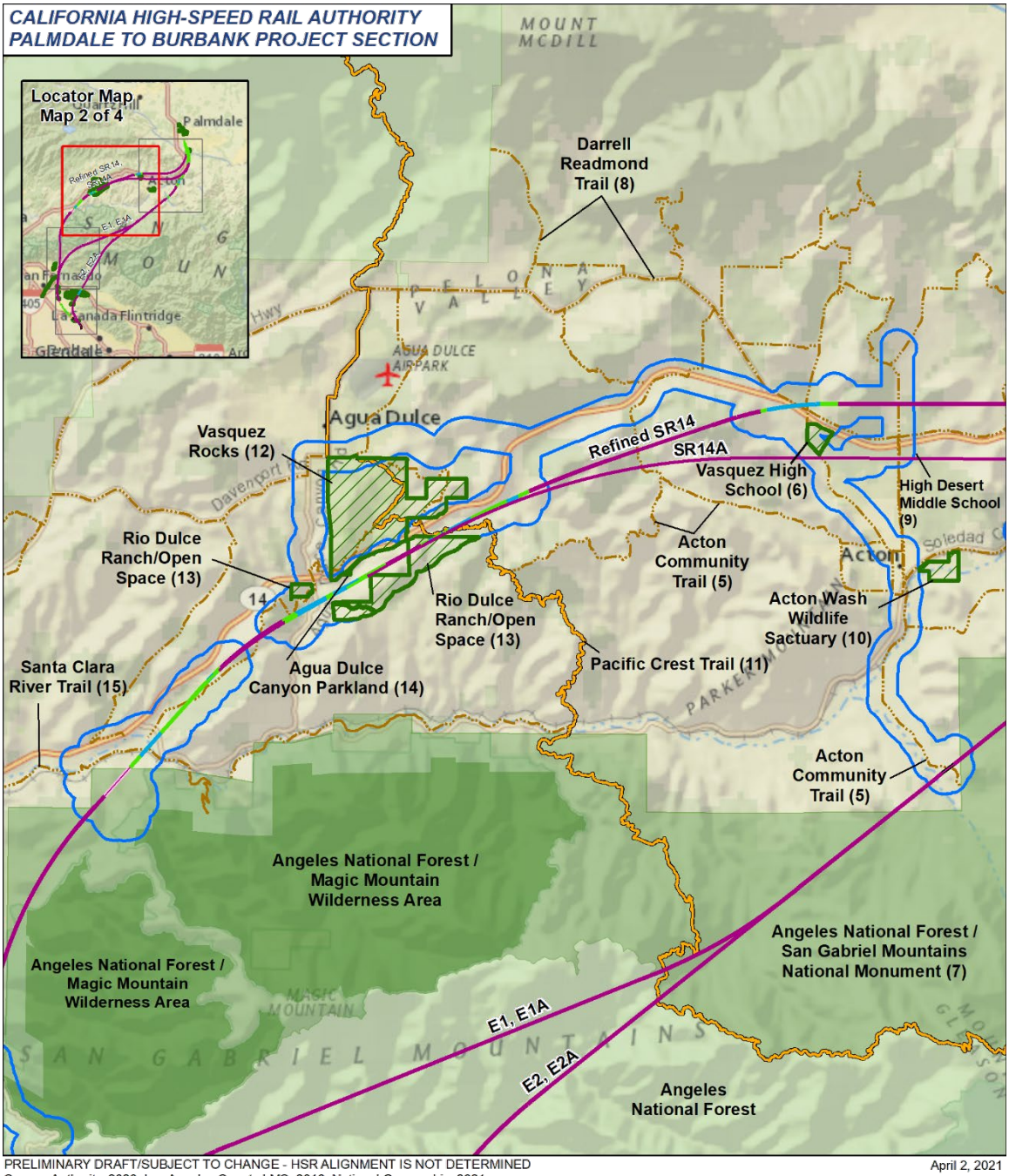


Figure 4-2 Parks and Recreation Resource Study Area (Map 2 of 4)

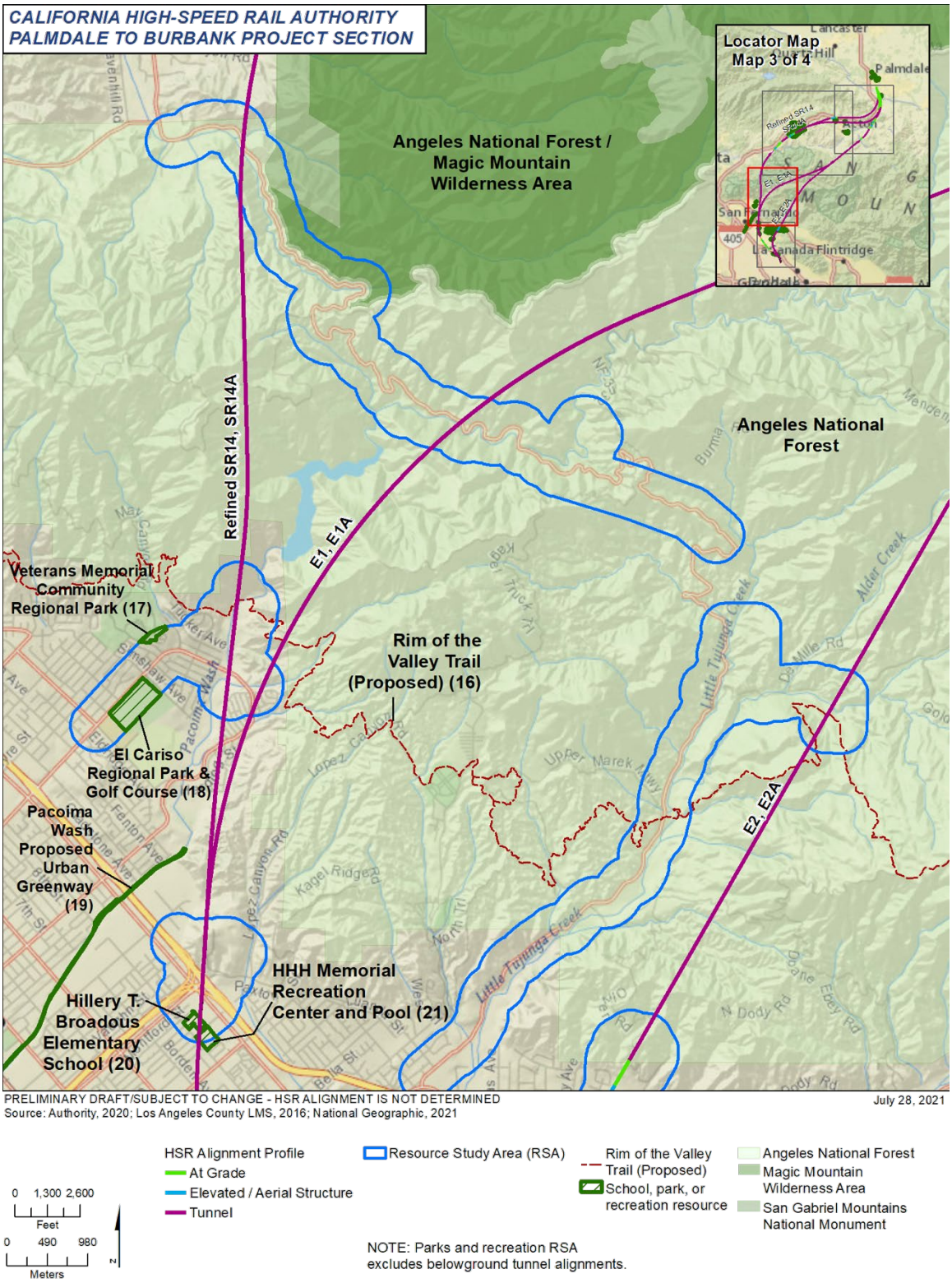


Figure 4-3 Parks and Recreation Resource Study Area (Map 3 of 4)

Figure 4-4 Parks and Recreation Resource Study Area (Map 4 of 4)

4.1.2.2 Historic Properties

Because this project is a federal undertaking, it must also comply with the NHPA. A Programmatic Agreement Among the Federal Railroad Administration, the Advisory Council on Historic Preservation, SHPO, the Surface Transportation Board, and the Authority Regarding Compliance with Section 106 of the National Historic Preservation Act, as it Pertains to the California High-Speed Train Project (PA 2011) outlines an approach for compliance with Section 106 of the NHPA for the California HSR System. The NHPA implementing regulations in 36 C.F.R. Section 800.4(a)(1) require the establishment of an APE. For Section 106 compliance, the APE is used for the technical reports that document the identification of historic properties and the assessment of effects. The APE is the geographic area or areas within which an undertaking may alter the character or use of historic properties, if such properties exist. Therefore, the APE serves as the RSA for Section 4(f) historic properties that are potentially eligible for listing or are listed on the NRHP.

The APE takes into consideration the potential effects of the project on both archaeological and historic built resources. For archaeological resources, the APE includes each of the six Build Alternative footprints, within which ground-disturbing activities may directly and physically alter the character or use of the historic property. For built resources, the APE includes the Build Alternative footprint and any area outside the footprint where visual, atmospheric, or audible intrusions may directly alter the character or use of a historic property, as well as any area where a historic property may be indirectly affected by project-related effects that are farther removed in distance or would occur later in time but are still reasonably foreseeable. The APE for the Palmdale to Burbank Project Section is described in detail in Section 3.17, Cultural Resources.

The historic built APE includes all properties that may contain buildings, structures, objects, sites, landscapes, and districts that are 50 years of age or older at the time the cultural resources survey was conducted. 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 undertaking where railroad materials, features, and activities have not been part of their historic setting and where the introduction of visual or audible elements may affect the use or characteristics of those properties that would be the basis for their eligibility for listing in the NRHP
- Properties near the undertaking that were either used by a railroad or served by a railroad, or where railroad materials, features, and activities have long been part of their historic setting

4.1.3 Section 4(f) Applicability

A park or recreation area qualifies for protection under Section 4(f) if it is: (1) publicly owned at the time at which the “use” occurs; (2) open to the public; (3) the land has been officially designated as a park or recreation area by a federal, state or local agency; (4) the primary purpose is consistent with the property’s primary function and how it is intended to be managed; and (5) considered significant by the OWJ over the property. This definition of park and recreation areas includes school play areas that are open to the public.

A wildlife or waterfowl refuge qualifies for protection under Section 4(f) if it is: (1) publicly owned at the time at which the “use” occurs; (2) the land has been officially designated as a wildlife and/or waterfowl refuge area by a federal, state, or local agency; (3) its primary designated purpose is consistent with the property’s primary function and how it is intended to be managed; and (4) considered significant by the OWJ over the property.

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

A historic site eligible for, or listed in, the NRHP may be protected under Section 4(f). Although the statutory requirements of Section 106 and Section 4(f) are similar, if a proposed action results in an "adverse effect" under Section 106, there will not automatically be a Section 4(f) "use." To determine whether a use of a historic property would occur, the Authority completes a separate Section 4(f) analysis and determination, in addition to those completed in compliance with the Section 106 process.

To qualify as a historic property to be eligible for the NRHP, a resource must meet at least one of the four NRHP criteria (i.e., Criteria A–D) described below.

The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and meet one or more of the following criteria:

- Criterion A—Properties that are associated with events that have made a significant contribution to the broad patterns of our history
- Criterion B—Properties that are associated with the lives of persons significant in our past
- Criterion C—Properties that embody distinctive characteristics of a type, period, or method of construction; 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
- Criterion D—Properties that have yielded, or may be likely to yield, information important in prehistory or history

An archaeological resource that is eligible solely under NRHP Criterion D, as defined above, is considered valuable primarily in terms of the data that can be recovered from it. For such resources (such as pottery scatters and refuse deposits), Section 4(f) does not apply. Conversely, archaeological resources eligible under Criteria A, B, or C, as defined above, may have value intrinsic to the resource's location and may be protected under Section 4(f).

Figure 4-1 through Figure 4-4 show an overview of the RSA and the parks and recreation resources within the RSA. Map identification numbers (map IDs) are shown parenthetically following the resource names to help identify and differentiate the resources.

4.1.4 Section 4(f) Use Definition

4.1.4.1 Permanent Use

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

4.1.4.2 Temporary Occupancy

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

- The occupancy must be of temporary duration (i.e., shorter than the period of construction) and must not involve a change in ownership of the property.
- The scope of work must be minor, with only minimal changes to the protected resource.

- There must be no permanent adverse physical impacts on the protected resource or temporary or permanent interference with activities or purpose of the resource.
- The property being used must be fully restored to a condition that is at least as good as existed before project construction.
- There must be documented agreement of the appropriate OWJ over the resource regarding the foregoing requirements.

4.1.4.3 Constructive Use

A constructive use of a Section 4(f) resource occurs when a transportation project does not permanently incorporate the property of a protected resource, but the proximity of the project results in impacts (e.g., noise, vibration, visual, access, or ecological) after incorporation of mitigation that are so severe that the protected activities, features, or attributes that qualify the resource for protection under Section 4(f) are substantially impaired. Substantial impairment occurs only if the protected activities, features, or attributes of the resource are substantially diminished. This determination is made after taking the following steps:

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

It is important to note that erecting a structure over a Section 4(f) resource, and thus requiring an air lease, does not by itself constitute a use, unless the effect constitutes a constructive use. Further, a noise or visual-related adverse effect under Section 106 of the NHPA to a historic property does not in and of itself result in a constructive use.

4.1.4.4 De Minimis Impact

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

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

4.2 Coordination

Title 49 U.S.C. Section 303(b) requires cooperation and consultation with the Secretary of the Interior (and the Secretaries of Housing and Urban Development and Agriculture, if appropriate) and with the state in developing transportation plans and programs that include measures to maintain or enhance the natural beauty of lands crossed by transportation activities or facilities. Throughout the EIR/EIS process, the Authority is consulting with or will consult with SHPO, local jurisdictions, the California Department of Fish and Wildlife, the Native American Heritage Commission and interested tribes, and the NPS. Section 4(f) requires consultation with the SHPO, pursuant to 36 C.F.R. Part 800, and agencies of jurisdiction in identifying Section 4(f) properties and assessing impacts on the properties. In addition, the RSA was reviewed for Section 6(f) properties using the NPS LWCF Project List by County and Summary Reports website, and no Section 6(f) properties were identified.

Related activities, such as Section 106 consultation under the NHPA, are summarized in Section 3.17, Cultural Resources. The Authority and the FRA consulted, and the Authority continues to consult, with the SHPO, the Surface Transportation Board, the U.S. Army Corps of Engineers, the U.S. Department of the Interior, Bureau of Reclamation, local agencies, interested parties, the Native American Heritage Commission, and interested tribes to identify and assess impacts on cultural resources in compliance with Section 106.

The Authority has continued to consult with these agencies and the California Department of Fish and Wildlife regarding the effects of the project on the features and attributes of Section 4(f) properties. The Authority's preliminary Section 4(f) determinations are presented in this chapter and the public is invited to comment on those preliminary determinations. The Final Section 4(f) determinations will be made and published as part of the Final EIR/EIS.

4.3 Purpose and Need

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

The purpose of the Palmdale to Burbank Project Section is to contribute to completion of the statewide HSR system by providing the public with electric-powered HSR service that offers predictable and consistent travel times between Palmdale and Burbank, connects the northern and southern portions of the statewide HSR system, and provides enhanced connections to airports, mass transit, and the highway network in the Antelope Valley and the San Fernando Valley, consistent with the Passenger Rail Vision in the California State Rail Plan, including the State's travel time objectives for the California HSR System.

For more information on the California HSR System objectives and the need for an HSR system in California and in the Los Angeles County region, refer to Chapter 1, Project Purpose, Need, and Objectives.

4.4 Build Alternatives

The Build Alternatives for the Palmdale to Burbank Project Section include six primary end-to-end Build Alternatives. The Palmdale to Burbank Project Section is approximately 31 to 38 miles. Each end-to-end Build Alternative is composed of two subsections—Central and Burbank. The Palmdale to Burbank Project Section extends through a variety of land uses and ecoregions, including urban, rural, and mountainous terrain. Each Build Alternative would involve areas of tunneling beneath the ANF, including portions within the SGMNM.

From the north, the Palmdale to Burbank Project Section would extend south through Palmdale, southwest through the ANF, including SGMNM, and then continue into the San Fernando Valley where it would connect with the Burbank Airport Station and terminate at Burton Avenue in the south. Elevated tracks would be on retained fill (earth), embankments, or structures and would consist of cast-in-place, reinforced-concrete columns supporting the box girders and bridge deck.

This section briefly describes the Palmdale to Burbank Project Section Build Alternatives—including the six Build Alternatives and the No Project Alternative. The alignments are described in geographical order, from north to south, for each of the subsections (Central and Burbank). Figure 4-5 shows the Build Alternatives and Figure 4-6 shows the proposed Burbank Airport Station. The Build Alternatives for the Palmdale to Burbank Project Section are described in further detail in Chapter 2, Alternatives.

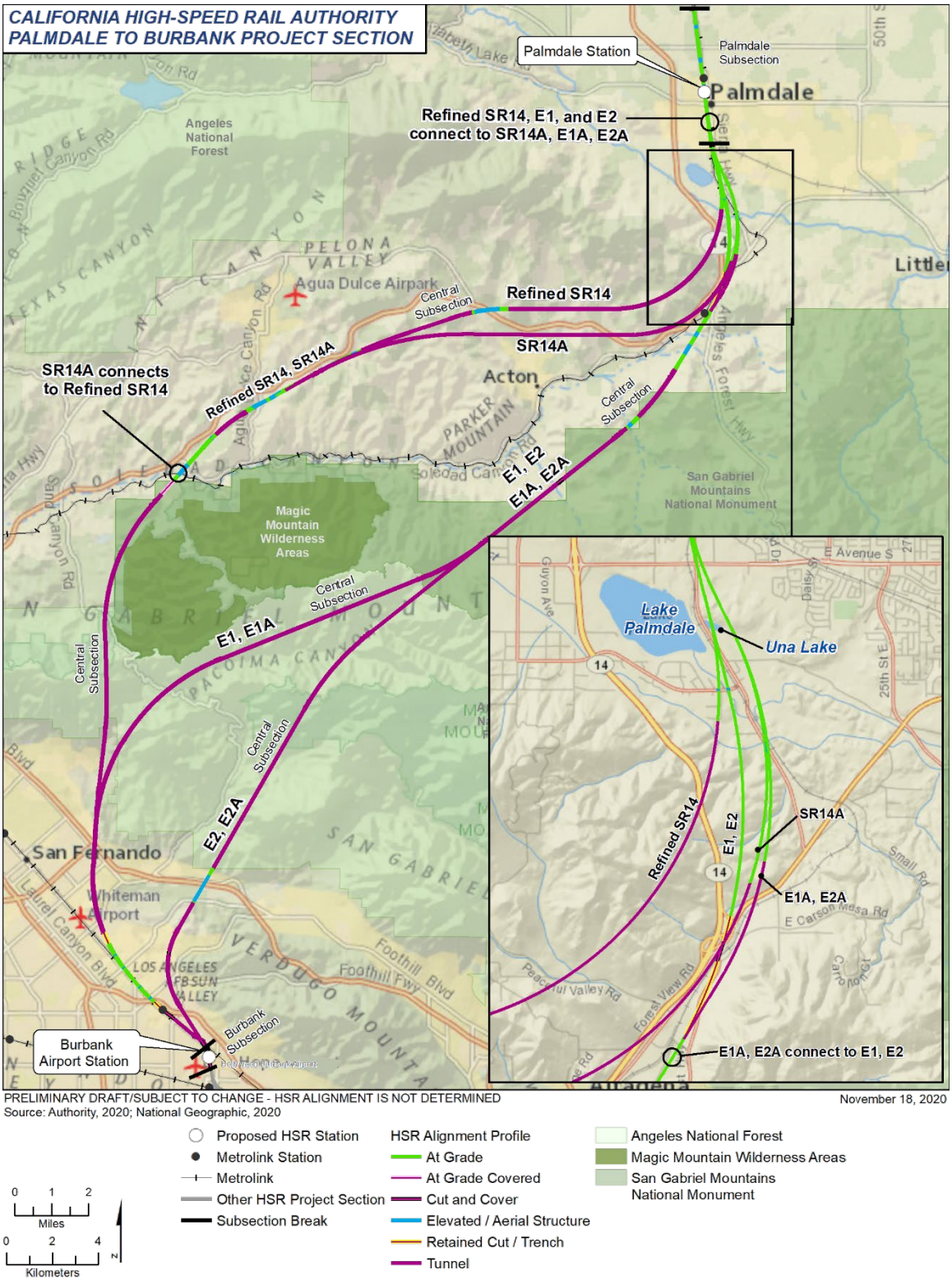


Figure 4-5 Palmdale to Burbank Project Section Build Alternatives and Station

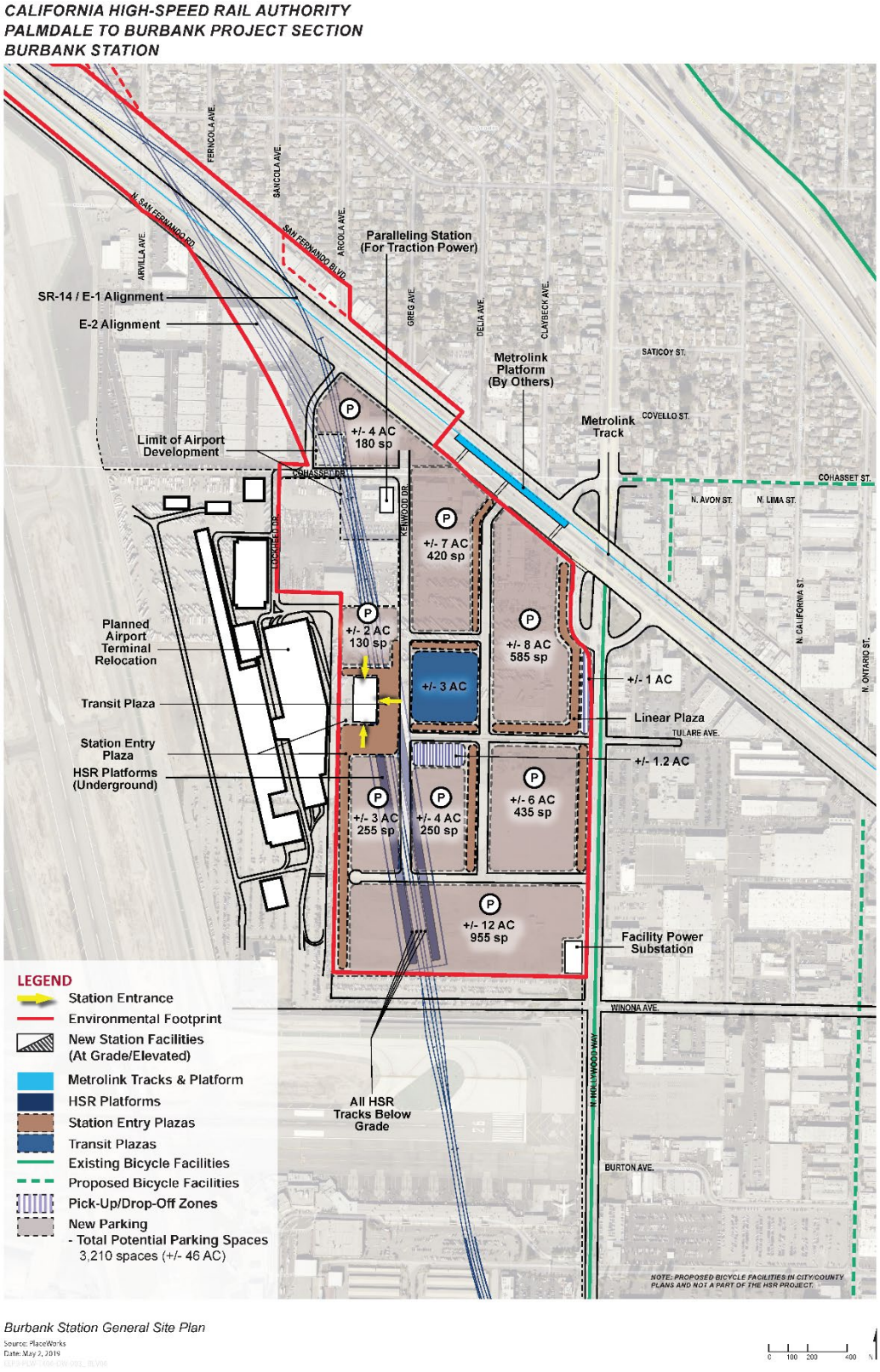


Figure 4-6 Proposed Burbank Airport Station

4.4.1 No Project Alternative

The No Project Alternative considers the effects of growth planned for the region as well as existing and planned improvements to the highway, aviation, conventional passenger rail, and freight rail systems in the Palmdale to Burbank Project Section study area through 2040. The No Project Alternative is based on a review of all city and county general plans, regional transportation plans for all modes of travel, and agency-provided lists of pending and approved projects within Los Angeles County.

The No Project Alternative does not include construction of the Palmdale to Burbank Project Section or associated facilities, and would thus have no impact on Section 4(f) or Section 6(f) resources; however, there would be impacts to Section 4(f) or Section 6(f) resources as a result of the existing and planned improvements that would occur under the No Project Alternative, particularly in developed areas such as Palmdale and Burbank. Due to land use restrictions in the ANF, including SGMNM, no major development would occur within the ANF, including SGMNM under the No Project Alternative.

The No Project Alternative would not address the purpose and need for the Palmdale to Burbank Project Section. This alternative is insufficient to meet existing and future travel demand; current and projected future congestion of the transportation system would continue to result in deteriorating air quality, reduced reliability, and increased travel times. Because the No Project Alternative does not meet the Palmdale to Burbank Project Section purpose and need, it is neither feasible nor prudent and is not discussed further as an avoidance alternative for Section 4(f) or Section 6(f) resources.

4.4.2 Refined SR14 Build Alternative

4.4.2.1 Central Subsection

In the Central Subsection, the Refined SR14 Build Alternative alignment would begin just east of Spruce Court, then continue south at grade, crossing the current alignment of Sierra Highway near the intersection of East Avenue S. The Refined SR14 Build Alternative alignment would cross Una Lake on an embankment, requiring partial filling of the lake. The alignment would also cross the San Andreas Fault Zone in the vicinity of Una Lake. South of Una Lake, the Refined SR14 Build Alternative alignment would cross Sierra Highway and the Metrolink rail line, which would both be relocated within this subsection.

Continuing south, the Refined SR14 Build Alternative alignment would cross over East Barrel Springs Road, continuing at grade before entering twin tunnels. The tunnels would pass beneath the East Branch of the California Aqueduct (EBA), State Route (SR) 14, and various residential communities. The tunnels either would be constructed with a continuous bore or may include a section of cut-and-cover tunnel. For the purposes of this analysis, it is conservatively assumed that the alignment would include a cut-and-cover tunnel in this location.

The Refined SR14 Build Alternative alignment would emerge from the tunnels east of Red Rover Mine Road. The alignment would continue west at grade and on a viaduct over Red Rover Mine Road, Sierra Highway, SR 14, and Escondido Canyon Road. The Refined SR14 Build Alternative alignment would then enter twin-bored tunnels, continuing southwest and emerging east of Big Springs Road.

Continuing southwest from Big Springs Road, the Refined SR14 Build Alternative alignment would be either at grade or on viaduct before briefly entering a tunnel. The Refined SR14 Build Alternative alignment would emerge from the tunnel approximately 1 mile east of Agua Dulce Canyon Road. From this point, the Refined SR14 Build Alternative alignment would continue southwest at grade and on viaduct, passing over Agua Dulce Canyon Road on a viaduct structure.

From about 0.5 mile west of Agua Dulce Canyon Road, the Refined SR14 Build Alternative alignment would enter twin tunnels, moving southwest. Upon emerging from this tunnel, the Refined SR14 Build Alternative alignment would continue at grade or on viaduct, crossing the Santa Clara River, Soledad Canyon Road, and the existing Metrolink rail alignment on a viaduct.

Continuing from the Santa Clara River toward Lang Station Road, the Refined SR14 Build Alternative alignment would enter the ANF, including SGMNM, in an at-grade covered tunnel, moving south through the Vulcan Mine and abandoned Nike Missile Headquarters site, both of which are within the ANF, including SGMNM. Details on tunnel types and example cross-sections can be found in Chapter 2, Alternatives.

Spoils from construction of the Refined SR14 Build Alternative would be deposited at the Vulcan Mine,[4] restoring a more natural topography in the area. Additionally, spoils associated with tunneling would be disposed of at the Boulevard Mine, which is west of San Fernando Road and north of the Interstate (I)-5/SR 170 interchange.

From this point, the Refined SR14 Build Alternative alignment would enter twin bored tunnels, proceeding underneath portions of the ANF, including SGMNM, the city of Santa Clarita, and the Pacoima neighborhood in the city of Los Angeles. The twin tunnels would pass through the San Gabriel Fault Zone and the Sierra Madre Fault Zone.

The Refined SR14 Build Alternative includes three options for adits, one of which would be selected. Refer to Chapter 2, Alternatives, for a detailed description of adits. The first adit option (SR14-A1) would be located within the ANF along Little Tujunga Canyon Road and is near the aforementioned fault zones. This would facilitate future remedial work that may need to occur in the event of seismic ground movement. The temporary construction staging area associated with this adit option (SR14-A1) is located on in-holdings within the ANF.[5] The second (SR14-A2) and third adit options (SR14-A3) would be just south of the Pacoima Dam. SR14-A2 would surface west of the Refined SR14 Build Alternative alignment and connect to Gavina Avenue, while SR14-A3 would surface east of the Refined SR14 Build Alternative alignment and connect to Wallabi Avenue.

Adits

Adits are intermediate tunnel access shafts intended to facilitate construction of bored tunnels. An adit can serve as a tunnel boring machine entry or exit point and can enable the use of multiple tunnel boring machines to shorten construction time.

Intermediate Windows

An *intermediate window* is a vertical shaft connecting to an underground construction area. Windows would comprise an elevator and gantry cranes to provide access to water, power, ventilation, and other support during construction. After construction is complete, a small structure for permanent access, and possibly ventilation equipment, would remain at the surface.

The Refined SR14 Build Alternative also includes two options for an intermediate window, one of which would be selected to provide construction access to tunnels. Please refer to Chapter 2, Alternatives, for a detailed description of intermediate windows. Both options would be in proximity to the I-210/SR 118 interchange. The first option would be directly north of the intersection of these freeways, while the second option would be south of the intersection of these freeways.

The Refined SR14 Build Alternative alignment would emerge from the tunnel east of the existing Antelope Valley Metrolink Corridor near Montague Street in the Pacoima neighborhood in the city of Los Angeles. From Montague Street, the alignment would continue south in a retained cut/trench before transitioning to at-grade tracks until crossing the Los Angeles County Flood Control Channel on viaduct. This viaduct would also cross over a realigned Metrolink track and Sheldon Street before entering the existing Metrolink corridor south of Sheldon Street. Continuing along the Metrolink corridor, the Refined SR14 Build Alternative alignment would then continue

[4] The Authority is conducting ongoing coordination with the United States Forest Service regarding spoils disposal within Vulcan Mine.

[5] An in-holding is privately owned land within the boundary of a publicly owned, protected area such as a national park or forest.

southeast at grade from immediately south of Allegheny Street to the I-5 undercrossing. Continuing from the I-5 undercrossing, the alignment would transition to a retained-cut/trench extending to Olinda Street. Continuing from Olinda Street, the Refined SR14 Build Alternative alignment would enter a cut-and-cover tunnel, where the alignment would be located in a box adjacent to the realigned Metrolink rail alignment. From this point, the Central Subsection Refined SR14 Build Alternative would continue on to the Burbank Subsection.

The Refined SR14 Build Alternative alignment would continue in the cut-and-cover tunnel adjacent to the realigned Metrolink railway from Olinda Street until reaching the southern limit of Lockheed Drive. The end of this alignment would be the southern limit of the Central Subsection.

4.4.2.2 Burbank Subsection

The northern limit of this subsection is Lockheed Drive. From Lockheed Drive, the Refined SR14 Build Alternative alignment would continue in a cut-and-cover tunnel until entering Burbank Airport Station. The Burbank Airport Station would be an underground station, beginning near Kenwood Street.

4.4.3 SR14A Build Alternative

4.4.3.1 Central Subsection

Within the Central Subsection, the SR14A Build Alternative alignment would diverge from the Refined SR14 Build Alternative alignment south of Spruce Court curving eastward and south approximately 300 feet east of Una Lake. South of Una Lake, the SR14A Build Alternative alignment would curve westward; cross over the Metrolink Antelope Valley Line, Sierra Highway, and the Soledad Siphon; and continue southwest entering a tunnel portal approximately 0.5-mile northeast of the Sierra Highway/Pearblossom Highway intersection. The SR14A Build Alternative alignment would then continue westward, in an approximately 13-mile-long tunnel before surfacing approximately 0.75 mile east of Agua Dulce Canyon Road. The SR14A Build Alternative also includes an intermediate window south of SR 14 in Acton. The alignment would transition between at-grade and elevated profiles closely paralleling SR 14 before entering an approximately 1-mile-long tunnel. Transitioning from tunnel to at grade, the SR14A Build Alternative alignment would converge with the Refined SR14 Build Alternative alignment at the Soledad Canyon Mining Operations (Vulcan Mine) site. The remaining SR14A Build Alternative alignment (south of the Vulcan Mine site, under the ANF including the SGMNM, and into the San Fernando Valley) would be identical to the Refined SR14 Build Alternative alignment.

4.4.3.2 Burbank Subsection

Within the Burbank Subsection, the SR14A Build Alternative would be identical to the Refined SR14 Build Alternative, including alignment and ancillary features, described under the Refined SR14 Build Alternative discussion above.

4.4.4 E1 Build Alternative

4.4.4.1 Central Subsection

Within the Central Subsection, the E1 Build Alternative alignment would begin east of Spruce Court at grade, and generally follow the existing Sierra Highway alignment. The alignment would continue at grade across Una Lake, which would be partially filled. South of Una Lake, the alignment would curve west, crossing the existing Sierra Highway and Metrolink corridors, which would be realigned to the east. In the vicinity of Una Lake, the E1 Build Alternative alignment would cross the San Andreas Fault Zone.

After continuing east of the Harold neighborhood and passing over Barrels Springs Road, the E1 Build Alternative alignment would reach the California Aqueduct approximately 0.2 mile west of where the aqueduct passes beneath Sierra Highway. This Build Alternative would require the relocation of a portion of the California Aqueduct. The E1 Build Alternative alignment would cross the California Aqueduct right-of-way at grade and would continue south before entering a stretch of retained cut/trench and cut-and-cover tunnel that would be beneath the Pearblossom Highway/SR 14 interchange, Sierra Highway, Metrolink corridor, Carson Mesa Road, and an extension of Mountain Springs Road. The alignment would continue at grade in between Angeles Forest Highway and the Vincent Grade/Acton Metrolink Station in a southwesterly direction.

Immediately south of Rockyford Road, the E1 Build Alternative alignment would transition from at grade to a viaduct structure to cross an unnamed wash area northwest of the existing Vincent Substation. The alignment would return to at grade at the southern bank of the wash and pass underneath Foreston Drive. Immediately south of Foreston Drive, the alignment would continue on a viaduct, crossing another drainage area. The E1 Build Alternative alignment would return to at grade approximately 0.2 mile east of the terminus of Kentucky Springs Road. This at-grade section would continue until approximately 0.2 mile south of the Enchanted Hills Road western terminus, where the alignment would enter twin tunnels. The tunnels would pass beneath rural residences and then under the ANF, including SGMNM.

The E1 Build Alternative alignment would emerge from the tunnels outside the ANF, including SGMNM, boundaries in the Aliso Canyon Road area. The alignment would continue at grade before crossing a tributary of the Santa Clara River on a viaduct. Aliso Canyon Road would need to be re-profiled as it approaches the prospective rail alignment to achieve grade separation. The new profile of Aliso Canyon Road would lower it so the road would run beneath the E1 Build Alternative alignment. This re-profiling would extend into the ANF, including SGMNM, by approximately 0.4 mile. The tunnel portal construction would require approximately 25.2 acres of surface area disturbance within the ANF, including SGMNM. Additionally, approximately 6.5 acres would be needed for lowering the profile of Aliso Canyon Road, and 6.2 acres within the ANF, including SGMNM would be needed for an electrical utility line.

The E1 Build Alternative alignment would return to at grade after the viaduct until entering a second pair of twin tunnels immediately west of Aliso Canyon Road. The initial 16.5 miles of the tunnels would be beneath the ANF, including some 6 miles beneath the SGMNM. There are two adit options for the E1 Build Alternative, one of which would be selected. Both adit options are located on private in-holdings along Little Tujunga Canyon Road, within the ANF. The first adit option would extend east from the underground cavern to a construction staging area along Little Tujunga Canyon Road, while the second adit option would extend west from the underground cavern to a construction staging area north of Little Tujunga Canyon Road. The selected adit site may serve as a permanent mid-tunnel ventilation structure.

The E1 Build Alternative would also have three options for intermediate windows, two of which would be selected. The first intermediate window would be located north of Arrastre Canyon, just outside the ANF, including SGMNM, boundary. The second and the third option would be in proximity to the I-210/SR 118 interchange. The second window option would be directly north of the intersection of these freeways, and the third window option would be south of the intersection of these freeways. Given the similar access provided by options two and three, one of these two options would be selected, in addition to the first option.

The E1 Build Alternative alignment would continue southwesterly, turning to a more southerly direction after crossing beneath Little Tujunga Canyon Road and the San Gabriel Fault. The alignment would continue in a tunnel passing approximately 0.3 mile east of the Pacoima Reservoir and exit the ANF (remaining underground) beneath the Sylmar neighborhood in the city of Los Angeles. The E1 Build Alternative alignment would continue underground, crossing the Sierra Madre Fault Zone, and then passing beneath the I-210/SR 118 interchange in the Pacoima neighborhood in the city of Los Angeles, where the alignment would curve from a southerly to southeasterly direction.

With implementation of the E1 Build Alternative, spoils would be deposited at the Boulevard Mine site as described above for the Refined SR14 Build Alternative. The E1 Build Alternative would emerge from the tunnel immediately after passing beneath Montague Street in the Pacoima neighborhood. From Montague Street, the alignment would follow the same routing as described for the Refined SR14 Build Alternative from its emergence at Montague Street. Similar to the Refined SR14 Build Alternative, the E1 Build Alternative would connect to the Burbank Airport Station near Olinda Street. From Olinda Street, the E1 Build Alternative would be identical to the Refined SR14 Build Alternative.

4.4.4.2 Burbank Subsection

Within the Burbank Subsection, the E1 Build Alternative would be identical to the Refined SR14 Build Alternative, including alignment and ancillary features, described under the Refined SR14 Build Alternative discussion above.

4.4.5 E1A Build Alternative

4.4.5.1 Central Subsection

In the Central Subsection, the E1A Build Alternative alignment would diverge from the E1 Build Alternative alignment south of Spruce Court following a more easterly route. In contrast to the E1 Build Alternative alignment, the E1A Build Alternative alignment would include elevated structures to cross over the California Aqueduct before entering a tunnel portal approximately 1,900 feet southwest of the Sierra Highway/Pearblossom Highway intersection. After proceeding underground for approximately 1.5 miles, the E1A Build Alternative alignment would transition to an at-grade profile approximately 350 feet north of Vincent View Road. Just south of Vincent View Road, the E1A Build Alternative alignment would converge with the E1 Build Alternative alignment. The remaining E1A Build Alternative alignment (south of Vincent View Road, under the ANF including SGMNM, into the San Fernando Valley, and to the southern terminus of the Central Subsection) would be identical to the E1 Build Alternative alignment.

4.4.5.2 Burbank Subsection

Within the Burbank Subsection, the E1A Build Alternative would be identical to the Refined SR14 and E1 Build Alternatives, including alignment and ancillary features, described under the Refined SR14 and E1 Build Alternative discussions above.

4.4.6 E2 Build Alternative

4.4.6.1 Central Subsection

Within the Central Subsection, the E2 Build Alternative alignment would be identical to the E1 Build Alternative alignment between Spruce Court and Aliso Canyon Road. This includes the area passing over Una Lake, the San Andreas Fault Zone, the California Aqueduct, the Santa Clara River tributary, and the Aliso Canyon Road crossing and re-profiling.

To the immediate west of Aliso Canyon Road, the E2 Build Alternative alignment would enter twin tunnels, initially proceeding to the southwest. A total of 7 miles of this tunnel would be beneath the ANF, including SGMNM. Similar to the E1 Build Alternative, the E2 Build Alternative would have an intermediate construction window in Arrastre Canyon as described below. The E2 Build Alternative alignment would continue southwesterly, curving to a more south-southwesterly direction as the alignment passes beneath Mendenhall Ridge Road and then through the San Gabriel Fault.

The E2 Build Alternative includes two options for adits, one of which would be selected. Both adit options for the E2 Build Alternative would connect to Little Tujunga Canyon Road on private in-holdings within the ANF. The first adit option would extend west from the underground cavern to a temporary construction staging area within a private in-holding approximately 0.4-mile north of Gold Creek Road, while the second adit option would also extend west from the underground cavern to a temporary construction staging area located within a private in-holding along Gold Creek Road.

The E2 Build Alternative also includes two intermediate window locations to provide construction access to tunnels. The first intermediate window location is just outside the ANF, north of Arrastre Canyon; the second intermediate window location is at the current site of the CalMat Mine.

The E2 Build Alternative alignment would transition from tunnel to at grade in the hills above the Lake View Terrace neighborhood in the city of Los Angeles, near the (private, unimproved) BP & L Road. This tunnel portal would require approximately 20 acres of grading and slope stabilization within ANF boundaries. After crossing the Sierra Madre Fault Zone, the E2 Build Alternative alignment would continue at grade before transitioning to an elevated viaduct structure. The viaduct would cross over Arnwood Road, Foothill Boulevard, and I-210 and then would continue to cross Big Tujunga Wash in the Hansen Dam Open Space Area, crossing below Wentworth Street in the Shadow Hills neighborhood in the city of Los Angeles.

After crossing Wentworth Street, the E2 Build Alternative alignment would have a relatively short at-grade section before transitioning to a tunnel. This portion of the alignment would continue in the same south-southwesterly direction until approximately Peoria Street in the Sun Valley neighborhood in the city of Los Angeles. Beneath Peoria Street, the E2 Build Alternative alignment would curve to the southeast. At Peoria Street, the tunnel construction method would change. North of Peoria Street, the tunnels would be bored; between Peoria Street and approximately Fleetwood Street, however, the tunnel would either be cut-and-cover via an open construction method or would extend in a continuous bored tunnel. For the purpose of this environmental review, it is assumed that the alignment would transition to a cut-and-cover tunnel in this location.

At Fleetwood Street the E2 Build Alternative alignment would pass beneath Sunland Boulevard, I-5, and San Fernando Road in a bored or mined tunnel. The tunnel would extend until just past Lockheed Drive, the southern limit of the Central Subsection.

With implementation of the E2 Build Alternative, some spoils would be deposited at the CalMat Mine, adjacent to Stonehurst Recreation Center east of Glenoaks Boulevard.

4.4.6.2 Burbank Subsection

From Lockheed Drive, the E2 Build Alternative alignment would transition into a cut-and-cover tunnel before entering the Burbank Airport Station underneath Kenwood Street.

After exiting the underground station, the E2 Build Alternative alignment would continue southeast in a cut-and-cover tunnel to reach Burton Avenue. At Burton Avenue (the southern limit of this subsection), the alignment would join with the tunnel alignment proposed within the Burbank to Los Angeles Project Section.

4.4.7 E2A Build Alternative

4.4.7.1 Central Subsection

In the Central Subsection, the E2A Build Alternative alignment would follow an identical route to the E1A Build Alternative to Vincent View Road, where it would rejoin with the E2 Build Alternative alignment.

4.4.7.2 Burbank Subsection

Within the Burbank Subsection, the E2A Build Alternative would be identical to the Refined SR14 and E2 Build Alternatives, including alignment and ancillary features, described under the Refined SR14 and E2 Build Alternative discussions above.

4.4.8 Station Sites

The Palmdale to Burbank Project Section would be served by a station in Burbank. The Burbank Airport Station would be designed to optimize access to the California HSR System, particularly to allow for intercity travel and connections to local transit, airports, highways, and bicycle and pedestrian networks. All California HSR System stations would include the following elements:

- Passenger boarding and alighting platforms
- Station head house with ticketing, waiting areas, passenger amenities, vertical circulation, administration and employee areas, and baggage and freight-handling service
- Vehicle parking (short-term and long-term)
- Pick-up and drop-off areas
- Motorcycle/scooter parking
- Bicycle parking
- Waiting areas and queuing space for taxis and shuttle buses
- Pedestrian walkway connections

4.4.8.1 Burbank Airport Station

The Burbank Airport Station would be located along the Build Alternative alignments, with rail facilities underground to meet the tracks. Both underground and aboveground facilities would be constructed at the station site. Aboveground facilities would cover approximately 70 acres.

Station facilities would include train boarding platforms, a station building (that would house ticketing areas, passenger waiting areas, restrooms, and related facilities), pick up/drop off facilities for private autos, a transit center for buses and shuttles, and surface parking areas.

Underground portions of the station would be beneath Cohasset Street, which parallels the boundary between the city of Los Angeles to the north and the city of Burbank to the south.

The station site would be located west of Hollywood Way and east of the Hollywood Burbank Airport. The airport and ancillary properties occupy much of the land south of the proposed station site. Industrial and light industrial land uses are located to the east, and residential land uses are located north of the station site. I-5 runs parallel to the station site, approximately 0.25 mile north of the proposed passenger platforms.

The Burbank Airport Station would have up to 3,210 surface parking spaces by 2040. Approximately 1,640 of these spaces would be available by the start of operations (2029). Proposed surface parking at the Burbank Airport Station would be in addition to parking spaces that might be included in the replacement terminal project if the Preferred Alternative site is ultimately selected.

4.4.9 Maintenance Facilities

The California HSR System includes four types of maintenance facilities: maintenance of infrastructure facilities; maintenance of infrastructure siding facilities; heavy maintenance facilities; and light maintenance facilities. One heavy maintenance facility would be required for the entire system. At this time, the Authority is anticipating the identification and selection of a heavy maintenance facility site built in the Central Valley, outside of the Palmdale to Burbank Project Section. The design and spacing of other types of maintenance facilities along the HSR alignment require the Bakersfield to Palmdale Project Section to include a Maintenance Facility in the Lancaster area at Avenue M, which is outside of the Palmdale to Burbank Project Section.

4.5 Section 4(f) Applicability Analysis

Section 4.5.1 identifies the park, recreation, open space, and wildlife and waterfowl refuge properties that meet the criteria for protection as Section 4(f) resources. Section 4.5.2 identifies cultural resources that meet the criteria for protection as Section 4(f) resources. All Section 4(f) parks and recreation resources are shown on Figure 4-1 through Figure 4-4.

The evaluation of potential use of Section 4(f) resources below includes the application of IAMFs that are included in the Build Alternatives and are listed in Chapter 2 of this Draft EIR/EIS. The Authority pledged to integrate programmatic IAMFs consistent with (1) the Final Program EIR/EIS for the Proposed California High-Speed Train System (Authority and FRA 2005); (2) the Bay Area

to Central Valley High-Speed Train Program EIR/EIS (Authority and FRA 2008); and (3) the Bay Area to Central Valley High-Speed Train Partially Revised Final Program EIR (Authority 2012). To avoid or reduce impacts, the Authority will implement these IAMFs during design and construction of the Preferred Alternative, as relevant to the Palmdale to Burbank Project Section. Use determinations examine the net effect on a resource after the application of IAMFs and project- or resource-specific avoidance, minimization, or mitigation measures.

4.5.1 Parks, Recreation Areas, and Wildlife and Waterfowl Refuges

Section 3.15, Parks, Recreation, and Open Space, provides a description of each park, recreation, and open space area in the Section 4(f) RSA. Open space includes greenbelts, wilderness areas, and wildlife and waterfowl refuges. However, not all of these facilities meet the requirements to qualify for protection under Section 4(f). Resources evaluated and determined not to be subject to protection under Section 4(f) are detailed in Table 4-5 in Section 4.5.3 below.

Data collection to identify potential Section 4(f) resources consisted of a review of the recreational resources, plans, and policies listed in Section 3.15, Parks, Recreation, and Open Space; consultation with OWJ over resources; field reviews; public input; and the use of geographic information system data banks. In some instances, the cities and counties provided the boundaries for parks and recreation resources located within the Section 4(f) RSA in geographic information system data format and in adopted plans. For resources that do not currently exist that may need realignment, such as proposed trail extensions, IAMFs will be applied in order to minimize effects should they be constructed prior to the Build Alternatives.

All parks, recreation, and wildlife refuge Section 4(f) resources (as defined in Section 4.1.3) are shown on Figure 4-1 through Figure 4-4 and contain corresponding map identification numbers. Table 4-1 summarizes Section 4(f) resources that would not incur Section 4(f) use, based primarily on their distance from HSR improvements or the type of HSR improvements proposed. For similar reasons, these resources have no potential for constructive use. Therefore, the resources summarized in Table 4-1 are not discussed further in this section. Those resources that are in close enough proximity to HSR improvements as to potentially incur a use or proximity impact are listed in Table 4-2 and described in detail below. Section 4(f) resources are thus presented in north to south order by subsection.

Table 4-1 Park, Recreation Area, and Wildlife and Waterfowl Refuge Resources: No Use

Property Name and Map ID	Official with Jurisdiction	Description	Distance from Build Alternative Footprint	Section 4(f) Use Analysis
Central Subsection				
Tejon Equestrian Park (1)	City of Palmdale	**Location:** East of the Sierra Highway and south of Barrel Springs Road **Size:** 19 acres **Features:** Pedestrian and equestrian uses	**Nearest HSR Improvements:** 100 feet. The SR14A, E1A, and E2A Build Alternatives would be at grade near the southern and western limits of Tejon Equestrian Park. **Distance from Centerline:** 310 feet	No part of Tejon Equestrian Park would be included in the permanent or temporary impact areas for project construction activities. No temporary construction easements would be required from this park. No permanent acquisition of property from this park would occur. Although implementation of the SR14A, E1A, and E2A Build Alternatives would not physically affect the park, users would be able to see a train passing and would experience heightened noise levels when a train passes through the area. However, a quiet setting is not a prerequisite for resource operations because of the existing noise setting and features of the resource. The facilities closest to the SR14A, E1A, and E2A Build Alternative alignments would be the parking lot and arena, both of which do not require a quiet setting to operate. The Sierra Highway currently passes less than 1,000 feet from the park, creating an existing noisy environment. While the alignments would be visible to the west (where the Sierra Highway is already visible), park users would still have expansive views to of the north, east, and south virtually unobstructed. The overall viewshed setting would not be substantially altered. Operational noise would not inhibit the use of this resource by the community. No changes to the character of this resource would occur with implementation of the Build Alternatives. None of the Build Alternatives would substantially impair the resource's protected activities, features, or attributes, or result in constructive use.
Darrell Readmond Trail (Proposed Extension) (8)	Los Angeles County Department of Parks and Recreation	**Location:** Runs along Escondido Canyon Road in the vicinity of the Refined SR14 and SR14A Build Alternatives **Size:** 0.22 mile **Features:** Hiking	**Nearest HSR Improvements:** 0 feet **Distance from Centerline:** 0 feet	No part of the proposed Darrell Readmond Trail extension would be included in the temporary impact areas for the Refined SR14 and SR14A Build Alternatives. No temporary construction easements would be required from this facility. The proposed subsurface utility easement would not affect surface improvements along Escondido Canyon Road. No permanent acquisition of property from the proposed Darrell Readmond Trail extension would occur. Access to the resource would be uninterrupted. The proposed subsurface utility easement in Escondido Canyon Road would not affect the existing character of the area where the proposed Darrell Readmond Trail extension would be located. No changes in access to the trail would occur. The Palmdale to Burbank Project Section would not substantially impair the resource's protected activities, features, or attributes, or result in constructive use.

Property Name and Map ID	Official with Jurisdiction	Description	Distance from Build Alternative Footprint	Section 4(f) Use Analysis
Playgrounds at Vasquez High School (6)	Acton-Agua Dulce Unified School District	**Location:** 33630 Red Rover Mine Road, Acton **Size:** N/A **Features:** Ball courts, track/athletic fields, swimming pool	**Nearest HSR Improvements:** Road improvements 700 feet north, utility easement within Escondido Canyon Road **Distance from Centerline:** 1,550 feet (Refined SR14) 230 feet (SR14A) (bored tunnel)	No part of Vasquez High School would be included in the temporary impact areas for the Refined SR14 and SR14A Build Alternatives. No temporary construction easements would be required from this facility. The proposed subsurface utility easement would not affect surface improvements along Escondido Canyon Road. No permanent acquisition of property from the high school would occur. Access to the resource would be uninterrupted. The proposed subsurface utility easement in Escondido Canyon Road would not affect the existing character of the Vasquez High School outdoor play areas. No changes in permanent access to the high school would occur. Road improvements would alter views from the high school. However, this segment of the proposed trail extension is adjacent to the SR 14 corridor, as well as low density commercial and residential land uses. Due to the existing setting in the vicinity of the proposed viaduct, implementation of the Refined SR14 or SR14A Build Alternatives would not result in changes in the character of the school's outdoor play areas. The Palmdale to Burbank Project Section would not substantially impair the resource's protected activities, features, or attributes, or result in constructive use.
Playgrounds at High Desert Middle School (9)	Acton-Agua Dulce Unified School District	**Location:** 3620 Antelope Woods Road, Acton **Size:** 14 acres **Features:** Athletic fields	**Nearest HSR Improvements:** Road improvements 630 feet west **Distance from Centerline:** 0 feet (bored tunnel)	No part of High Desert Middle School would be included in the temporary impact areas for the Refined SR14 and SR14A Build Alternatives. No temporary construction easements would be required from this facility. No permanent acquisition of property from the high school would occur. Access to the resource would be uninterrupted. Because of the distance from the school, and intervening freeway corridor, the access roadway improvements to Clanfield Street would not affect the existing character of the High Desert Middle School outdoor play areas or result in visual, noise, or air quality impacts. No changes in permanent access to the high school would occur. The closest HSR railway alignment would be a bored tunneled segment approximately 0.5 mile north of the school (Refined SR14) and a bored tunneled segment underground at the southern edge of the school (SR14A), which would not result in changes in the character of school's outdoor play areas. The Palmdale to Burbank Project Section would not substantially impair the resource's protected activities, features, or attributes, or result in constructive use.

Property Name and Map ID	Official with Jurisdiction	Description	Distance from Build Alternative Footprint	Section 4(f) Use Analysis
Acton Wash Wildlife Sanctuary (10)	Los Angeles County Department of Parks and Recreation	**Location:** Soledad Canyon Road and Gillespie Avenue, Acton **Size:** 75 acres **Features:** Passive recreation through observing wildlife	**Nearest HSR Improvements:** Utility easement within Crown Valley Road would border the sanctuary (approximately 10 feet away). **Distance from Centerline:** Bored tunnel outside of resource boundary. No surface improvements.	No part of the Acton Wash Wildlife Sanctuary would be included in the temporary impact area for the Build Alternatives. No temporary construction easements would be required from this facility. No permanent acquisition of property from the wildlife sanctuary would occur. Access to the resource would be uninterrupted. The E2 and E2A Build Alternatives would include a utility easement within Aliso Canyon Road that would follow the eastern border of the Acton Wildlife Sanctuary. The utility easement along Aliso Canyon Road would have no associated physical improvements and would not otherwise present operational-period impacts that would change the character of the Acton Wash Wildlife Sanctuary, such as visual or noise impacts. The Palmdale to Burbank Project Section would not substantially impair the resource's protected activities, features, or attributes, or result in constructive use.
Vasquez Rocks Natural Area Park (12)	Los Angeles County Department of Parks and Recreation	**Location:** 10700 West Escondido Canyon Road, Agua Dulce **Size:** 932 acres **Features:** Rock formations, Tataviam Indian sites, hiking	**Nearest HSR Improvements:** The Refined SR14 and SR14A Build Alternative alignments approximately 900 feet from the park on the opposite side of SR 14. **Distance from Centerline:** 1,000 feet	No part of Vasquez Rocks Natural Area Park would be included in the temporary impact areas for the Refined SR14 and SR14A Build Alternatives. No temporary construction easements would be required from this park. No permanent acquisition of property from Vasquez Rocks Natural Area Park would occur. Access to the resource would be uninterrupted during construction. The utility easement along Agua Dulce Canyon Road would have no associated physical improvements and would not present operational-period impacts that would change the character of the Vasquez Rocks Natural Area Park, such as visual or noise impacts. Vehicular and pedestrian access to the park would be maintained from all existing access points. The closest physical HSR improvements to the Vasquez Rocks Natural Area Park would be 1,000 feet south. Because of the distance between the park and the HSR improvements, and the intervening SR 14 corridor, the operation of the Refined SR14 and SR14A Build Alternatives would not affect the existing character of the park. The Palmdale to Burbank Project Section would not substantially impair the resource's protected activities, features, or attributes, or result in constructive use.

Property Name and Map ID	Official with Jurisdiction	Description	Distance from Build Alternative Footprint	Section 4(f) Use Analysis
Veterans Memorial Community Regional Park (17)	Los Angeles County Department of Public Works	**Location:** 13000 Sayre Street, Sylmar **Size:** 97 acres **Features:** Camping, picnic areas, restrooms, rental facilities	**Nearest HSR Improvements:** Utility easement 600 feet to the south **Distance from Centerline:** Bored tunnel outside of park boundary. No surface improvements.	No part of Veterans Memorial Community Regional Park would be included in the temporary impact areas for the Refined SR14 and SR14A Build Alternatives. No temporary construction easements would be required from this park. No permanent acquisition of property from Veterans Memorial Community Regional Park would occur. Access to the resource would be uninterrupted. The utility easement along Hubbard Street would have no associated physical improvements and would not present operational-period impacts that would change the character of the Veterans Memorial Community Regional Park, such as visual or noise impacts. Vehicular and pedestrian access to the park would be maintained from all existing access points. Neither the Refined SR14 nor the SR14A Build Alternatives would include surface improvements within 1,000 feet of the park, and the closest railway alignment would be bored tunnel. The operation of the Refined SR14 or SR14A Build Alternatives would not affect the existing character of the Veterans Memorial Community Regional Park. The Palmdale to Burbank Project Section would not substantially impair the resource's protected activities, features, or attributes, or result in constructive use.
El Cariso Regional Park and Golf Course (18)	Los Angeles County Department of Parks and Recreation	**Location:** 13100 Eldridge Avenue, Sylmar **Size:** 80 acres **Features:** Golf, club facilities	**Nearest HSR Improvements:** Utility easement 600 feet to the southeast **Distance from Centerline:** Bored tunnel outside of resource boundary. No surface improvements.	No part of El Cariso Regional Park and Golf Course would be included in the temporary impact areas for the Refined SR14 and SR14A Build Alternatives. No temporary construction easements would be required from this park. No permanent acquisition of property from El Cariso Regional Park and Golf Course would occur. Access to the resource would be uninterrupted. The utility easement along Hubbard Street would have no associated physical improvements and would not present operational-period impacts that would change the character of the El Cariso Regional Park and Golf Course such as visual or noise impacts. Vehicular and pedestrian access to the park would be maintained from all existing access points. Neither the Refined SR14 nor the SR14A Build Alternatives would include surface improvements within 1,000 feet of the park, and the closest railway alignment would be bored tunnel. The operation of the Refined SR14 and SR14A Build Alternatives would not affect the existing character of the El Cariso Regional Park and Golf Course. The Palmdale to Burbank Project Section would not substantially impair the resource's protected activities, features, or attributes, or result in constructive use.

Property Name and Map ID	Official with Jurisdiction	Description	Distance from Build Alternative Footprint	Section 4(f) Use Analysis
Pacoima Wash Proposed Urban Greenway (19)	Los Angeles County Department of Public Works	**Location:** Approximately 3 miles northeast of Sylmar **Size:** 68 acres **Features:** Hiking trails, sightseeing	**Nearest HSR Improvements:** 2,500 feet **Distance from Centerline:** Bored tunnel outside of resource boundary. No surface improvements.	No part of the Pacoima Wash Proposed Urban Greenway extension would be included in the temporary impact areas for the Refined SR14, SR14A, E1, and E1A Build Alternatives. No temporary construction easements would be required from this park. No permanent acquisition of property from the Pacoima Wash Proposed Urban Greenway extension would occur. Access to the resource would be uninterrupted. The bored tunnel alignments closest to the Pacoima Wash Proposed Urban Greenway extension would have no associated physical improvements and would not present operational-period impacts that would change the character of the proposed trail, such as visual or noise impacts. New overhead utility lines would be installed south of the proposed greenway. The Palmdale to Burbank Project Section would not substantially impair the resource's protected activities, features, or attributes, or result in constructive use.
Playgrounds at Hillery T. Broadous Elementary School (20)	Los Angeles Unified School District	**Location:** 12561 Fillmore Street, Pacoima **Size:** N/A **Features:** Ball courts, track field	**Nearest HSR Improvements/ Distance from Centerline:** Bored tunnel	No part of Hillery T. Broadous Elementary School would be included in the temporary impact areas for the Refined SR14, SR14A, E1, and E1A Build Alternatives. No temporary construction easements would be required from this school. No permanent acquisition of property from Hillery T. Broadous Elementary School would occur. Access to the resource would be uninterrupted. The bored tunnel alignments that would pass under the Hillery T. Broadous Elementary School would have no associated physical improvements and would not present operational-period impacts that would change the character of the school, such as visual or noise impacts. The Palmdale to Burbank Project Section would not substantially impair the resource's protected activities, features, or attributes, or result in constructive use.
HHH Memorial Recreation Center and Pool (21)	City of Los Angeles Department of Recreation and Parks	**Location:** 12560 Fillmore Street, Pacoima **Size:** 10 acres **Features:** Gym and sports facilities, arts and crafts, after-school programs, swimming	**Nearest HSR Improvements/ Distance from Centerline:** Bored tunnel	No part of HHH Memorial Recreation Center and Pool would be included in the temporary impact areas for the Refined SR14, SR14A, E1, and E1A Build Alternatives. No temporary construction easements would be required from this school. No permanent acquisition of property from HHH Memorial Recreation Center and Pool would occur. Access to the resource would be uninterrupted. The bored tunnel alignments that would pass under the HHH Memorial Recreation Center and Pool would have no associated physical improvements and would not present operational-period impacts that would change the character of the park, such as visual or noise impacts. The Palmdale to Burbank Project Section would not substantially impair the resource's protected activities, features, or attributes, or result in constructive use.

Property Name and Map ID	Official with Jurisdiction	Description	Distance from Build Alternative Footprint	Section 4(f) Use Analysis
Playgrounds at Charles Maclay Middle School (22)	Los Angeles Unified School District	**Location:** 12540 Pierce Street, Pacoima **Size:** 14 acres **Features:** Ball courts, athletic fields	**Nearest HSR Improvements/ Distance from Centerline:** Bored tunnel	No part of Charles Maclay Middle School would be included in the temporary impact areas for the Refined SR14, SR14A, E1, and E1A Build Alternatives. No temporary construction easements would be required from this school. No permanent acquisition of property from the Charles Maclay Middle School would occur. Access to the resource would be uninterrupted. The bored tunnel alignments that would continue under Charles Maclay Middle School would have no associated physical improvements and would not present operational-period impacts that would change the character of the school, such as visual or noise impacts. The Palmdale to Burbank Project Section would not substantially impair the resource's protected activities, features, or attributes, or result in constructive use.
Roger W. Jessup Park (25)	City of Los Angeles Department of Recreation and Parks	**Location:** 12408 Osborne Street, Pacoima **Size:** 9 acres **Features:** Play area, community room, picnic tables, community garden	**Nearest HSR Improvements/ Distance from Centerline:** Bored tunnel	No part of Roger W. Jessup Park would be included in the temporary impact areas for the Refined SR14, SR14A, E1, and E1A Build Alternatives. No temporary construction easements would be required from this park. No permanent acquisition of property from Roger W. Jessup Park would occur. Access to the resource would be uninterrupted. The bored tunnel alignments that would continue under Roger W. Jessup Park would have no associated physical improvements and would not present operational-period impacts that would change the character of the park, such as visual or noise impacts. The Palmdale to Burbank Project Section would not substantially impair the resource's protected activities, features, or attributes, or result in constructive use.
Playgrounds at Stonehurst Avenue Elementary School (27)	Los Angeles Unified School District	**Location:** 9851 Stonehurst Avenue, Sun Valley **Size:** N/A **Features:** Ball courts, athletic fields	**Nearest HSR Improvements/ Distance from Centerline:** Bored tunnel	No part of Stonehurst Avenue Elementary School would be included in the temporary impact areas for the E2 and E2A Build Alternatives. No temporary construction easements would be required from this school. No permanent acquisition of property from Stonehurst Avenue Elementary School would occur. Access to the resource would be uninterrupted. The E2 and E2A Build Alternatives include a bored tunnel alignment that would pass under Stonehurst Avenue Elementary School. The tunneled railway would have no associated surface improvements and would not present operational-period impacts that would change the character of the school, such as visual or noise impacts. The Palmdale to Burbank Project Section would not substantially impair the resource's protected activities, features, or attributes, or result in constructive use.

Property Name and Map ID	Official with Jurisdiction	Description	Distance from Build Alternative Footprint	Section 4(f) Use Analysis
Tujunga Ponds Wildlife Sanctuary[1] (24)	City of Los Angeles Department of Recreation and Parks	**Location:** 210 Freeway and Wentworth Street, Tujunga **Size:** 13 acres **Features:** Hiking, nature study and passive recreation	**Nearest HSR Improvements/ Distance from Centerline:** 4,200 feet	No part of the Tujunga Ponds Wildlife Sanctuary would be included in the temporary impact areas for the E2 and E2A Build Alternatives. No temporary construction easements would be required from this area. No permanent acquisition of property from the wildlife sanctuary would occur. Access to the resource would be uninterrupted. The closest physical HSR improvements to the Tujunga Ponds Wildlife Sanctuary would be the elevated viaduct 0.8 mile to the west. Because of the distance between the wildlife sanctuary and the HSR improvements, the operation of the E2 and E2A Build Alternatives would not affect the existing character of the wildlife sanctuary. The Palmdale to Burbank Project Section would not substantially impair the resource's protected activities, features, or attributes, or result in constructive use.
Stonehurst Park and Recreation Center (26)	City of Los Angeles Department of Recreation and Parks	**Location:** 9901 Dronfield Avenue, Sun Valley **Size:** 45 acres **Features:** Athletic fields, activity center	**Nearest HSR Improvements:** 50 feet **Distance from Centerline:** Bored tunnel outside of park boundary. No surface improvements	No part of Stonehurst Park would be included in the temporary impact areas for the E2 and E2A Build Alternatives. No temporary construction easements would be required from this park. No permanent acquisition of property from Stonehurst Park would occur. Access to the resource would be uninterrupted. The bored tunnel alignments that would pass more than 1,000 feet from Stonehurst Park would have no associated physical improvements and would not present operational-period impacts that would change the character of the park, such as visual quality or noise. The CalMat Mine disposal site is immediately adjacent to Stonehurst Park to the south and east and is not a part of the park or considered a Section 4(f) resource. Construction spoils would be disposed of at the mine site adjacent to Stonehurst Park. Given the temporary duration of spoils deposition activities and the lack of permanent impacts to the features and attributes that define the park, a constructive use is not anticipated. Stonehurst Park would remain open during construction. The permanent improvements associated with the intermediate window option (E2–W2) on the CalMat Mine site would consist of relatively small structures consistent with the surrounding urban environment and would not affect the park operations. The Palmdale to Burbank Project Section would not substantially impair the resource's protected activities, features, or attributes, or result in constructive use.

Property Name and Map ID	Official with Jurisdiction	Description	Distance from Build Alternative Footprint	Section 4(f) Use Analysis
Sun Valley Recreation Center and Pool (28)	City of Los Angeles Department of Recreation and Parks	**Location:** 8123 Vineland Avenue, Sun Valley **Size:** 17 acres **Features:** Athletic fields, swimming pool, play area, tennis courts, and community room	**Nearest HSR Improvements:** 280 feet **Distance from Centerline:** 280 feet	No part of Sun Valley Pool/Sun Valley Park and Recreation Center would be included in the temporary impact areas for the Refined SR14, SR14A, E1, and E1A Build Alternatives. No temporary construction easements would be required from this park. No permanent acquisition of property from Sun Valley Pool/Sun Valley Park and Recreation Center would occur. Access to the resource would be uninterrupted. The tunnel alignments that would travel under San Fernando Road would have no associated physical improvements and would not present operational-period impacts that would change the character of Sun Valley Pool/Sun Valley Park and Recreation Center such as visual quality or noise. The permanent roadway improvements at the intersection of Cantara Street and Vineland Avenue would be consistent with the surrounding urban environment and would not affect the park operations. The Palmdale to Burbank Project Section would not substantially impair the resource's protected activities, features, or attributes, or result in constructive use.
Playground at Roscoe Elementary School (29)	Los Angeles Unified School District	**Location:** 10765 Strathern Street, Sun Valley **Size:** N/A **Features:** Ball courts	**Nearest HSR Improvements:** 20 feet **Distance from Centerline:**90 feet	No part of Roscoe Elementary School would be included in the temporary impact areas for the Refined SR14, SR14A, E1, and E1A Build Alternatives. No temporary construction easements would be required from this school. No permanent acquisition of property from Roscoe Elementary School would occur. Access to the resource would be uninterrupted. The tunnel alignments that would travel under San Fernando Road would have no associated physical improvements and would not present operational-period impacts that would change the character of Roscoe Elementary School, such as visual quality or noise. The permanent roadway improvements would be consistent with the surrounding urban environment and would not affect the school operations. The Palmdale to Burbank Project Section would not substantially impair the resource's protected activities, features, or attributes, or result in constructive use.

Property Name and Map ID	Official with Jurisdiction	Description	Distance from Build Alternative Footprint	Section 4(f) Use Analysis
Playgrounds at Glenwood Elementary School (30)	Los Angeles Unified School District	**Location:** 8001 Ledge Avenue, Sun Valley **Size:** 7 acres **Features:** Ball courts, athletic fields	**Nearest HSR Improvements/ Distance from Centerline:** Bored tunnel	No part of Glenwood Elementary School would be included in the temporary impact areas for the Refined SR14, SR14A, E1, and E1A Build Alternatives. No temporary construction easements would be required from this school. No permanent acquisition of property from Glenwood Elementary School would occur. Access to the resource would be uninterrupted. The E2 and E2A Build Alternative tunnel alignments that would continue under San Fernando Road would have no associated physical improvements and would not present operational-period impacts that would change the character of Glenwood Elementary School, such as visual quality or noise. The Palmdale to Burbank Project Section would not substantially impair the resource's protected activities, features, or attributes, or result in constructive use.
Burbank Subsection				
There are no parks, recreation, or open space resources in the Burbank Subsection.				

Source: Authority, 2019d

[1] The Tujunga Ponds Wildlife Sanctuary is outside the Section 4(f) RSA but may be sensitive to noise and vibration and thus is included in this analysis.

Authority = California High-Speed Rail Authority; HHH = Hubert H. Humphrey; HSR = high-speed rail; IAMF = impact avoidance and minimization feature; ID = identification; N/A = not applicable; RSA = resource study area

Table 4-2 Parks and Recreation Resources Evaluated for Section 4(f) Use

Resource Name and Map ID	Ownership/Official with Jurisdiction	Description	Applicable Build Alternatives						Distance from Build Alternative Footprint
			Refined SR14	SR14A	E1	E1A	E2	E2A	
Central Subsection									
Palmdale Hills Trail (Proposed Extension) (2)	City of Los Angeles Department of Recreation and Parks	**Location:** South of Lake Palmdale **Size:** 1-mile route **Features:** Hiking	X	X	X	X	X	X	**Nearest HSR Improvements/Distance from Centerline:** 0 feet: The Refined SR14 Build Alternative alignment would tunnel under a proposed extension of this trail, so there would be no potential use under Refined SR14. The SR14A, E1, and E2 Build Alternative alignments would cross the proposed trail extension at grade. The E1A and E2A Build Alternative alignments would cross the trail in an elevated structure.
Vasquez Loop Trail (Proposed Extension) (3)	Los Angeles County Department of Parks and Recreation	**Location:** Runs in a north-south direction along red Rover Mine Road in Acton. **Size:** 3-mile route **Features:** Hiking	X	X	X	X	X	X	**Nearest HSR Improvements/Distance from Centerline:** 0 feet: The Refined SR14 Build Alternative alignment would tunnel under the proposed trail and would cross on a viaduct; the SR14A, E1A, and E2A Build Alternative alignments would cross under the trail in a bored tunnel. The E1 and E2 Build Alternative alignments would cross the trail with cut/cover and then immediately adjacent would be a retained cut. Traction power facilities are also proposed in the vicinity and would cross the trail.
Littlerock Trail (Proposed Extension) (4)	Los Angeles County Department of Parks and Recreation	**Location:** Runs south along Sierra Highway until E Soledad Road, and then veers east into the ANF. **Size:** 1-mile route **Features:** Hiking, camping	X	X	X	X	X	X	**Nearest HSR Improvements/Distance from Centerline:** 0 feet: The E1 and E2 Build Alternative alignments would cross the proposed trail extension with cut/cover and then immediately adjacent would be a retained cut. The E1A and E2A Build Alternative alignments would cross under the trail in a bored tunnel. Traction power facilities needed for the Refined SR14 and SR14A Build Alternative alignments would cross the trail.

Resource Name and Map ID	Ownership/Official with Jurisdiction	Description	Applicable Build Alternatives						Distance from Build Alternative Footprint
			Refined SR14	SR14A	E1	E1A	E2	E2A	
Acton Community Trail (Proposed Extension) (5)	Los Angeles County Department of Parks and Recreation	**Location:** Follows the existing Metrolink tracks through Acton, and loops via Cedarcroft Road and Country Way. **Size:** Proposed length is 17.75 miles **Features:** Hiking	N/A	N/A	X	X	X	X	**Nearest HSR Improvements/Distance from Centerline:** 0 feet: The E1, E1A, E2, and E2A Build Alternative alignments would run parallel (at grade and retained cut) and would cross the proposed trail extension; the trail extension would overlap with a traction power facility.
Pacific Crest Trail (11)	Various public and private owners including the Pacific Crest Trail Association[1]	**Location:** The Pacific Crest Trail (PCT) runs from Manning Park on the U.S.-Canada border to the U.S.-Mexico border, just south of Campo, California. In the project vicinity, from the north, the PCT follows Agua Dulce Canyon Road and then traverses Vasquez Rocks Natural Area Park before crossing SR 14 and continuing in a southeast direction. **Size:** The PCT's entire length is 2,659 miles. **Features:** Hiking, equestrian activities	X	X	X	X	X	X	**Nearest HSR Improvements/Distance from Centerline:** 0 feet: Approximately 3 miles of the trail are within the Refined SR14 Build Alternative RSA. The Refined SR14 Build Alternative alignment would pass over the PCT in two locations on a viaduct, potentially affecting about 0.7 mile of trail. The SR14A, E1, E1A, E2, and E2A Build Alternative alignments would tunnel underneath the PCT where the PCT travels through the ANF, including SGMNM.

Resource Name and Map ID	Ownership/Official with Jurisdiction	Description	Applicable Build Alternatives						Distance from Build Alternative Footprint
			Refined SR14	SR14A	E1	E1A	E2	E2A	
Angeles National Forest/San Gabriel Mountains National Monument (7)	USFS (U.S. Department of Agriculture)	**Location**: Beginning south of Palmdale, extending south to just north of I-210. Comprises an area between Antelope, San Fernando, and San Gabriel Valleys in Los Angeles County **Size**: 700,000 acres **Features**: Hiking, trails, camping	X	X	X	X	X	X	**Nearest HSR Improvements/Distance from Centerline:** 0 feet: All six Build Alternative alignments would tunnel underneath the ANF, including SGMNM, and some project features, such as tunnel portals and access roads would require construction within this resource.
Rim of the Valley Trail (Proposed Extension) (16)	National Park Service (U.S. Department of the Interior)	**Location:** The trail would encircle the area known as the Rim of the Valley Corridor, an area that circles around the San Fernando Valley, through ANF, Simi Valley, and Santa Monica Mountains. **Size:** 80 miles (current); 120 miles (proposed extension) **Features:** Hiking, nature study, equestrian activities	X	X	X	X	X	X	**Nearest HSR Improvements/Distance from Centerline:** 0 feet: The Refined SR14, SR14A, E1, and E1A Build Alternatives would intersect the proposed trail extension south of the Pacoima Reservoir in the ANF. The E1 and E1A Build Alternatives would intersect the proposed trail extension near Little Tujunga Canyon Road in the ANF. The proposed trail extension would also cross through temporary construction areas associated with ancillary project features, such as adits and windows, for all six Build Alternatives.

Resource Name and Map ID	Ownership/Official with Jurisdiction	Description	Applicable Build Alternatives						Distance from Build Alternative Footprint
			Refined SR14	SR14A	E1	E1A	E2	E2A	
Hansen Dam Open Space Area (23)	City of Los Angeles Department of Recreation and Parks	**Location:** The open space area is approximately 25 miles north of downtown Los Angeles in Lake View Terrace. **Size:** 813 acres **Features:** Golf, horse riding, aquatic recreation, volleyball court, and hiking	N/A	N/A	N/A	N/A	X	X	**Nearest HSR Improvements/Distance from Centerline:** 0 feet: The E2 and E2A Build Alternative alignments include an elevated viaduct structure that would cross the open space area. Footing/supports for the viaduct would be located within the open space area.
Burbank Subsection									
None									

Source: Authority, 2019d

[1] The PCT Owner with Jurisdiction is the Pacific Crest Trail Association; however, the underlying fee ownership of portions of the PCT within the Section 4(f) RSA varies between public and private entities. The public agency property owners of the PCT in the RSA include the National Park Service and Los Angeles County.

ANF = Angeles National Forest; Authority = California High-Speed Rail Authority; HSR = high-speed rail; I = Interstate; N/A = not applicable; PCT = Pacific Crest Trail; RSA = Resource Study Area; SGMNM = San Gabriel Mountains National Monument; SR = State Route; USFS = U.S. Forest Service

4.5.1.1 Central Subsection

Parks, recreation, and wildlife and waterfowl refuges in the Central Subsection are shown in detail in Figure 4-9 through Figure 4-20 at the end of this section.

Palmdale Hills Trail (Proposed Extension) (Map ID 2)

Size and Location

The Palmdale Hills Trail, shown on Figure 4-1 and Figure 4-9, is an approximately 1-mile route located south of Lake Palmdale, and is proposed to be extended by approximately 12 miles. The Refined SR14 Build Alternative alignment would tunnel under the trail extension, and the SR14A, E1, E1A, E2, and E2A Build Alternative alignments would cross the trail extension at grade.

Ownership

This resource is owned and maintained by City of Los Angeles Department of Recreation and Parks.

Usage (Intended, Actual/Current, and Planned)

The Palmdale Hills Trail is used for recreational activities. Planned trail extensions would provide additional hiking opportunities and connections to the local trail system.

In the vicinity of the Build Alternatives, the trail crosses SR 14 and runs parallel to Sierra Highway. Thus, the trail's setting is marked by the intrusion of traffic noise and the visibility of transportation facilities. The trail provides the opportunity for regional hiking and trail connections south of Palmdale—the resource is not considered a quiet or undisturbed setting. The six Build Alternatives would not change the characteristics of the resource.

Acton Community Trail (Proposed Extension) (Map ID 5)

Size and Location

The Acton Community Trail, shown on Figure 4-1, Figure 4-2, and Figure 4-13 through Figure 4-15, follows the Metrolink tracks through Acton, looping via Cedarcroft Road and Country Way, and is proposed to be extended. The E1, E1A, E2, and E2A Build Alternative alignments would run parallel to the proposed extension of the trail at grade and in a retained cut and then would turn to cross the area proposed for the trail extension.

Ownership

This resource is owned and maintained by the Los Angeles County Department of Parks and Recreation.

Usage (Intended, Actual/Current, and Planned)

The Acton Community Trail is used for recreational activities. Planned trail extensions would provide additional hiking opportunities and connections to the local trail system.

In this location, the Acton Community Trail is adjacent to SR 14, exposing users to noise associated with the operation of that transportation facility. The trail provides hiking opportunities and trail connections to the Acton community—the resource is not considered a quiet or undisturbed natural setting. The E1, E1A, E2, and E2A Build Alternatives would not change the characteristics of the resource.

Littlerock Trail (Proposed Extension) (Map ID 4)

Size and Location

The Littlerock Trail, shown on Figure 4-1, Figure 4-9, and Figure 4-13, is an approximately 1-mile route, which runs south along the Sierra Highway until E Soledad Road, where it turns east and enters the ANF. As shown on Figure 4-1, the trail is proposed to be extended. The E1, E1A, E2, and E2A Build Alternative alignments would cross the proposed extension trail at grade. Traction

power facilities needed for the Refined SR14 and SR14A Build Alternative alignments would also cross the trail.

Ownership

This resource is owned and maintained by the Los Angeles County Department of Parks and Recreation.

Usage (Intended, Actual/Current, and Planned)

The Littlerock Trail is used for recreational activities. Planned trail extensions would provide additional hiking opportunities and connections to the local trail system.

In this location, the Littlerock Trail is adjacent to SR 14, Angeles Forest Highway, and the Metrolink corridor, exposing users to noise associated with the operation of these transportation facilities. The trail provides the opportunity for regional recreational hiking and trail connections—the resource is not considered a quiet or undisturbed setting. The E1, E1A, E2, and E2A Build Alternatives would not change the characteristics of the resource.

Vasquez Loop Trail (Proposed Extension) (Map ID 6)

Size and Location

The Vasquez Loop Trail, shown on Figure 4-1, Figure 4-9, Figure 4-10, and Figure 4-13, is an approximately 3-mile route that runs in a north-south direction along Red Rover Mine Road in Acton, and is proposed to be extended. The Refined SR14 Build Alternative would tunnel under the trail extension, and the E1 and E2 Build Alternative alignments would cross the proposed trail extension at grade. The SR14A, E1A, and E2A Build Alternative alignments would cross under the trail in a bored tunnel.

Ownership

This resource is owned and maintained by the Los Angeles County Department of Parks and Recreation.

Usage (Intended, Actual/Current, and Planned)

The Vasquez Loop Trail is used for recreational activities. Planned trail extensions would provide additional hiking opportunities and connections to the local trail system.

The Vasquez Loop Trail intersects with and crosses SR 14 along its alignment, exposing users to noise associated with the operation of that transportation facility. The trail provides the opportunity for regional recreational hiking and trail connections—the resource is not considered a quiet or undisturbed setting. The six Build Alternatives would not change the characteristics of the resource.

Pacific Crest Trail (Map ID 11)

Size and Location

The Pacific Crest Trail (PCT), shown on Figure 4-2 and Figure 4-11, is a series of ridgeline trails that extend approximately 2,650 miles along the Sierra Nevada and Cascade Mountain Ranges, from Mexico through California (including Los Angeles and Kern Counties), Oregon, and Washington to Canada. Approximately 3 miles of the trail are within the Section 4(f) RSA. The Refined SR14 Build Alternative alignment would cross the existing PCT on a viaduct in two locations south of SR 14, south of Vasquez Rocks Natural Area Park, shown on Figure 4-2. The SR14A Build Alternative alignment would pass beneath the PCT in a bored tunnel south of SR 14. The E1, E1A, E2, and E2A Build Alternative alignments would pass beneath the trail in a bored tunnel, several miles southeast of where the Refined SR14 and SR14A Build Alternative alignments would cross the PCT.

Ownership

Over its entire distance, the PCT passes through lands owned and managed by a range of federal, state, and county agencies; Native American Tribes; and private parties. The overall responsibility for managing the PCT lies with the USFS within the Pacific Southwest Region of the U.S. Department of Agriculture. In the immediate area of its crossing with the Refined SR14 and SR14A Build Alternative alignments, the PCT is on lands owned or managed by Los Angeles County, the U.S. Department of the Interior Bureau of Land Management, various conservation agencies/authorities, and private parties. This trail is assumed to be a Section 4(f) resource for the purposes of this study because of its public recreational use.

Usage (Intended, Actual/Current, and Planned)

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

The PCT intersects with and crosses existing transportation corridors along its 2,650-mile alignment, including I-5 near Ashland, Oregon, and Mt. Shasta, California; I-80 near Truckee, I-50 near South Lake Tahoe, and I-15 near Canyon Junction, in addition to numerous State and local highway crossings. Users periodically experience noise associated with the operation of those transportation facilities. Within the RSA, the PCT currently crosses underneath SR 14 in a drainage tunnel adjacent to the proposed Refined SR14 and SR14A Build Alternative alignments. The portion of the PCT in the RSA provides a connection to the rest of the trail. In this area, the PCT is not considered a quiet or natural setting. The six Build Alternatives would not change the characteristics of the resource.

Angeles National Forest/San Gabriel Mountains National Monument (Map ID 7)

Size and Location

The ANF, shown on Figure 4-1 through Figure 4-3 and Figure 4-12 through Figure 4-17, is an approximately 700,000-acre national forest containing recreational resources (USFS 2017). The SGMNM is an approximately 342,000-acre national monument within the ANF, and also offers a variety of recreational resources. This resource is located between Palmdale and Burbank, and all of the Build Alternative alignments would pass through the resource in bored tunnels. A small section of the Refined SR14 and SR14A Build Alternative alignments would be constructed as above-grade covered tunnels within the resource, in the area of the Vulcan Mine. The E1, E1A, E2, and E2A Build Alternative alignments would pass through the ANF, including SGMNM, underground in bored tunnels. All six Build Alternatives would require some surface work within the resource, for grading, temporary utilities, and new electrical utilities.

There is one hydrogeological risk area within the RSA in the ANF including SGMNM near Aliso Canyon Road that could be affected by bored tunnels, however, the probability would be minimal to none that surface hydrologic resources would be affected in this area. See Section 3.8, Hydrology and Water Resources for a more detailed analysis that includes the Tunnel Construction RSA.

Ownership

This resource is owned and maintained by the USFS.

Usage (Intended, Actual/Current, and Planned)

The ANF, including SGMNM, is used for recreational activities. The ANF offers natural environments and developed recreation areas, including campgrounds and picnic facilities. Additionally, recreational users can swim, fish, hike, and ski in the ANF. The SGMNM offers passive recreation opportunities in addition to visitor amenities, including hiking trails, skiing trails, picnic areas, horseback riding, and campgrounds. Some areas of the ANF are designated as Critical Biological land uses to provide habitat and protection for at-risk species. Some areas within the ANF, including SGMNM, are not recreational in nature or use and are used for resource extraction (mines and oil wells), or are developed areas including infrastructure such as utility power lines and access roads.

The ANF covers public lands in the Transverse Range, including portions of the San Gabriel and Sierra Pelona Mountains. According to the ANF Land and Resources Management Plan, 5 million people visit the forest annually for recreation. In addition to recreational uses, portions of the ANF, including SGMNM, are used for resource extraction (e.g., mining, oil wells) and other nonrecreational uses. These nonrecreational uses are being phased out within the SGMNM but will remain in the ANF.

Section 4(f) Applicability of the Angeles National Forest

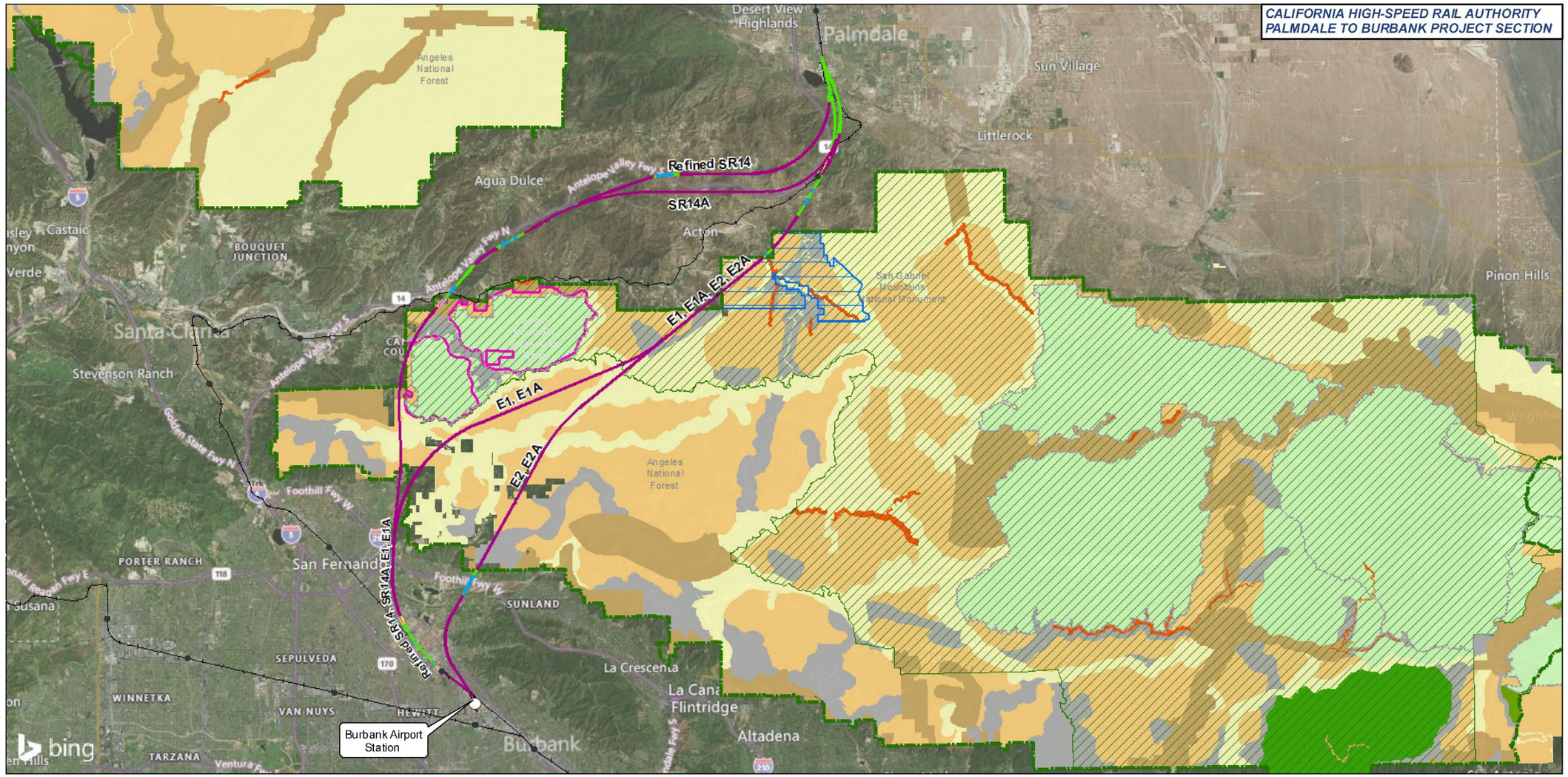
Section 4(f) applies only to those portions of a multiple-use public property such as the ANF that are designated by statute or identified in an official management plan of the administering agency as being primarily for public park, recreation, or wildlife and waterfowl refuge purposes, and are determined to be significant for such purposes. Section 4(f) will also apply to historic sites within the multiple-use public property that are on or eligible for the NRHP. Multiple-use public land holdings are often vast in size, and by definition these properties are comprised of multiple areas that serve different purposes. Section 4(f) does not apply to those areas within a multiple-use public property that functions primarily for a purpose other than significant park, recreation, or refuge purposes. For example, within ANF, there are areas that qualify as Section 4(f) resources (e.g., campgrounds, trails, picnic areas) while other areas function primarily for purposes other than park, recreation or as a refuge such as timber sales or mineral extraction. Authority coordination with the OWJ, the USFS, and examination of the management plan for the area is ongoing and will aid in determining whether Section 4(f) should apply to various areas with the ANF.

The SGMNM was designated with the intent to help ensure these lands remain a benefit for all Americans through rock art that provides a glimpse into ancient civilizations, an observatory that brought the world the cosmos, and thousands of miles of streams, hiking trails and other outdoor recreation opportunities (USFS 2014). As such, the Authority (acting in FRA's capacity pursuant to the assignment MOU under 23 U.S.C. 327) has preliminarily determined that Section 4(f) applies to the entirety of the SGMNM except for areas that are clearly not recreational in nature or uses such as the Vulcan Mine area and other areas closed to the public.

Angeles National Forest Land Management Plan

The ANF Land Management Plan (LMP) is a three-part plan adopted in 2005 that provides the vision, strategy, and design criteria for the forest. The Land Management Plan Strategy (Part 2 of the LMP) provides an overall focus on sustainable management of the forest and includes land use designations and permitted uses within those designations. Land use zones identify appropriate management types of uses that are consistent with the achievement of the overall vision for the forest, demonstrate the USFS's intent for each area of the forest, and indicate the anticipated level of public land use. The LMP was used to determine applicability of Section 4(f) to areas within the ANF outside the SGMNM boundary. The LMP land use map is provided in Figure 4-7.

In defining activities permitted in each land use, the LMP uses several key terms: “suitable,” “not suitable,” “designated areas,” and “by exception.” Activities noted as suitable for a land use are not authorized based solely on the land use definition; suitable activities are provided as guidance for consideration of future activities and further project or site-specific analysis by USFS may be required.



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HSR ALIGNMENT IS NOT DETERMINED
Source:Authority, 2020; Bing, 2021

April 23, 2021

Figure 4-7 ANF including SGMNM Land Use Map and Build Alternatives

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Land Uses within the Resource Study Area

The Authority has preliminarily determined that all of the SGMNM with a few exceptions as noted above including the Vulcan Mine and areas that are clearly not recreational in nature or use, is considered a Section 4(f) resource.

Within the ANF, the Section 4(f) RSA includes several LMP land uses, as shown in Figure 4-7 above and Table 4-3 below. These land uses have been evaluated by the Authority to determine whether areas within the ANF meet the criteria for protection under Section 4(f). Many of the land uses permit a wide range of nonrecreational activities, including communication sites, major transportation corridors, major utility corridors, oil and gas exploration, and forestry. Where these types of uses are permitted, the Authority has preliminarily determined the land use is not primarily for recreational purposes, and therefore areas within the ANF with this land use designation are not protected under Section 4(f). Each land use within the Section 4(f) RSA is shown in Figure 4-7 above and land uses are categorized by Section 4(f) applicability in the bullets below and as shown in Figure 4-8. The Authority has initiated discussions with USFS on land uses and Section 4(f) applicability. Land uses are described below, along with permitted land use activities:

- **Developed Areas Interface**—This land use permits development of communication sites, major transportation corridors, major utility corridors, roads, and developed facilities. As described in the LMP, this land use includes areas adjacent to communities, concentrated use areas, and developed sites. Based on the activities permitted in this land use, the primary use of the area is not recreational, and is therefore not protected under Section 4(f). The Authority will conduct further consultation with USFS for a final determination for this land use.
- **Back Country**—This land use permits development of communication sites, major transportation corridors, major utility corridors, roads, and developed facilities. As described in the LMP, this land use includes areas of the national forest that are generally undeveloped with few roads. Based on the activities permitted in this land use, the primary use of the area is not recreational, and is therefore not protected under Section 4(f). The Authority will conduct further consultation with USFS for a final determination for this land use.
- **Back Country – Motorized Use Restricted**—This land use permits the development of low-intensity land uses, communication sites, major utility corridors, roads, and developed facilities by exception. Based on the activities permitted in this land use, the primary use of the area may not be recreational, and therefore would not be protected under Section 4(f). The Authority will conduct further consultation with USFS for a final determination for this land use.
- **Back Country Non-Motorized**—This land use permits the development of low-intensity uses and communication sites by exception. Based on the activities permitted in this land use, the primary use of the area may not be recreational, and therefore would not be protected under Section 4(f). The Authority will conduct further consultation with USFS for a final determination for this land use.
- **Wilderness**—This land use permits some development of low-intensity land uses by exception. As described in the LMP, this land use includes congressionally designated wildernesses. The management intent for this land use is continued administration for the use and enjoyment of the public and preservation of the wilderness character and natural conditions. Based on the activities permitted in this land use, the primary use of the area is recreational, and is therefore protected under Section 4(f).
- **Critical Biological**—This land use permits the development of low-intensity uses and communication sites by exception. Based on the activities permitted in this land use, the primary use of the area may not be recreational. However, the primary use is for wildlife protection through the provision of natural habitat with limited human development. Therefore, this land use has been preliminarily deemed eligible for protection under Section

4(f). The Authority will conduct further consultation with USFS for a final determination for this land use.

- **Experimental Forest**—This land use permits the development of low-intensity uses, communication sites, and roads by exception, and permits developed facilities for research purposes. Based on the activities permitted in this land use, the primary use of the area may not be recreational, and therefore would not be protected under Section 4(f). The Authority will conduct further consultation with USFS for a final determination for this land use. The Palmdale to Burbank Project Section RSA does not include this land use.

Land Use Overlay Areas

The LMP designates Special Interest Areas (SIA). As stated in the LMP, the purpose of SIAs is to "Protect and, where appropriate, foster public use and enjoyment of areas with scenic, historical, geological, botanical, zoological, paleontological, or other special characteristics. Uses that are compatible with maintaining the target of the areas designation are appropriate." Within the Palmdale to Burbank Project Section RSA, there is one SIA: Aliso-Arrastre Middle and North. This SIA covers 7,850 acres in the Soledad Front Country area of the ANF, including SGMNM, along the forest boundary. The underlying land uses include Back Country, Back Country Non-Motorized, and Back Country Motorized Use Restricted.

Table 4-3 Suitable Uses for Selected ANF, including SGMNM, Land Use Categories

Land Use Zone	Angeles National Forest							San Gabriel Mountains National Monument
	Developed Areas Interface	Back Country	Back Country Motorized Use Restricted	Back Country Non-Motorized	Critical Biological	Wilderness	Experimental Forest	
Special Uses: Low Intensity Land Use	Suitable	Suitable	Suitable	By Exception	By Exception	By Exception	By Exception	For the purpose of this analysis, the SGMNM is considered as a Section 4(f) resource with a few exceptions such as the Vulcan Mine and areas clearly not recreational in nature or use (not open to the public).
Communication Sites	Designated Areas	Designated Areas	Designated Areas	By Exception	By Exception	Not Suitable	By Exception	
Major Transportation Corridors	Designated Areas	Designated Areas	Not Suitable	Not Suitable	Not Suitable	Not Suitable	Not Suitable	
Major Utility Corridors	Designated Areas	Designated Areas	Designated Areas	Not Suitable	Not Suitable	Not Suitable	Not Suitable	
Road Construction or Re-construction	Suitable	Suitable	Suitable for authorized use	Not Suitable	Not Suitable	Not Suitable	By Exception	
Developed Facilities	Suitable	Suitable	By Exception	Not Suitable	Not Suitable	Not Suitable	For Research	
Section 4(f) Resource?[1]	**No**	**No**	**TBD**	**TBD**	**Yes**	**Yes**	**TBD**	**Yes**

Source: Angeles National Forest Land Management Plan, 2005; Authority, 2018
[1] Coordination with the United States Forest Service is ongoing regarding Section 4(f) use in the ANF, including SGMNM.
ANF = Angeles National Forest; Authority = California High-Speed Rail Authority; SGMNM = San Gabriel Mountains National Monument; TBD = to be determined

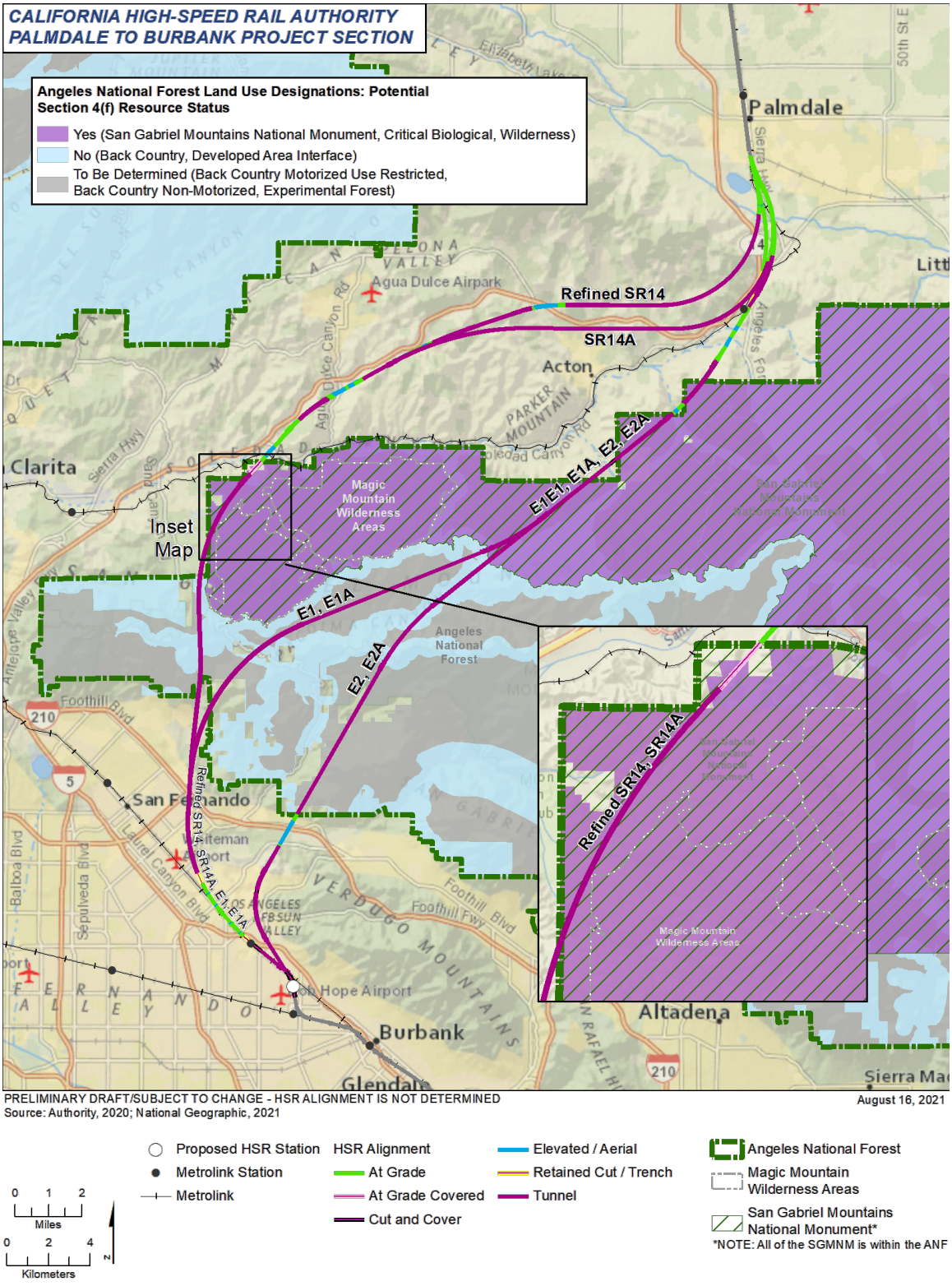

Figure 4-8 Overview: Potential Section 4(f) Land Uses

Rim of the Valley Trail (Proposed Extension) (Map ID 16)

Size and Location

The Rim of the Valley Trail, shown on Figure 4-3, would encircle the area known as the Rim of the Valley Corridor, an area that circles around the San Fernando Valley, through the ANF, Simi Valley, and Santa Monica Mountains. The trail is currently 80 miles long, and an additional 120-mile extension is planned. The trail is part of the larger Rim of the Valley Trail Corridor, which is intended to ultimately connect the many mountain ranges encircling the San Fernando Valley.

All six Build Alternative alignments would cross under the proposed Rim of the Valley Trail extension in tunnels and would include permanent surface improvements within 1,000 feet of the proposed Rim of the Valley Trail extension. Little Tujunga Canyon Road, which crosses the trail would be acquired as an access roadway; however, this easement would not involve acquiring a piece of the trail.

The Refined SR14 and SR14A Build Alternatives include two adit options, SR14-A1 and SR14-A2, that would require temporary construction staging areas at the surface that conflict with approximately 330 feet of the proposed Rim of the Valley Trail extension. The E2 and E2A Build Alternatives would include adit option E2-A2, with a 23-acre temporary construction staging area that would conflict with approximately 400 feet of the future trail.

Ownership

This resource is owned and maintained by the NPS (U.S. Department of the Interior).

Usage (Intended, Actual/Current, Planned)

The Rim of the Valley Trail is used for recreational activities. Planned trail extensions would provide additional opportunities for these existing activities through a larger area of the ANF, and connections to other trails within the ANF. The existing segment of the trail nearest the RSA is a single-track, unpaved out-and-back trail over steep grade within the ANF near Sunland-Tujunga.

Hansen Dam Open Space Area (Map ID 23)

Size and Location

The Hansen Dam Open Space Area, shown on Figure 4-4 and Figure 4-19, is approximately 813 acres. The resource is located approximately 25 miles north of downtown Los Angeles in the Lake View terrace neighborhood. The E2 and E2A Build Alternative alignments would pass directly through an approximately 0.5-mile portion of the Hansen Dam Open Space area, which extends east from Hansen Dam into Big Tujunga Wash.

Ownership

This resource is owned and maintained by the Los Angeles County Department of Parks and Recreation.

Usage (Intended, Actual/Current, and Planned)

The recreation area includes day-use facilities such as a golf course and riding stables; an aquatic center with a lake available for swimming, fishing, boating, and picnic areas. Additionally, the recreation area has two large waterslides and a volleyball court.

Little Tujunga Creek and the Tujunga Wash are adjacent to the recreation area, adding to the natural setting of the open space resource; however, I-210 runs along the northern border of the recreation area, resulting in the intrusion of traffic noise in some areas of the resource. This traffic noise is particularly intrusive to equestrian activities, which are noise sensitive. Therefore, this Hansen Dam Open Space Area provides a variety of recreational opportunities, some of which

rely on quiet or natural visual setting, and some that do not. The E2 and E2A Build Alternative alignments would not change the characteristics of the resource.

4.5.1.2 Burbank Subsection

There are no parks, recreation areas, or wildlife and waterfowl refuges in the Burbank Subsection that are subject to protection under Section 4(f) (see Figure 4-20).

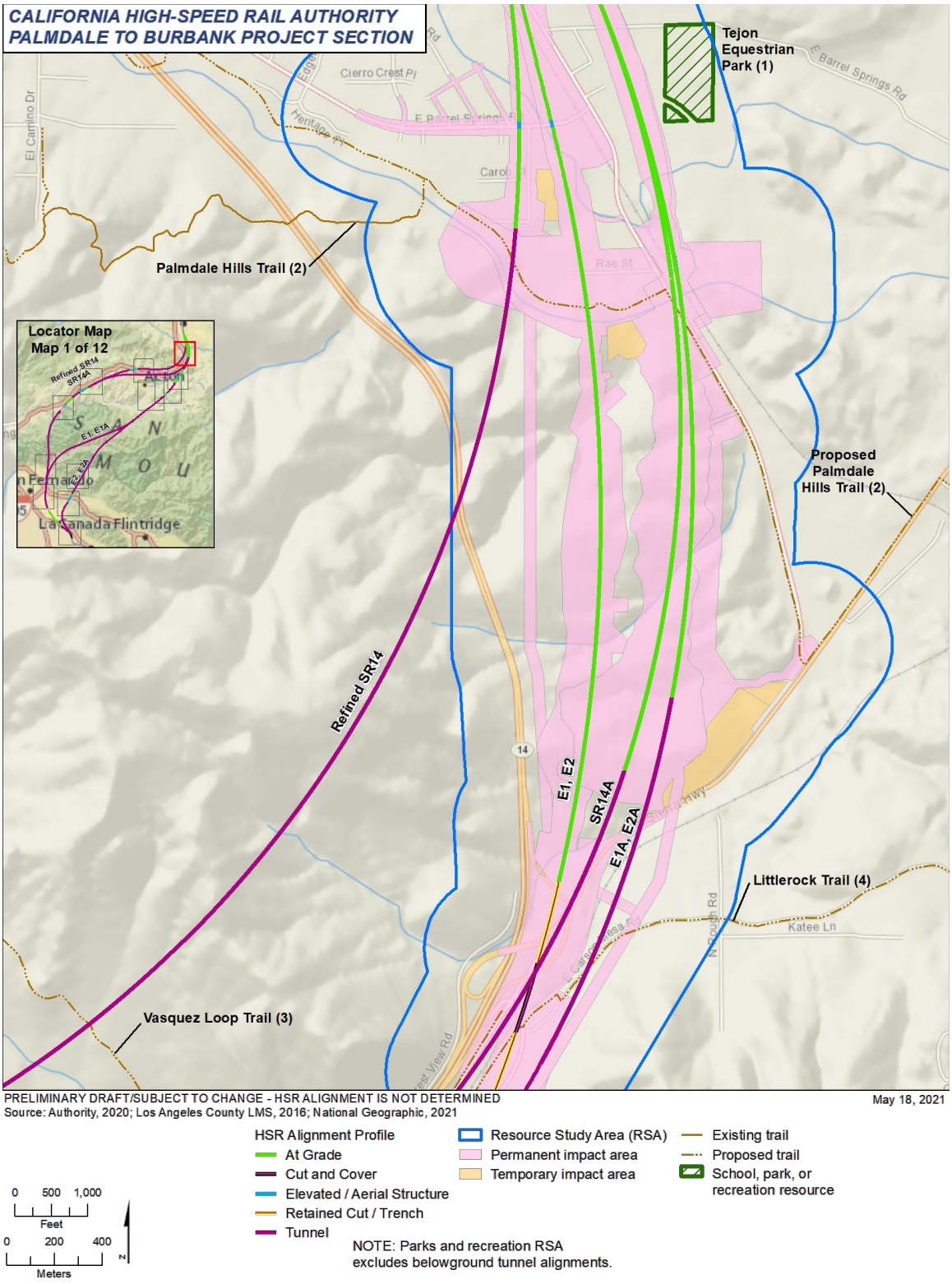

Figure 4-9 Potential Recreational Section 4(f) Resources (Map 1 of 12)

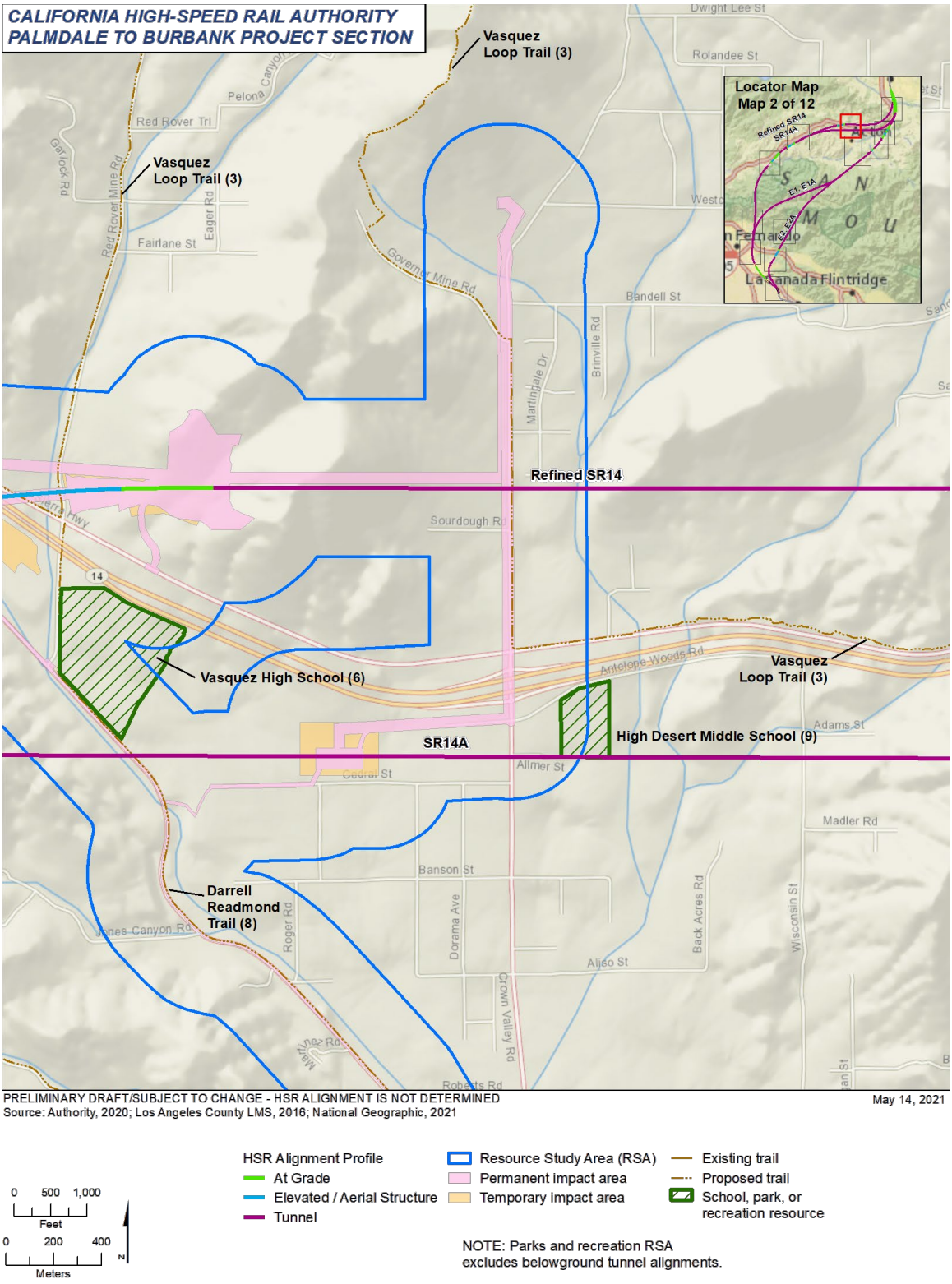

Figure 4-10 Potential Recreational Section 4(f) Resources (Map 2 of 12)

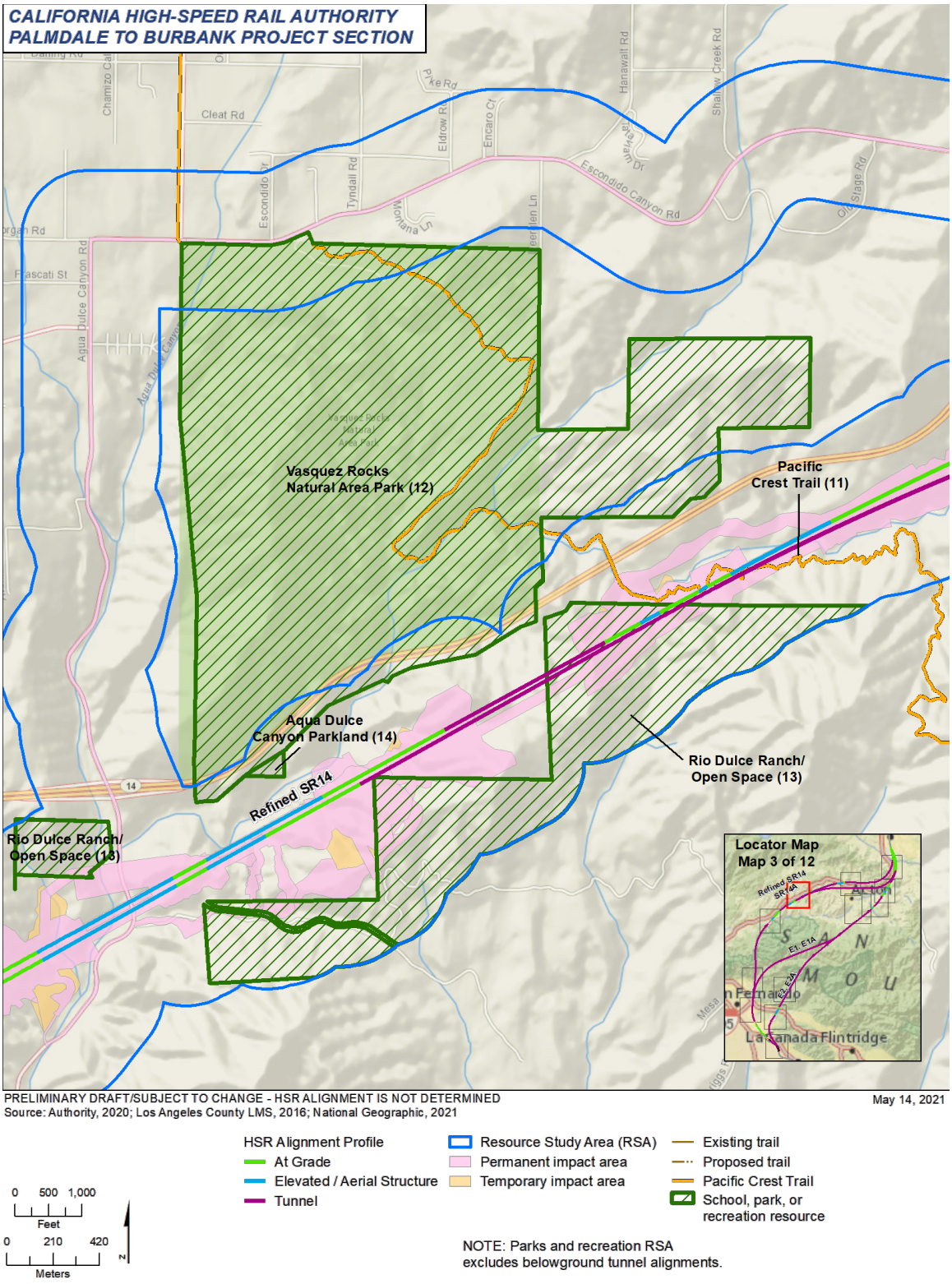

Figure 4-11 Potential Recreational Section 4(f) Resources (Map 3 of 12)

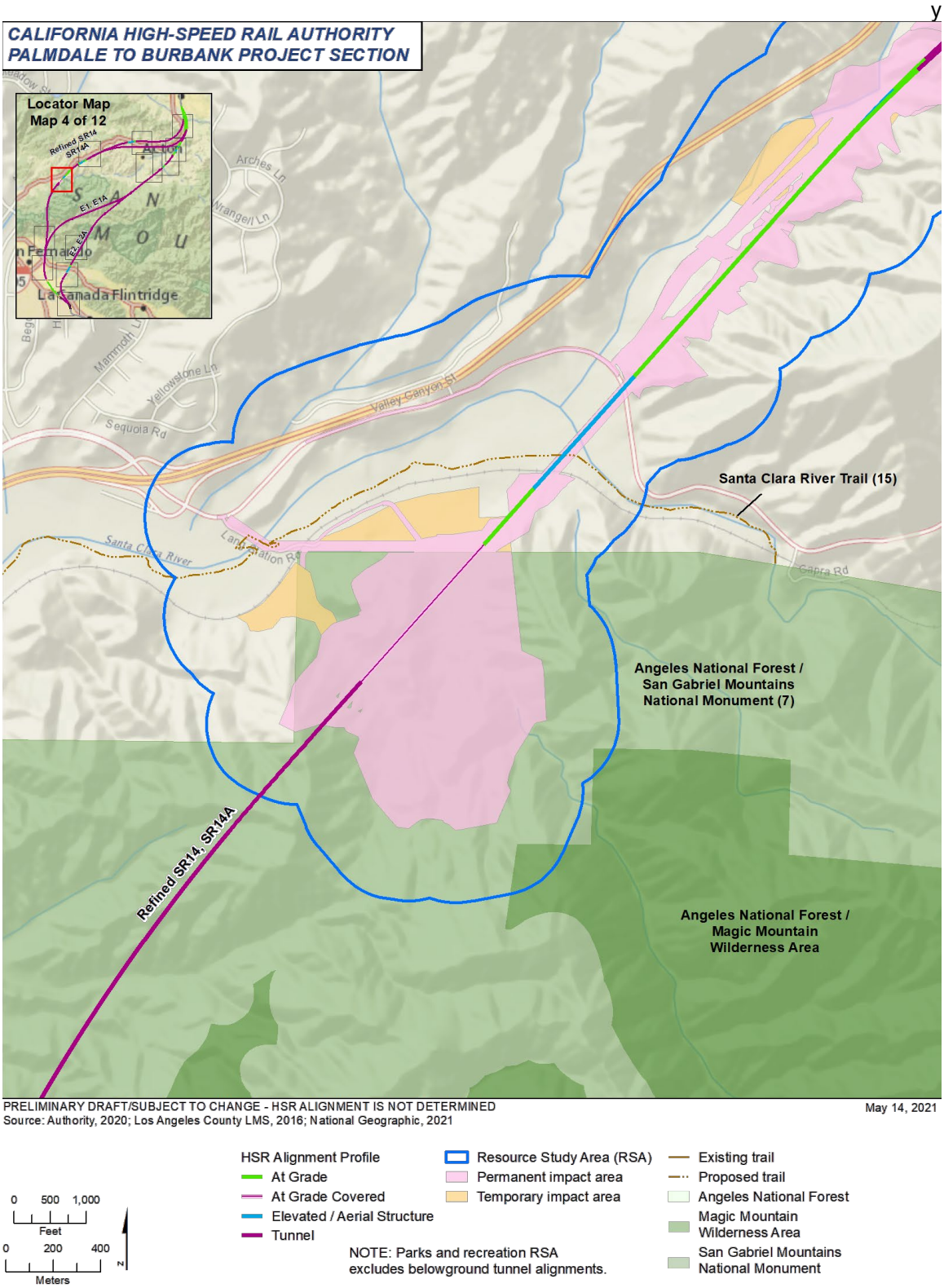

Figure 4-12 Potential Recreational Section 4(f) Resources (Map 4 of 12)

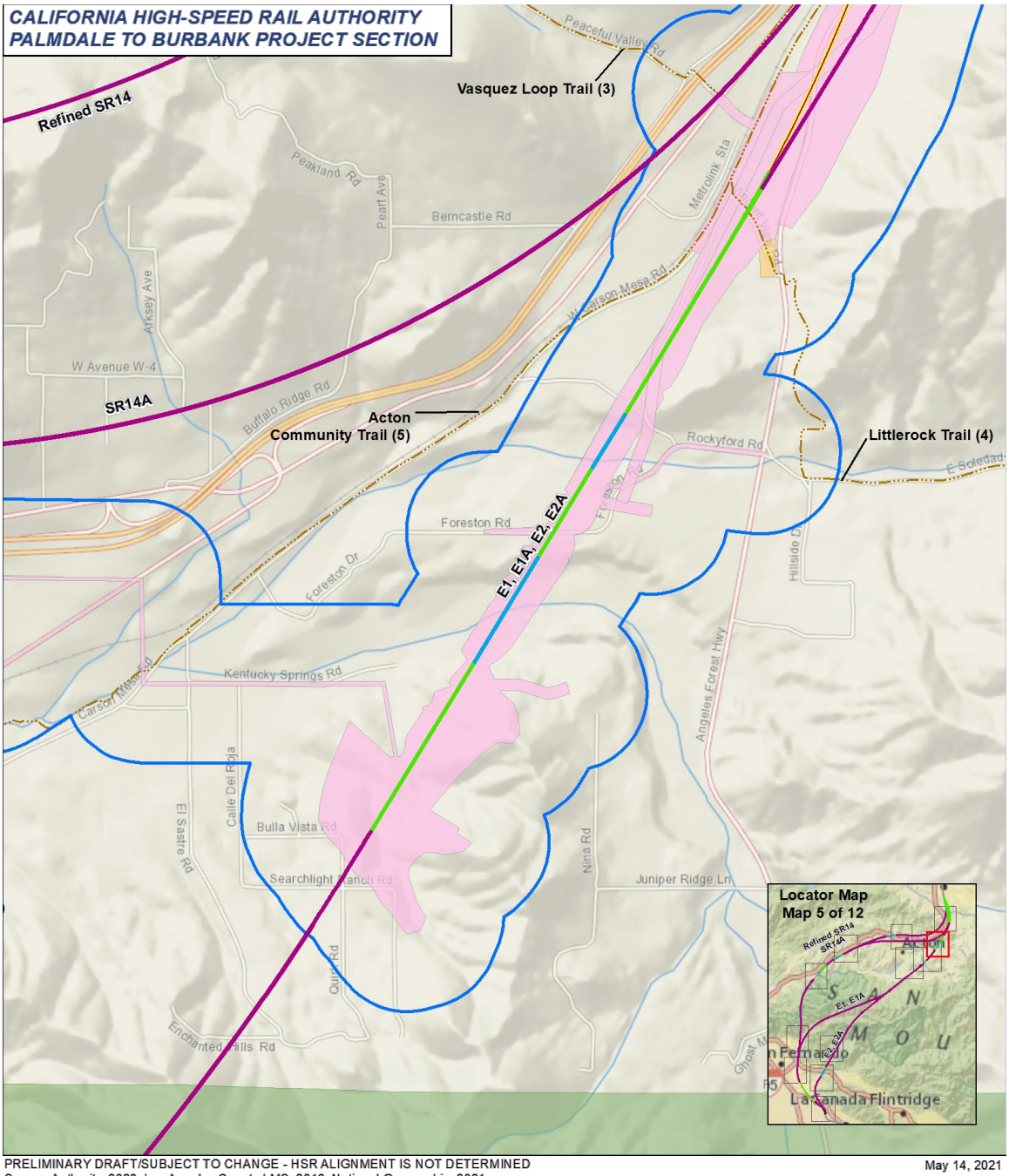

Figure 4-13 Potential Recreational Section 4(f) Resources (Map 5 of 12)

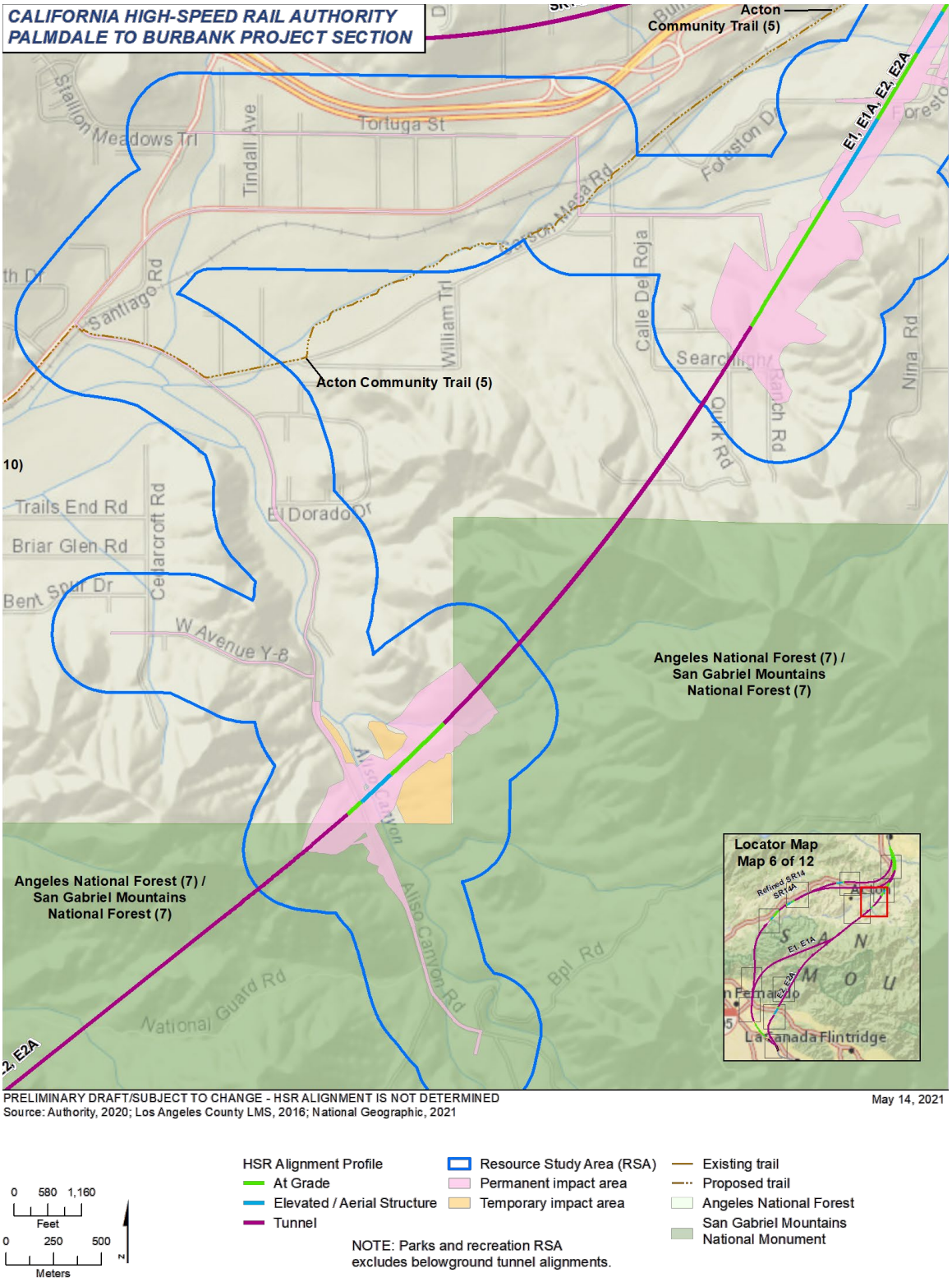

Figure 4-14 Potential Recreational Section 4(f) Resources (Map 6 of 12)

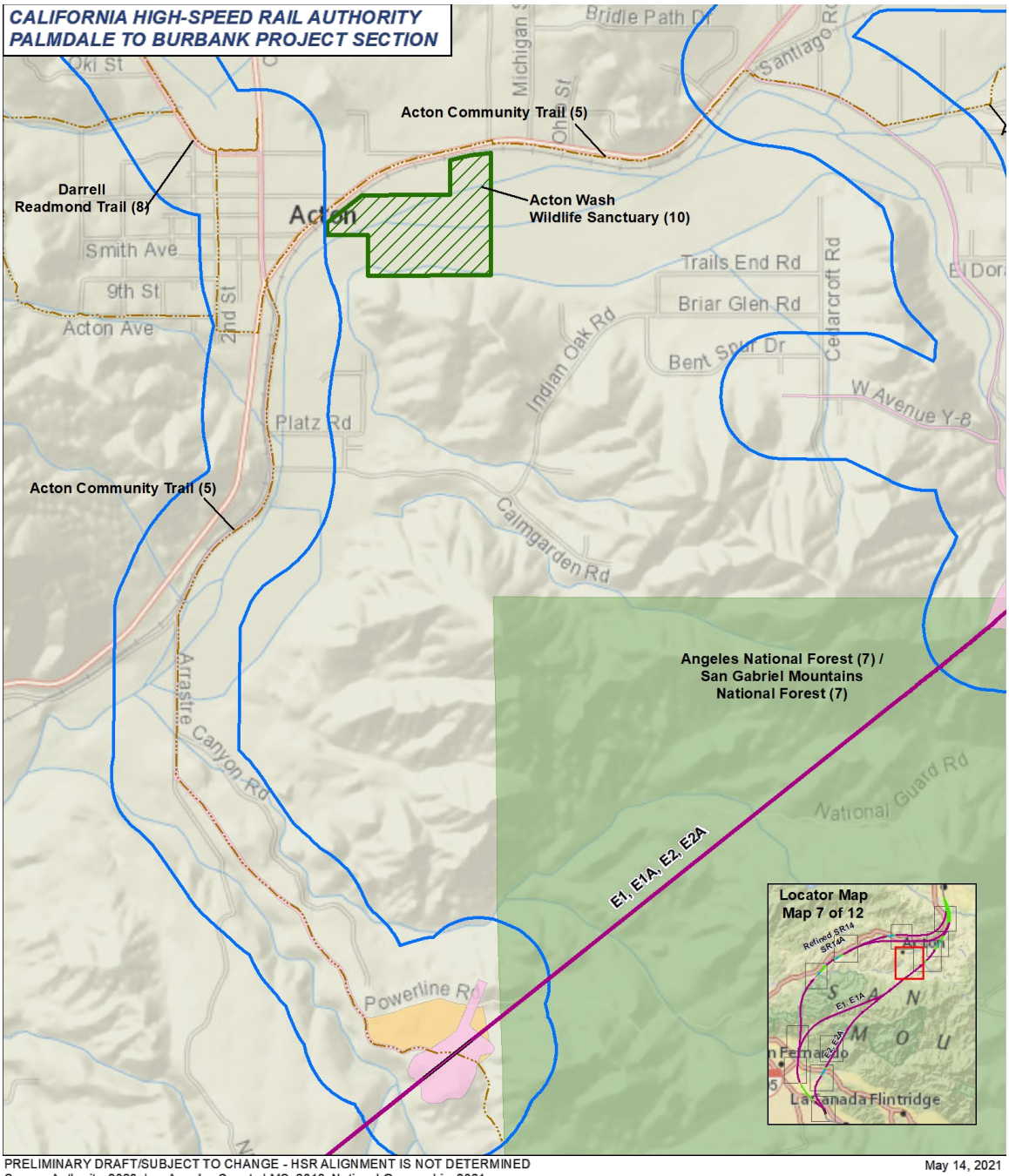

Figure 4-15 Potential Recreational Section 4(f) Resources (Map 7 of 12)

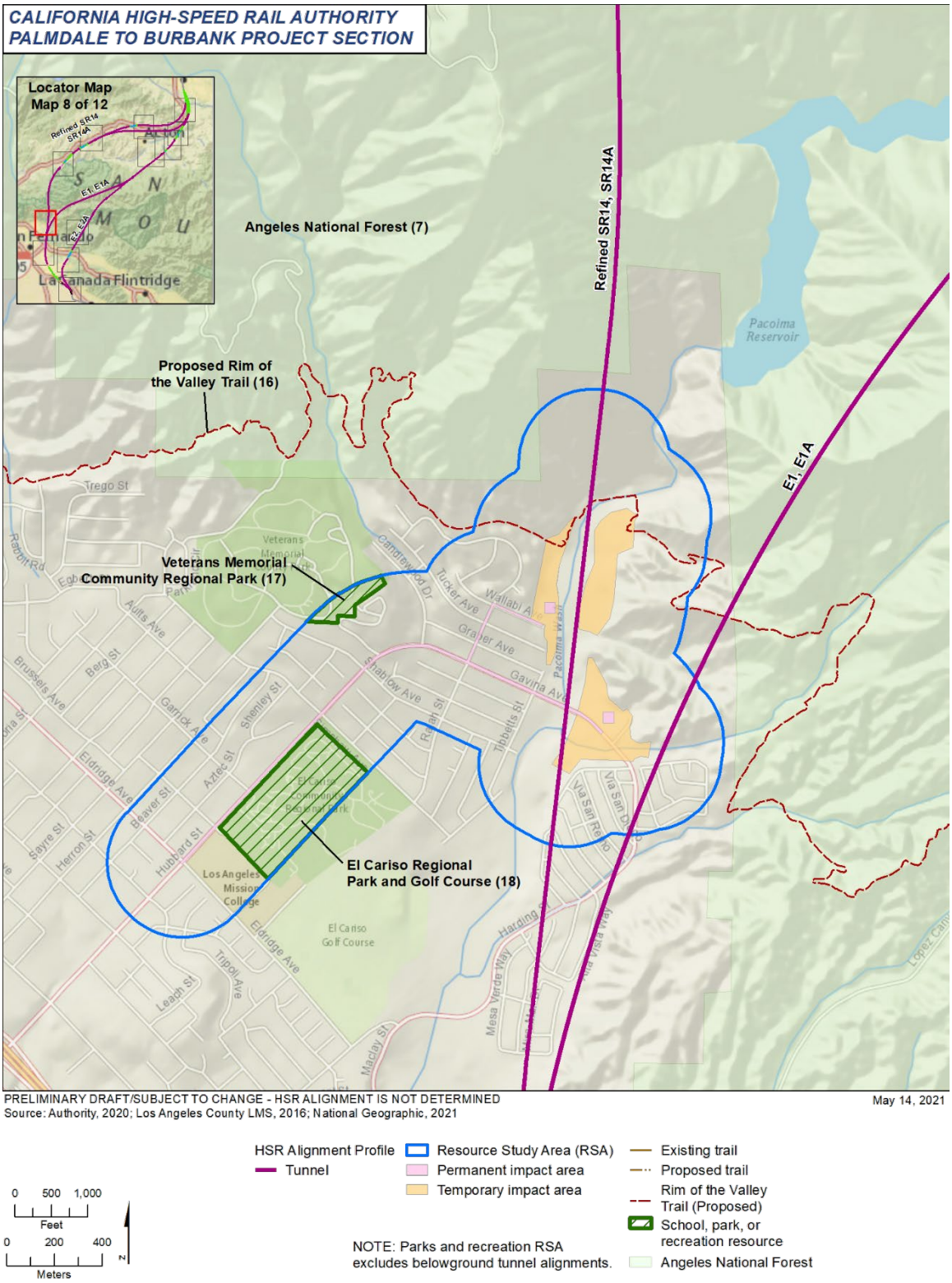

Figure 4-16 Potential Recreational Section 4(f) Resources (Map 8 of 12)

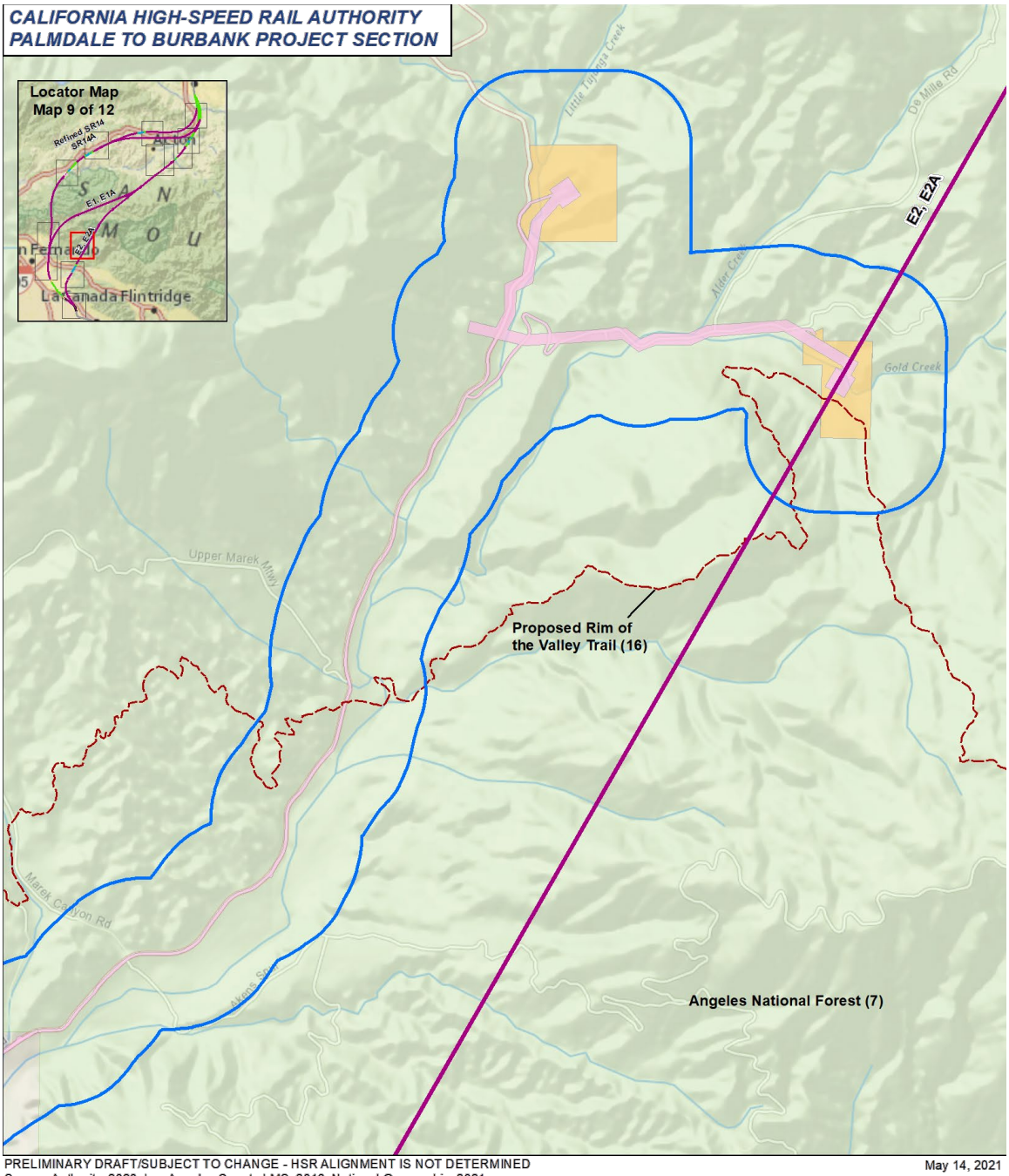

Figure 4-17 Potential Recreational Section 4(f) Resources (Map 9 of 12)

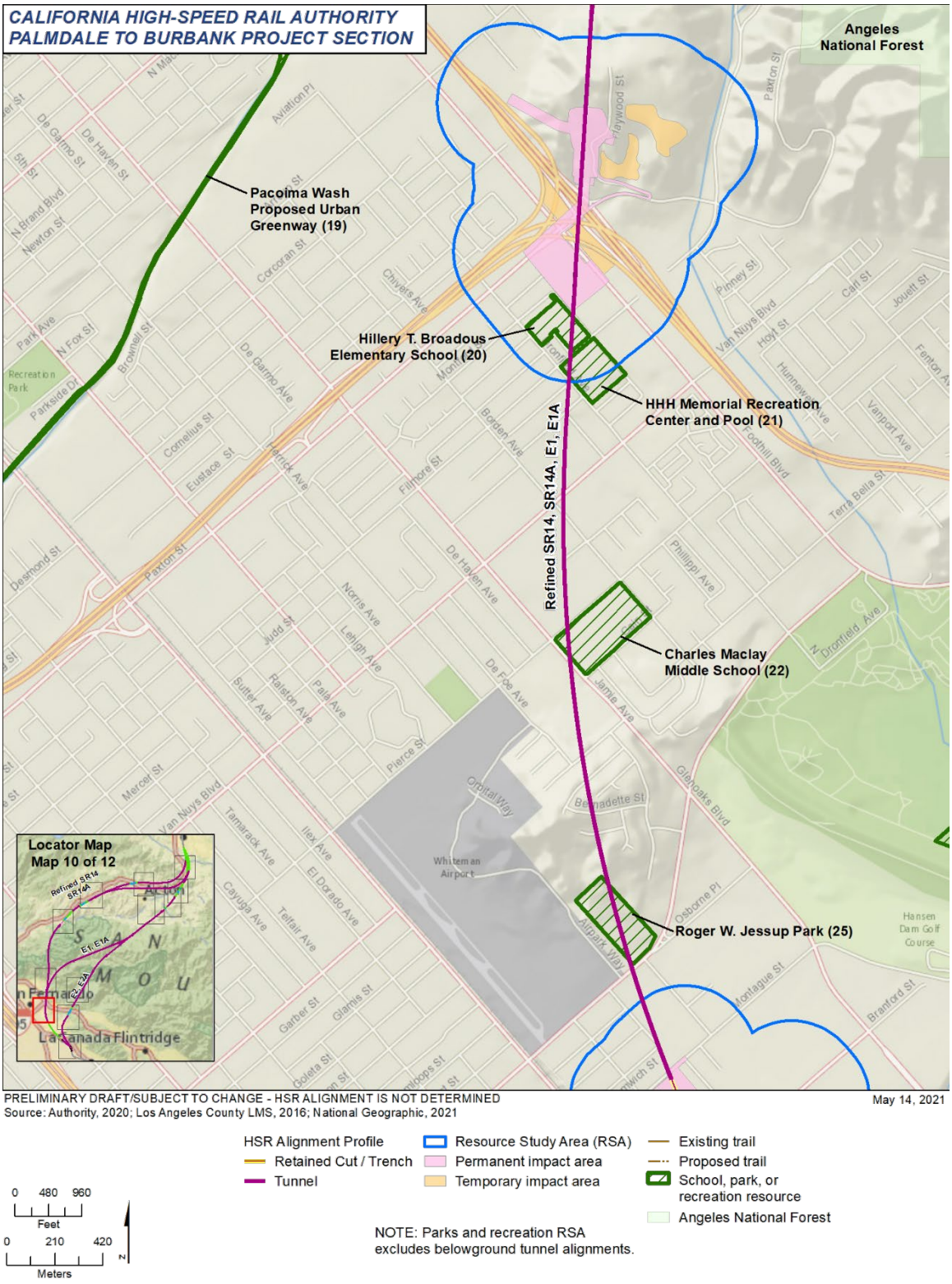

Figure 4-18 Potential Recreational Section 4(f) Resources Map (Map 10 of 12)

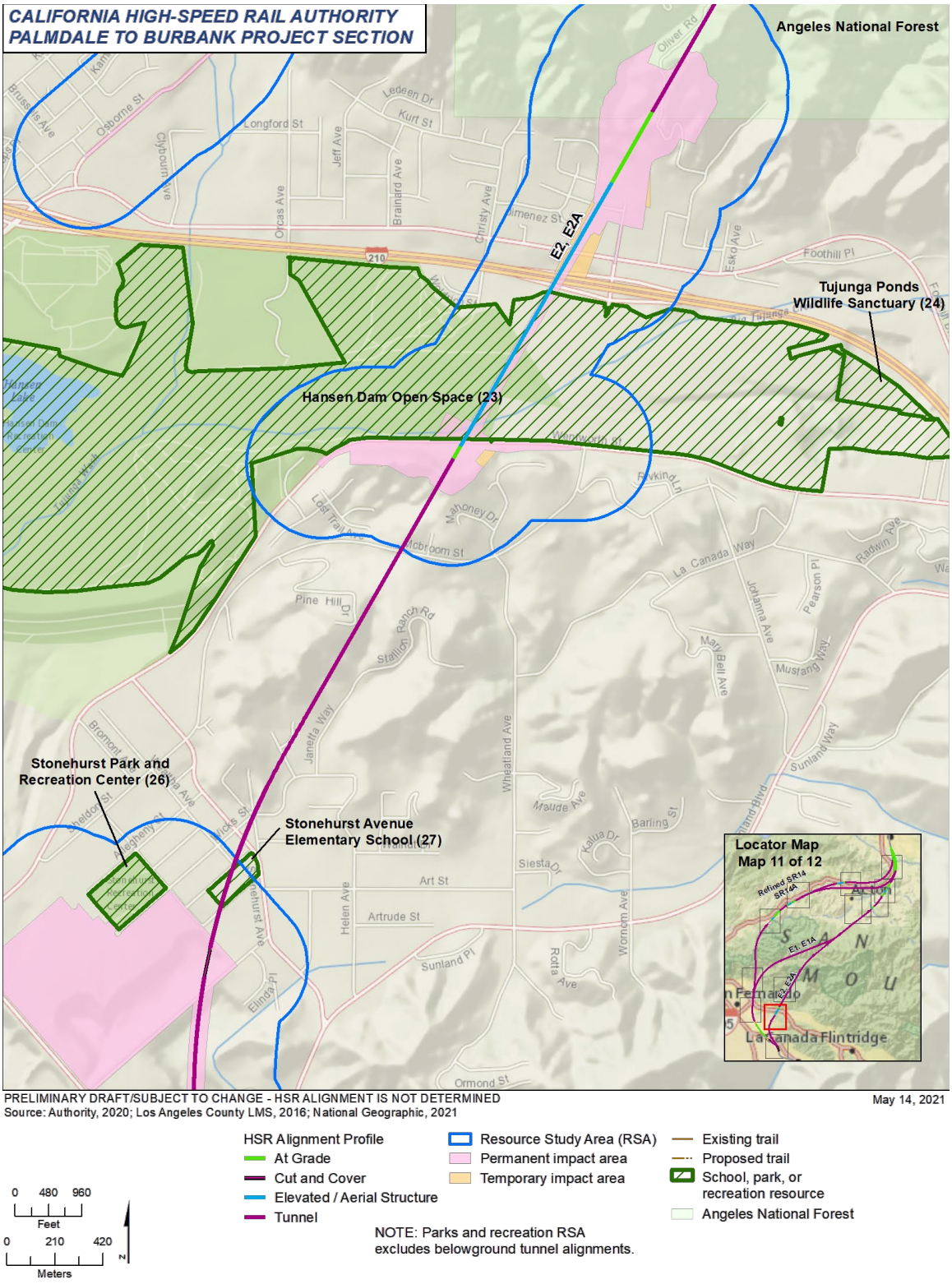

Figure 4-19 Potential Recreational Section 4(f) Resources Map (Map 11 of 12)

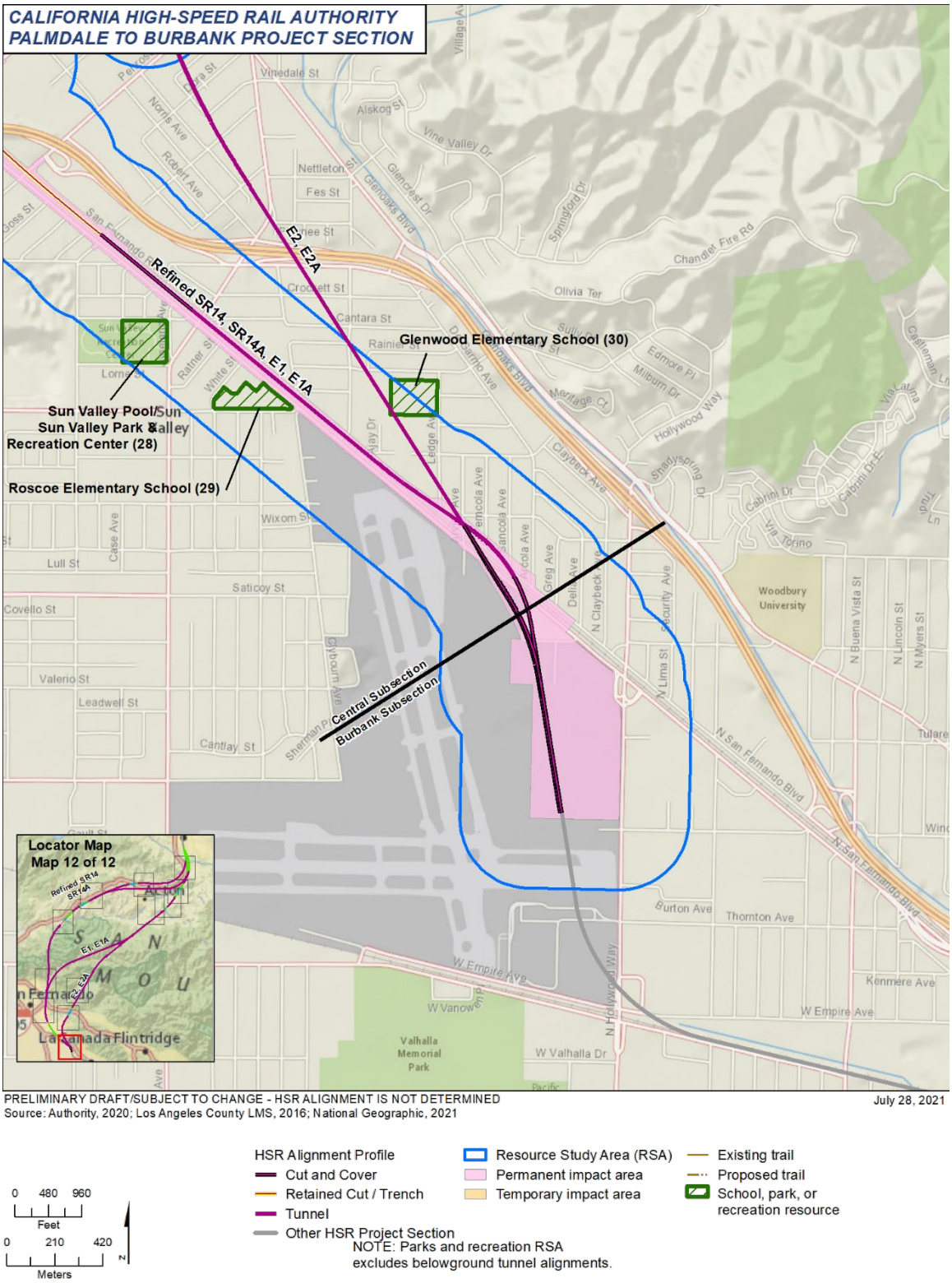

Figure 4-20 Potential Recreational Section 4(f) Resources Map (Map 12 of 12)

4.5.2 Cultural Resources

For purposes of identifying cultural resources potentially protected under Section 4(f), the RSA is the same as the APE defined in Section 3.17, Cultural Resources. Within the archaeological and historic built APEs, background research and field surveys identified 12 historic built resources listed or eligible for listing in the NRHP, with SHPO concurrence, that also qualify as Section 4(f) resources. These historic properties are described in Section 4.5.2.1, and only those resources with the potential for adverse impacts or permanent acquisition are discussed in Section 4.6.2.

See Section 3.17, Cultural Resources, for details of the eligibility criteria of historic built and archaeological resources for listing in the NRHP. There is one known archaeological resource in the Section 4(f) RSA that may qualify as a Section 4(f) resource. Table 4-4 describes historic built resources listed in, or determined to be eligible for, the NRHP, and archaeological resources listed in or determined eligible for the NRHP. As described in Section 4.1.3, resources that are only solely eligible under Criterion D for information that may be gained (typically through data recovery) are not protected under Section 4(f). Cultural resource mitigation measures have been developed to avoid impacts in the event that previously unidentified archaeological resources are encountered during project construction. These measures are provided in Section 4.8.

Table 4-4 Historic Properties Analyzed for Section 4(f) Use

Resource Name	Address	City/Town	Year(s) Built	NRHP Criteria	Distance from Build Alternative Footprint
Central Subsection					
Palmdale Ditch	N/A	Palmdale Vicinity	1895–1896	A/1	**Refined SR14, SR14A, E1, E1A, E2, and E2A** all transect at grade (0 feet, inside footprint)
East Branch of the California Aqueduct	N/A	Palmdale Vicinity	1966–1973	A/1 and C/3 and Criteria Consideration G	**Refined SR14** would tunnel under the channel; **SR14A, E1, E1A, E2,** and **E2A** would transect at grade (0 feet, inside footprint)
Big Creek Hydroelectric System Historic District – Vincent Transmission Lines (contributing structure)	N/A	Multiple	1927	A/1 and C/3	**E1, E1A, E2, E2A:** Road realignments, road improvements, and new overhead traction power systems adjacent to transmission lines (varies)
Blum Ranch	31880 Aliso Canyon Road	Acton Vicinity	1891–1933	A/1 and C/3	**E1, E1A, E2, E2A;** 0 feet; water conveyance would be spanned with a viaduct.
Blum Ranch Farmhouse	31880 Aliso Canyon Road	Acton Vicinity	1916	C/3	**E1, E1A, E2, E2A;** Utility easement running along Aliso Canyon Road (approximately 400 feet), viaducts and portals (approximately 2,000 feet south)

Resource Name	Address	City/Town	Year(s) Built	NRHP Criteria	Distance from Build Alternative Footprint
LADWP Boulder Transmission Line 3	N/A – resource is multi-state	N/A – resource is multi-state	1939–1940	A/1 and C/3	**E1, E1A, E2, E2A:** Tunneled alignment (3,600 feet/0.75 mile)
Eagle & Last Chance Mine Road	FS 05-01-55-45	Angeles National Forest	Circa 1880s	A/1, B/2, and C/3	**E1, E1A, E2, E2A:** Construction staging area (adjacent), tunneled alignment
1890s Acton Ford Road	FS 05-01-55-216	Angeles National Forest	Circa 1890s	A/1	**E1, E1A, E2, E2A:** Overhead traction power system (0 feet)
1893 Monte Cristo Mining District Wagon Road	FS# 05-01-55-116, FS# 05-01-55-158, FS#: 05-01-55-189	Angeles National Forest	Late 19th Century	A/1	**E1, E1A, E2, E2A:** Overhead traction power system (+/-50 feet)
Los Pinetos Nike Missile Site	Forest Road 3N 17	Sylmar	1955–1956	A/1 and C/3	**Refined SR14, SR14A;** The Refined SR14 Build Alternative would tunnel approximately 3,500 feet to the southeast.
Residence	10004 Clybourn Avenue	Los Angeles	Circa 1922	C/3	**E2, E2A;** Tunneling under property (0 feet, inside footprint)
Pink Motel and Café	9457–9475 San Fernando Road	Los Angeles	1946 and 1949	A/1 and C/3	**Refined SR14, SR14A, E1, E1A;** Elevated alignment of Refined SR14, SR14A, E1, and E1A (300 feet from centerline)
Site 19-003890 (Prehistoric Vasquez Rocks Archaeological District)	N/A	N/A	N/A	Listed on the NRHP—Criteria A, C, D (1972)	**Refined SR14, SR14A**; Utility easement intersecting northern and western edges of resource
Burbank Subsection					
None.					

Source: Authority, 2019d
Authority = California High-Speed Rail Authority; LADWP = Los Angeles Department of Water and Power; N/A = Not Applicable; NRHP = National Register of Historic Places

Stipulation VI.E of the Programmatic Agreement states that, in accordance with 36 C.F.R. 800.4(b)(2), phased identification may occur in situations where identification of historic properties cannot be completed. This phased identification approach has been applied to the Palmdale to Burbank Project Section because 90.7 percent of the Build Alternative footprint has not been accessible for archaeological pedestrian survey. Records searches have found that 73 archaeological resources have been previously identified within the Build Alternative footprint. Of these sites, three have been evaluated. Phased identification would occur as access is granted, the project design is refined, and where adverse effects are likely to occur. Known archaeological resources that have not yet been evaluated will be evaluated, if warranted, when access is granted (see Section 3.17, Cultural Resources, of this Draft EIR/EIS). Once surveyed and, if

warranted, they will be evaluated under Section 106. If the sites have the potential to be valuable primarily for preservation in place, an expedited Section 4(f) analysis will be prepared in accordance with the FRA's Section 4(f) regulations, 23 C.F.R. Part 774.9(e), effective as of November 2018. Areas determined to be sensitive for archaeological sites through research and geoarchaeological studies have the potential to yield buried resources; these areas will also be subject to archaeological survey once access is granted.

The Programmatic Agreement requires that a memorandum of agreement (MOA) be negotiated between FRA, the SHPO, the Authority, other agencies, Native American tribes, and interested parties to document the agreed-upon treatment of historic properties that will be adversely affected by the Palmdale to Burbank Project Section. In addition to an MOA, a built environment treatment plan (BETP) and an archaeological treatment plan (ATP) will be developed and reviewed by the MOA signatories and consulting parties.

All historic properties, both built and archaeological, eligible for protection under Section 4(f) in the Palmdale to Burbank Project Section are within the Central Subsection. There are no historic resources in the Burbank Subsection.

4.5.2.1 Description of Historic and Archaeological Resources

Below are brief descriptions of the archaeological and historic built resources in the RSA that are listed in or determined eligible for the NRHP and are protected under Section 4(f).

Palmdale Ditch

The Palmdale Ditch is an irrigation channel located south of Palmdale that was constructed by the South Antelope Valley Irrigation Company in 1896. The resource carried water 8.6 miles from Littlerock Creek north through the northern edge of the San Gabriel Mountains, following along Barrel Springs Road toward Sierra Highway, which crosses before turning north and emptying in Lake Palmdale. The Palmdale Ditch became part of the Palmdale Irrigation District in 1918 and the alignment east of the railroad tracks in the historic built APE has not significantly changed from the period of significance (1896 through 1924), and as such, has maintained integrity. West of the railroad tracks, the ditch was covered after 2008 and is no longer considered to contribute to the historic property. Given the resource's association with the development of irrigated farming in the South Antelope Valley Area, and with the development of the Palmdale and Littlerock Creek Irrigation Districts, the Palmdale Ditch is eligible for listing in the NRHP/California Register of Historical Resources (CRHR) under Criterion A/1.

The boundary of the Palmdale Ditch within the historic built APE begins just east of the railroad tracks, turning south and then west under the tracks to just north of the junction of Sierra Highway and Sierra Hills Lane. It then follows a generally northern route towards Una Lake. As the ditch turns to travel beneath Barrel Springs Road, it flows through a culvert constructed in 1989. The northern terminus of the ditch empties out into Una Lake. As a result, the ditch crosses the APE in two places. Within the historic built APE, west of the railroad tracks, the ditch is underground; in these places, the ditch's presence below ground can be seen on aerials as it resembles an unpaved, dirt road. The rest of the ditch within the APE, east of the railroad tracks, remains earthen and an open water course. The primary character-defining features of the ditch within the historic built APE are its curvilinear alignment and its earthen construction.

East Branch of the California Aqueduct

The EBA was constructed between 1970 and 1971 as a portion of the larger California Aqueduct constructed by means of the State Water Project. The California Aqueduct meets the criteria for listing in the NRHP and the CRHR under Criterion A/1, representing a comprehensively planned and publicly sanctioned water conveyance public works project. It also meets Criterion C/3 for its complex design necessary to redistribute water throughout the state. Because completion of the aqueduct is less than 50 years old, the subject resource is evaluated under NRHP Criterion Consideration G and the CRHR special consideration for properties less than 50 years old. The EBA accounts for 98 miles of the total 444-mile system. The historic boundary of the California Aqueduct consists of the unreinforced concrete channel, original engineer designed roads on

either side of the aqueduct, operational bridges/vehicular crossings that were located at 4-mile intervals, dams, and numerous auxiliary power and pumping plants. Contributing features of the EBA include the canal and unreinforced concrete lining. The character-defining features within the APE include the unreinforced concrete channel and the original roads on either side of the aqueduct.

Big Creek Hydroelectric System Historic District – Vincent Transmission Line

The Big Creek Hydroelectric System- Vincent Transmission Line (Map ID 3862) was constructed in 1927 as a portion of the larger Big Creek Hydroelectric System. The Historic District was nominated to the NRHP in 2016 under Criterion A/1 for its influential role in the physical development of the state and the hydroelectric generation industry in California during the early part of the 20th century, and under Criterion C/3 as a significant and representative example of early 20th century hydroelectric engineering and development, both at the state level. The period of significance was established as 1927, which is when the portion of the transmission line was constructed in the APE. The historic boundary of this contributing element of the historic district is defined by the parcel, right-of-way, and easement boundary for the line. Character-defining features were identified in the NRHP nomination as, “the overall alignment…the original steel frame towers, and the operational integrity of the line as a transmission feature of the Big Creek Hydroelectric System Historic District.” While operationally critical, the insulators, ground wires, and conductor cables are not considered character-defining features as they have been upgraded and replaced over time to maintain operational integrity of the system.

Blum Ranch

The Blum Ranch is located at 31880 Aliso Canyon Road in the Acton area and is eligible for listing in the NRHP and the CRHR at the local level, as a contiguous historic district and as a rural historic landscape. The property is eligible under Criterion A/1 for its association with the early settlement and development of agriculture in northern Los Angeles County. The property is also eligible for listing under Criterion C/3 for the vernacular designs of its buildings, circulation networks, and water conveyance features that date to the farmstead’s period of significance (1891 to circa 1924). Although only one of the contributing components (the main farmhouse) also qualifies for individual listing in the NRHP and CRHR because of its differentiated design combination of the Craftsman and Swiss-Chalet architectural styles, they all share the same method of vernacular construction and the reliance on locally available materials.

Blum Ranch is associated with homesteading, in the area of significance of exploration/settlement and agriculture, at the local level of significance. Homesteading made a significant contribution to the exploration and settlement of northern Los Angeles County, and the Blum Ranch was the first homestead property in the Acton area. The NRHP and CRHR historic district boundaries consist of the perimeter road, the former peach orchard, the existing peach orchard, portions of Aliso Creek, the pear orchard, and the irrigation pipeline in the vicinity of the property.

Blum Ranch Farmhouse

The Blum Ranch Farmhouse, located at 31880 Aliso Canyon Road in the Acton area, is an uncommon example of an early-20th century Craftsman style dwelling with Swiss-Chalet style influences. Although the farmhouse features distinctive characteristics of the Craftsman style and Swiss-Chalet style, the stonework on the house is unique as it showcases the skills of Mr. Blum’s trade as a stonecutter and his Swiss heritage. As a result, it is also illustrative of a type and period of vernacular construction influenced by the abundance of stone and absence of wood as building materials. The farmhouse retains its historic integrity and distinctive decorative details, including exposed rafters, decorative false beams, porches with battered piers, and painted finish on the trim. The Blum Ranch Farmhouse is located within the Blum Ranch Historic District described above; both the Blum Ranch Historic District and Blum Ranch Farmhouse are considered separate eligible historic resources. Given this, the farmhouse is eligible for listing in the NRHP and CRHR under Criterion C/3. The boundary of the resource is limited to the physical footprint of the farmhouse.

LADWP Boulder Transmission Line 3

The LADWP Boulder Transmission Line 3 is eligible for listing in the NRHP as a contributing segment of the Los Angeles Bureau of Power and Light Transmission Line Multi-State Linear Historic District, which played a crucial role in delivering power to the Los Angeles area during and after World War II. The linear historic district is eligible under NRHP and CRHR Criterion A/1 for its direct association with the economic and industrial development of the Los Angeles region, and for pioneering technology in high-voltage transmission. Furthermore, the linear historic district is eligible for listing in the NRHP and CRHR under Criterion C/1 because long-distance transmission at such high voltages had not been attempted prior to its construction. Consequently, the lines and towers included several important design innovations. The period of significance for the linear historic district is 1933–1939, which concludes with the completion of Transmission Line 3. The boundary of the segment of Boulder Dam Transmission Line 3 within the historic built APE, consists of the following contributing elements present within the historic built APE; the route and footprint of the line, one tower, and the associated access road, which consists of 1,122 feet of Edison Road that parallels the transmission line to the south between Ranch Road and the Aliso Arrastre Cutoff.

Eagle and Last Chance Mine Road

The Eagle and Last Chance Mine Road is a historic dirt wagon road which provided primary access to a number of mines on Mt. Gleason. Patented in the 1880s, the Eagle-Last Chance Mining Complex documented by Michael McIntyre in 1996, and by James Brock in 2000, includes a minimum of 18 mining claims, plus the Eagle and Last Chance Mine Road that served them. The Eagle and Last Chance Mine Road could be included in a potential NRHP-eligible district associated with Mt. Gleason mining activities. As a contributor to a potential mining-related historic district, the Eagle and Last Chance Mine Road is potentially significant under Criterion A/1 because, in its role of transporting people and materials to and from the mines on Mt. Gleason, it played an important role in the economy and development of the area according to the previous evaluations.

The Eagle and Last Chance Mine Road was considered for eligibility in 1996 and 2000 as a contributor to a potential mining-related historic district, potentially significant under NRHP and CRHR Criterion B/2 due to its association with George Gleason. This linear resource may be significant under Criterion B/2 as it is directly associated with Gleason's important role in the development of mining activity on Mt. Gleason. Noting the location of the Mt. Gleason mines at high elevations, which would have required innovative engineering to access them, McIntyre and Brock also considered the Eagle and Last Chance Mine Road as a contributor to a historic district that is potentially significant under NRHP and CRHR Criterion C/3. For the purposes of this evaluation, the historic boundary of the Eagle and Last Change Mine Road is defined as the alignment of the existing roadway that remains visible on the landscape within the historic built APE. Character-defining features consist of the alignment, road width, grade, roadcuts, and road surface, which is eroded in some locations and regraded in the northern portions.

1890s Acton Ford Road

Located in the ANF, the 1890s Acton Ford Trail is a spur wagon trail that is directly associated with the 16-mile-long Monte Cristo Mining District Wagon Trail developed from the 1860s through the 1890s. Based on a 2006 evaluation, the 1890s Acton Ford Trail potentially meets the criteria for listing in the NRHP and the CRHR as a contributor to a potentially NRHP-eligible district associated with the Monte Cristo Mining District Wagon Trail. Although it does not appear that SHPO formally concurred with the 2006 evaluation, the 1890s Acton Ford Trail is treated as having significance for the purposes of this analysis as a potential historic district contributor under NRHP and CRHR Criterion A/1.

It is directly associated with the 1893 Monte Cristo Mining District Wagon Road, which linked the gold mining areas in the Upper Big Tujunga Canyon area with the Southern Pacific Railroad and communities in Soledad Canyon. This specific segment served a supportive purpose, allowing access to juniper trees, which contributed to the overall functioning of the area as a mining

center. Due to diminished integrity, the 1890s Acton Ford Trail lacks distinction as an individually eligible resource. The boundary of the historic property within the historic built APE is defined by the existing roadway width and length within the historic alignment, 0.15 mile and 12–15 feet, respectively. Character-defining features of the roadways include its alignment, width, grade, roadcuts, unpaved wagon-road surface in the eastern segment, and graded surface in the western portion.

1893 Monte Cristo Mining District Wagon Road

The Monte Cristo Mining District Wagon Road is a wagon road and trail system in the ANF and was associated with mining activity in the Upper Big Tujunga Canyon area. Based upon a 2006 recommendation, this linear feature is treated as eligible for the NRHP at the local level of significance and the CRHR as a contributor to a potential historic district or a potential rural historic landscape. Under NRHP Criterion A and CRHR Criterion 1, the Monte Cristo Mining District Wagon Road is treated as a contributor to a potential historic district associated with gold mining or a rural historic landscape. A full evaluation of this potential historic district is beyond the scope of the current investigation; however, it has been determined that the road served as vital connection between historically significant gold mining activities in the Upper Big Tujunga Canyon area and communities and the Southern Pacific Railroad in Soledad Canyon. Therefore, it would potentially contribute to a larger district expressing the area's gold mining or rural development history, if such a district existed. Until such a historic district can be proposed and evaluated, it is recommended that wagon road segments be managed as if they were eligible for inclusion to the NRHP.

The boundary for this property is defined as the alignment of the existing roadway that is still visible on the landscape within the historic built APE. Character-defining features include the roadway alignment, its width and grade, and roadcuts.

Los Pinetos Nike Missile Site

The Los Pinetos Nike Site (Map ID 152) was constructed between 1955 and 1956. The resource meets the criteria for listing in the NRHP and the CRHR under Criterion A/1 for its association with the development of the Nike System for the Los Angeles Defense Area from 1955–1968, which made a significant contribution both to industrial technology and the policy-making decisions of American government during the late 1950s and 1960s. The property also meets the criteria for listing in the NRHP under Criterion C, and the CRHR under Criterion 3. In addition, Los Pinetos is considered to be the most intact of all the Nike installations in the ANF.

The historic boundary of the Los Pinetos Nike Missile Site consists of three separate sites in the northwest corner of the ANF: (1) the Launch Area (or missile launching site), (2) the Barracks, and (3) the Radar Control Area.

Character-defining features of the Los Pinetos Nike Missile Site include:

- Launch Area—Sentry box, paint and oil storage building, missile assembly and test building, ready room, three underground storage magazine sites (silos), warheading building, sentry control station, water storage tank, and canine kennels.
- Barracks—Two dormitories, water storage tank, pump house, mess hall, and gas station/garage.
- Radar Control Area—Barracks and officer's quarters, sentry box, two radar platforms, mesh helipad, two concrete pads, and towers.

In addition to the three sites containing buildings and structures, the line-of-sight provided by the location of this station is also considered a character-defining feature of the historic property. Particularly from the barracks site, one can view the San Fernando Valley to the southwest, and Canyon Country to the northwest. From the launching area, one can view most of the greater Los Angeles Basin.

Residence – 10004 Clybourn Avenue

The single-family residence located at 10004 Clybourn Avenue (Map ID 1504) is eligible under NRHP Criterion 3 and CRHR Criterion 3 at the local level, as a superb example of a locally distinctive architectural style, known as Stonemason Vernacular or Arroyo Stone house. Both Stonemason Vernacular and Arroyo Stone houses have been recognized by the City of Los Angeles as locally significant architectural types and styles. Most commonly found in the northeast San Fernando Valley—specifically in the city of Los Angeles neighborhoods of Stonehurst (adjacent to the Shadow Hills neighborhood) and Sunland–Tujunga (east of I-210)—the unique local style and character is referred to in SurveyLA (City of Los Angeles 2007) as "Stonemason Vernacular," a derivative of the Craftsman style of architecture. Character-defining features of eligible examples of this style that are displayed on this residence include: flat or low-sloped roofs with parapets; multi-pane windows with wood frames, sills, and sashes (casement or hung); stone masonry walls; stone masonry chimneys; deeply recessed window and door openings when stone masonry is present; little if any ornamentation; stone masonry landscape elements such as pathway markers and fences; and deep front yard setbacks with landscape and mature trees. The boundary of the historic property was identified as the current legal parcel; the contributing features within this boundary include the 1922 residence, the curvilinear drive, and the masonry retaining walls along the road, which reflect the adherence to the historic architectural style and provide access between the house and the road.

Pink Motel and Café

The Pink Motel and Café are located at 9457–9475 San Fernando Road in Los Angeles. The properties are eligible under NRHP and CRHR Criterion C/3, as rare and outstanding examples of the late-1940s Googie-style roadside architecture.

Each building is rare example of and one of the few representations remaining of post-World War II roadside architecture in the San Fernando Valley, and together they signify a remarkable example of the post-war roadside commercial development. The Pink Motel captures elements of the Googie style, as evidenced by the cantilevered entry, the slender porch support, the flat roof, the distinctive neon sign, and the decorative grilles along the main elevation of the building. The former Pink Café, now Cadillac Jack's, also captures elements of the Googie style, as reflected in the cantilevered entry, the cantilevered roof, and the stacked sign at the southeast corner of the building. The historic property consists of the Pink Motel and Café, the swimming pool, and the signs for both the motel and café. The NRHP-eligible historic property boundary consists of the entire city lots of 9457 and 9475 San Fernando Road (Assessor's Parcel Numbers 2629-007-004 and 2629-007-003, respectively) that have been historically and are currently associated with the properties.

Site 19-003890 (Vasquez Rocks Archaeological District)

This resource is the Vasquez Rocks Archaeological District and includes sites 19-00358-00381 and 19-00440 (CA-LAN-358 through 381 and CA-LAN-440). At the time it was nominated for inclusion in the NRHP in 1971, it was described as a cluster of 25 sites within a 200-acre area that made up the major components of the Late Prehistoric Rancheria occupied by the Alliklik (Tataviam) people. The types of sites within the locality include rock shelter sites, habitation sites, large and small lithic sites, multi-activity workshop sites, rock art sites, an earthen oven site, and a cemetery site. The Vasquez Rocks Archaeological District was placed on the NRHP in 1972.

4.5.3 Park, Recreation Area, and Wildlife and Waterfowl Refuge Resources Evaluated and Determined Not to Be Subject to Protection under Section 4(f)

In addition to the resources described in Sections 4.5.1 and 4.5.2 and listed in Table 4-1, the resources listed in Table 4-5 were evaluated for Section 4(f) applicability. These resources were determined not to be subject to Section 4(f) requirements for the reasons described below.

Table 4-5 Park, Recreation Area, and Wildlife and Waterfowl Refuge Resources Not Subject to Section 4(f) Requirements

Resource	Reason Why the Resource Is Not Subject to Protection under Section 4(f)
Central Subsection	
Lake Palmdale	Lake Palmdale is owned by the Palmdale Water District. Although the lake is owned by a public agency, its use for recreation is restricted and reserved for members of the Palmdale Fin and Feather Club; this resource is not open to the public or publicly accessible. Therefore, this resource is not subject to Section 4(f) requirements.
Una Lake	Una Lake is privately owned and enclosed by fencing. This resource does not function primarily as a refuge. Therefore, this resource is not subject to Section 4(f) requirements.
Rio Dulce Ranch/Open Space	Although access to the open space owned by the U.S. Department of the Interior, Bureau of Land Management is not restricted, there are no recreational amenities on the properties or access routes to/from the resources from public rights-of-way. This site is also not officially designated as a wildlife refuge and does not function primarily as a refuge. Therefore, this resource is not subject to protection under Section 4(f).
U.S. Department of Interior, Bureau of Land Management Holdings	Although access to these parcels is not restricted, there are no recreational amenities or trails on the properties or access routes to/from the resources. These sites are also not officially designated as a wildlife refuge, nor do they function primarily as refuge, and are therefore not subject to protection under Section 4(f).
Agua Dulce Canyon Parkland	There are no recorded recreational amenities or trails within the Agua Dulce Canyon Parkland; nor is it officially designated or primarily used as a wildlife refuge. Therefore, this is not subject to protection under Section 4(f).
Burbank Subsection	
San Fernando Road Bike Path (Proposed)	This planned bike path would be an off-street bike path for public use and would be considered part of the transportation network. When complete the bikeway would help extend the County's network of regional Class I bike paths and connect directly to the Downtown Burbank Metrolink Station. The project is primarily funded by a grant from the Los Angeles County Metropolitan Transportation Authority. The proposed connectivity of the bike path does not demonstrate recreational characteristics or use as a recreational resource as defined under Section 4(f), consistent with the FHWA's 2012 Policy Paper.

Source: Authority, 2019d
Authority = California High-Speed Rail Authority; FHWA = Federal Highway Administration; U.S. = United States

4.6 Preliminary Section 4(f) Use Assessment

4.6.1 Park, Recreation Area, and Wildlife and Waterfowl Refuge Resources

Preliminary use assessments for the park, recreation, and wildlife and waterfowl refuge resources relative to Build Alternatives are discussed in this section. The following Section 4(f) findings are preliminary and final use determinations will be made after consultation with Section 4(f) OWJ

and a formal public review period that begins with the publication of the Draft EIR/EIS. Final use determinations will be published in the Final EIR/EIS. All parks and recreation Section 4(f) resources are shown in Figure 4-9 through Figure 4-20; however, only those resources that would incur a use or are in close enough proximity to a Build Alternative as to incur proximity impacts as listed in Table 4-2 above and are described below.

Each resource is first evaluated for permanent use. If a permanent use is determined to occur, an evaluation of whether or not the use would be *de minimis* is completed. If no permanent use is found, an analysis is conducted to evaluate for temporary occupancy. If there is no temporary occupancy, an analysis of constructive use is completed. The analysis below takes into consideration IAMFs, and mitigation measures identified in other sections of the Draft EIR/EIS that would reduce Build Alternative impacts on the resources described in this chapter. Evaluation of use under Section 4(f) is based on the "net" effect remaining after the application of avoidance, minimization, and mitigation measures.

4.6.1.1 Central Subsection

Palmdale Hills Trail (Proposed Extension) (Map ID 2)

Permanent Use – De Minimis

Proposed Extension – Constructed

The six Build Alternatives would cross the Palmdale Hills Trail extension at different points. The Refined SR14 Build Alternative would tunnel under the planned alignment for the Palmdale Hills Trail extension near Courson Ranch Road. If the trail extension is operational at the time of Build Alternative construction, the trail would need to be temporarily closed or detoured around construction activities in this area. Because of the trail's proposed alignment east-west on the northern side of the EBA, temporary detouring may be difficult. It is assumed that the trail would be temporarily closed to the public in this location during Build Alternative construction.

Segments of the trail outside of the construction area would remain open and accessible to the public during construction. After construction in this area is complete, the trail would be restored to allow users to travel through the area and over the Refined SR14 Build Alternative tunnel. The tunnel portal may require the trail to be realigned to the north to provide an acceptable trail grade for pedestrians. The realigned trail would still cross HSR right-of-way, requiring that a small portion of the trail be acquired, or a permanent access/maintenance easement be created. The overall connectivity of the trail would not be diminished subsequent to construction. This incorporation of a segment of the trail into HSR right-of-way would constitute a permanent use of a portion of this resource.

The SR14A, E1, and E2 Build Alternatives would require construction of an at-grade railway alignment and the E1A and E2A Build Alternatives would require construction of an elevated structure that directly conflicts with the proposed trail extension, shown on Figure 4-1 and Figure 4-10. The trail would intersect with the E1 and E2 Build Alternatives at grade south of Rae Street. The trail would intersect with the SR14A Build Alternative at grade and would intersect with the elevated structures of the E1A and E2A Build Alternatives near Sierra Highway. These Build Alternatives would affect the proposed trail alignment and would require the realignment of an approximately 300-foot (0.06-mile) segment of the proposed 12-mile trail. This would constitute a permanent use of the Palmdale Hills Trail.

Access to the trail may also be temporarily restricted during construction; however, segments of the trail outside of the temporary construction area would remain open and accessible to the public. PK-IAMF#1 would require preparation of a technical memorandum to identify project design features that would minimize impacts on the trail. These features may include safe and attractive access for present travel modes to ensure ease of use. The overall connectivity of the trail would not be diminished as the trail would remain open and available to the public along its new alignment after construction of the SR14A, E1, E1A, E2, or E2A Build Alternative is completed.

Proposed Extension – Not Constructed

Although implementation of the Refined SR14 Build Alternative would not physically affect the trail if the trail does not currently exist, construction activities in this area may result in topographical or other permanent changes, such as the potential realignment of the EBA and the addition of a tunnel portal, which would require the future alignment of the planned trail to be changed. Construction of the tunnel portal would change the topography in the immediate area from relatively flat to steeply graded around the portal, making it difficult and unsafe for trail users to traverse. This could affect approximately 0.6 mile of the 12-mile proposed trail. However, construction of the Refined SR14 Build Alternative would not prevent future construction of the proposed Palmdale Hills Trail extension.

Preliminary Summary of Findings

If the trail extension has not been constructed prior to implementation of the Build Alternatives, no potential use would occur because the Build Alternatives would not preclude future extension of the trail.

The Authority has preliminarily concluded that the permanent use of the trail and realignment of a small portion of the trail would constitute a *de minimis* impact under all six Build Alternatives because the features and attributes that qualify the resource for protection under Section 4(f), including its purpose as a contiguous recreational hiking trail, would not be diminished due to the California HSR System. Accordingly, visual and noise impacts would not be of a severity that the protected activities, features, or attributes that qualify the Palmdale Hills Trail for protection under Section 4(f) would be substantially impaired, and no constructive use would result.

The trail intersects with and crosses existing transportation corridors along its current alignment. Recreational use would be maintained with implementation of all six Build Alternatives. Therefore, the Authority has preliminarily concluded that the Build Alternatives' construction would constitute a *de minimis* impact as defined by 49 U.S.C. 303(d). This preliminary determination is subject to concurrence by the OWJ for this resource (City of Los Angeles Department of Recreation and Parks).

Acton Community Trail (Proposed Extension) (Map ID 5)

Permanent Use – De Minimis

The Acton Community Trail and proposed trail extensions are outside the limits of the nearest permanent project improvements for the Refined SR14 and SR14A Build Alternatives, as shown on Figure 4-13 through Figure 4-15. With implementation of the Refined SR14 and SR14A Build Alternatives, the nearest improvements would be approximately 1.8 miles northwest of the extended trail. Therefore, the Refined SR14 and SR14A Build Alternatives would not result in use of this resource.

Proposed Extension – Constructed

The construction of traction power facilities for the E1, E1A, E2, and E2A Build Alternatives would require the permanent acquisition of an approximately 150-foot segment of the 17.75-mile proposed Acton Community Trail extension, if the proposed extension is operational when the E1, E1A, E2, and E2A Build Alternatives are implemented (see Figure 4-13 through Figure 4-15). This acquisition of a segment of the trail and realignment would represent a permanent incorporation of a portion of the planned resource into a transportation facility and would constitute a permanent use of land from the Acton Community Trail.

The trail would be realigned slightly to the west, following the planned realignment of the Metrolink tracks in this area, and would maintain its planned connectivity (realignment of the Metrolink tracks are described in Chapter 2, Alternatives). If the proposed trail extension is operational at the time of the Build Alternatives' construction, access to the extended and realigned trail may be temporarily restricted in this area during construction. The trail would remain open and available to the public upon completion of construction activities. and would function as it did prior to operation of the E1, E1A, E2, or E2A Build Alternatives.

Proposed Extension – Not Constructed

If the proposed trail extension is not constructed at the time of the E1, E1A, E2, and E2A Build Alternatives' construction, the trail would not be physically affected. Construction of the Build Alternatives would not prevent future construction of the proposed Acton Community Trail extension.

Preliminary Summary of Findings

If the trail extension has not been constructed prior to implementation of the Build Alternatives, no potential use would occur because the Build Alternatives would not preclude future extension of the trail.

The Authority has preliminarily concluded that the permanent use of the trail and trail realignment would constitute a *de minimis* impact because the features and attributes that qualify the resource for protection under Section 4(f), including its purpose as a contiguous recreational hiking trail, would not be diminished under the E1, E1A, E2, and E2A Build Alternatives. Accordingly, visual and noise impacts would not be of a severity that the protected activities, features, or attributes that qualify Acton Community Trail for protection under Section 4(f) would be substantially impaired, and no constructive use would result.

The existing trail intersects with and runs parallel to existing transportation corridors along its alignment, including Metrolink. Trail connectivity would be maintained with implementation of the E1, E1A, E2, and E2A Build Alternatives. Therefore, the Authority has preliminarily concluded that HSR operation in the Palmdale to Burbank Project Section would constitute a *de minimis* impact as defined by 49 U.S.C. 303(d). This preliminary determination is subject to concurrence by the OWJ for this resource (Los Angeles County).

Littlerock Trail (Proposed Extension) (Map ID 4)

Permanent Use – De Minimis

Proposed Extension – Constructed

The Refined SR14 and SR14A Build Alternatives would include the construction of a traction power facility and overhead utility lines that cross the proposed Littlerock Trail extension in the area of the SR 14/Sierra Highway interchange (Figure 4-13). The traction power facility would be constructed near the proposed Little Rock Trail extension and Acton Community Trail extension intersection, and overhead utility lines would cross the proposed trail extension east of the SR 14/Sierra Highway interchange.

While the construction of traction power facilities and overhead utility lines would not require realignment of the trail, it would intersect with approximately 270 feet of the 1-mile proposed Littlerock Trail extension and would constitute a permanent use. The trail would remain open and available to the public and would function as it was before construction and operation of the Refined SR14 and SR14A Build Alternatives. There are no temporary easements outside of the permanent use areas, and temporary closure of the trail is not anticipated during construction.

The E1, E1A, E2, and E2A Build Alternative alignments would cross the proposed Littlerock Trail extension at grade at the SR 14/Sierra Highway interchange. Implementation of the E1, E1A, E2, and E2A Build Alternatives would affect approximately 720 feet of the 1-mile proposed Littlerock Trail extension. Access to the trail along East Carson Mesa Road would be temporarily restricted during construction. Although a small portion of the trail would be used by the Authority, the trail would be open to the public when project construction is completed and would function as it was before the operation of the E1, E1A, E2, or E2A Build Alternatives.

Proposed Extension – Not Constructed

If the proposed trail extension is not constructed at the time of the Build Alternatives' construction, the trail would not be physically affected. Construction of the Build Alternatives would not prevent future construction of the proposed Littlerock Trail extension.

Preliminary Summary of Findings

If the trail extension has not been constructed prior to implementation of the Build Alternatives, no potential use would occur because the Build Alternatives would not preclude future extension of the trail.

The Authority has preliminarily concluded that the permanent use of land at the Littlerock Trail extension for construction of the Refined SR14 and SR14A Build Alternatives and the traction power facilities would constitute a *de minimis* impact because the features and attributes that qualify the resource for protection under Section 4(f), including its purpose as a contiguous recreational hiking trail, would not be diminished. The trail would remain open and accessible to the public and its connectivity would not be diminished. Accordingly, visual and noise impacts would not be of a severity that the protected activities, features, or attributes that qualify the Littlerock Trail for protection under Section 4(f) would be substantially impaired, and no constructive use would result under the Refined SR14 and SR14A Build Alternatives.

Though implementation of the E1, E1A, E2, and E2A Build Alternatives would temporarily restrict use of the proposed Littlerock Trail extension, access and connectivity of the trail would be maintained subsequent to project construction. Therefore, the features and attributes that qualify the resource for protection under Section 4(f), including its purpose as a contiguous recreational hiking trail, would not be diminished. The Authority has preliminarily concluded that the construction and operation of the E1, E1A, E2, and E2A Build Alternatives at Littlerock Trail would constitute a *de minimis* impact, as defined by 49 U.S.C. 303(d). This preliminary determination is subject to concurrence by the OWJ for this resource (City of Los Angeles).

Vasquez Loop Trail (Proposed Extension) (Map ID 3)

Permanent Use – De Minimis

Proposed Extension – Constructed

The Refined SR14 Build Alternative alignment would cross the proposed Vasquez Loop Trail extension in three locations: near Peaceful Valley Road, along Red Rover Mine Road, and along Crown Valley Road (Figure 4-10 and Figure 4-13). Near Peaceful Valley Road and along Crown Valley Road, the Refined SR14 Build Alternative would be constructed in a bored tunnel. No topographical changes at the surface and/or other permanent changes would occur at this location. Therefore, no temporary or permanent acquisitions of this trail alignment are anticipated near Peaceful Valley Road and along Crown Valley Road.

At Red Rover Mine Road, the Refined SR14 Build Alternative alignment would traverse the proposed trail extension on an elevated viaduct. Overhead electrical utility lines would also be installed across the proposed trail extension at Red Rover Mine Road, approximately 300 feet north of the railway viaduct. Temporary easements would be needed to construct the overhead facilities across the proposed Vasquez Loop Trail extension at Red Rover Road; these are associated with both the Refined SR14 and SR14A Build Alternatives. These temporary easements are not anticipated to require the temporary closure of the trail.

Construction of the overhead electrical utility lines would require the permanent acquisition of approximately 160 feet of the 3-mile proposed Vasquez Loop Trail extension. Construction of the elevated railway would require permanent acquisition of an additional 170 feet of the trail to allow for access and maintenance of the electrical lines. This would not represent a permanent change to the use of the proposed extension; however, incorporation of a portion of the planned 3-mile resource into a transportation facility would constitute a permanent use of land from the Vasquez Loop Trail.

The SR14A, E1A, and E2A Build Alternative alignments would cross the Vasquez Loop Trail extension in a bored tunnel near the SR 14/Sierra Highway interchange.

Construction of the E1 and E2 Build Alternative alignments and roadway and interchange realignments at the SR 14/Sierra Highway interchange would require the permanent acquisition of approximately 0.2 mile of the proposed Vasquez Loop Trail extension. The trail would be

realigned along with the existing access road where the trail is proposed to be extended. This would represent a permanent change to the proposed extension through incorporation of a portion of the planned 3-mile resource into a transportation facility and would constitute a permanent use of land from the Vasquez Loop Trail. The trail would remain open and available to the public when project construction is complete and would function as it was before the operation of the E1 or E2 Build Alternatives.

Proposed Extension – Not Constructed

If the proposed trail extension is not constructed at the time of the Build Alternatives' construction, the trail would not be physically affected. Construction of the Build Alternatives would not prevent future construction of the proposed Vasquez Loop Trail extension.

Preliminary Summary of Findings

If the trail extension has not been constructed prior to implementation of the Build Alternatives, no potential use would occur because the Build Alternatives would not preclude future extension of the trail.

The Authority has preliminarily concluded that the permanent use of a portion of the trail would constitute a *de minimis* impact because the features and attributes that qualify the resource for protection under Section 4(f), including its purpose as a contiguous recreational hiking trail, would not be diminished with implementation of the Build Alternatives. Accordingly, visual and noise impacts would not be of a severity that the protected activities, features, or attributes that qualify the Vasquez Loop Trail for protection under Section 4(f) would be substantially impaired, and no constructive use would result.

The existing trail intersects with and crosses existing transportation corridors along its alignment. The trail connectivity would be maintained with implementation of all of the Build Alternatives. Therefore, the Authority has preliminarily concluded that HSR operation in the Palmdale to Burbank Project Section would constitute a *de minimis* impact as defined by 49 U.S.C. 303(d). This preliminary determination is subject to concurrence by the OWJ for this resource (City of Los Angeles Department of Recreation and Parks).

Pacific Crest Trail (Map ID 11)

Permanent Use – De Minimis

The Refined SR14 Build Alternative alignment would be on viaducts where it would intersect a section of the existing PCT, shown on Figure 4-11. The intersection would occur approximately 0.24 mile south of the Antelope Valley Freeway (SR 14), approximately 2 miles southeast of Agua Dulce.

While the PCT's entire length is approximately 2,659 miles, approximately 3 miles of this trail are within the Refined SR14 Build Alternative RSA. The Refined SR14 Build Alternative would require that an approximately 400-foot segment of the PCT be used as a construction staging area. The Refined SR14 Build Alternative would affect an approximately 0.7-mile length of the current alignment of the PCT (Figure 4-21). This would require the realignment of the PCT prior to construction.

The Authority has consulted with the Pacific Crest Trail Association, the Bureau of Land Management, and USFS regarding trail realignment options and has developed a preliminary PCT realignment that would be part of the Refined SR14 Build Alternative, if selected. The trail would be realigned and cross under the HSR alignment in a perpendicular fashion in order to move trail users through this area as expeditiously as possible. This realignment has been designed to minimize air quality, visual, and noise impacts on PCT users, including such effects that currently exist associated with the PCT's present alignment in proximity to the SR 14 Freeway.

The existing trail would remain in its current alignment approaching the HSR tracks from the west. Realignment of the trail would begin just west of the HSR tracks and the trail would cross under a proposed viaduct, as shown on Figure 4-21. From there, the trail realignment would continue

generally eastward, moving trail users away from the HSR alignment as quickly as possible. The trail realignment would take advantage of existing ridges and valleys to provide noise shielding where possible from both the HSR alignment as well as SR 14. After moving eastward, the trail realignment would turn generally northward before reconnecting with the existing PCT alignment.

This realignment would represent a permanent change to the trail and would constitute a permanent use of the PCT, through acquisition of right-of-way or a permanent utility easement of a portion of the PCT where the Refined SR14 Build Alternative alignment would intersect the trail. PK-IAMF#1 would require the preparation of a technical memorandum to identify project design features that would minimize impacts on the trail during realignment. These features may include safe and attractive access for present travel modes to ensure ease of use.

If the Refined SR14 Build Alternative is selected, the trail realignment would be operational prior to the commencement of construction. The Final EIR/EIS would also include detailed impact analysis for the realignment area. Preliminary reconnaissance indicates that the proposed realignment area has similar resources to other nearby areas of the footprint and that the trail realignment would not introduce a new or more severe impact. As shown on Figure 4-21, the proposed realignment would be a similar distance to SR 14 and would experience the same proximity effects as under current conditions. Therefore, implementation of the Refined SR14 Build Alternative would not result in changes in the character of this recreation resource or reduce its capacity or value after construction is complete.

The SR14A, E1, E1A, E2, and E2A Build Alternatives would also intersect the PCT within the Central Subsection. However, the alignments would be in a tunnel several hundred feet below ground, crossing underneath the PCT, thereby precluding surface impacts on the trail. Because the Build Alternative alignments would be underground, no realignment of the PCT would thus be necessary in association with the SR14A, E1, E1A, E2, or E2A Build Alternatives and there would be no use.

Preliminary Summary of Findings

The Authority has preliminarily concluded that the permanent use at the PCT for the trail realignment under construction and operations of the Refined SR14 Build Alternative would be *de minimis* because the features and attributes that qualify the resource for protection under Section 4(f) would not be diminished. The PCT intersects with and crosses existing transportation corridors along its 2,650-mile alignment, and the continuity of the trail across the western U.S. represents the features and attributes that qualify the resource for protection under Section 4(f). Therefore, the continuity of the resource is not anticipated to be diminished or affected with operation of the Palmdale to Burbank Project Section. Accordingly, visual and noise impacts under the Refined SR14 Build Alternative would not be of a severity that the protected activities, features, or attributes that qualify the PCT Trail for protection under Section 4(f) would be substantially impaired, and no constructive use would result. This preliminary determination is subject to concurrence by the OWJ for this resource (Pacific Crest Trail Association, Bureau of Land Management, and USFS), consistent with 49 U.S.C. 303(d)(3)(B).

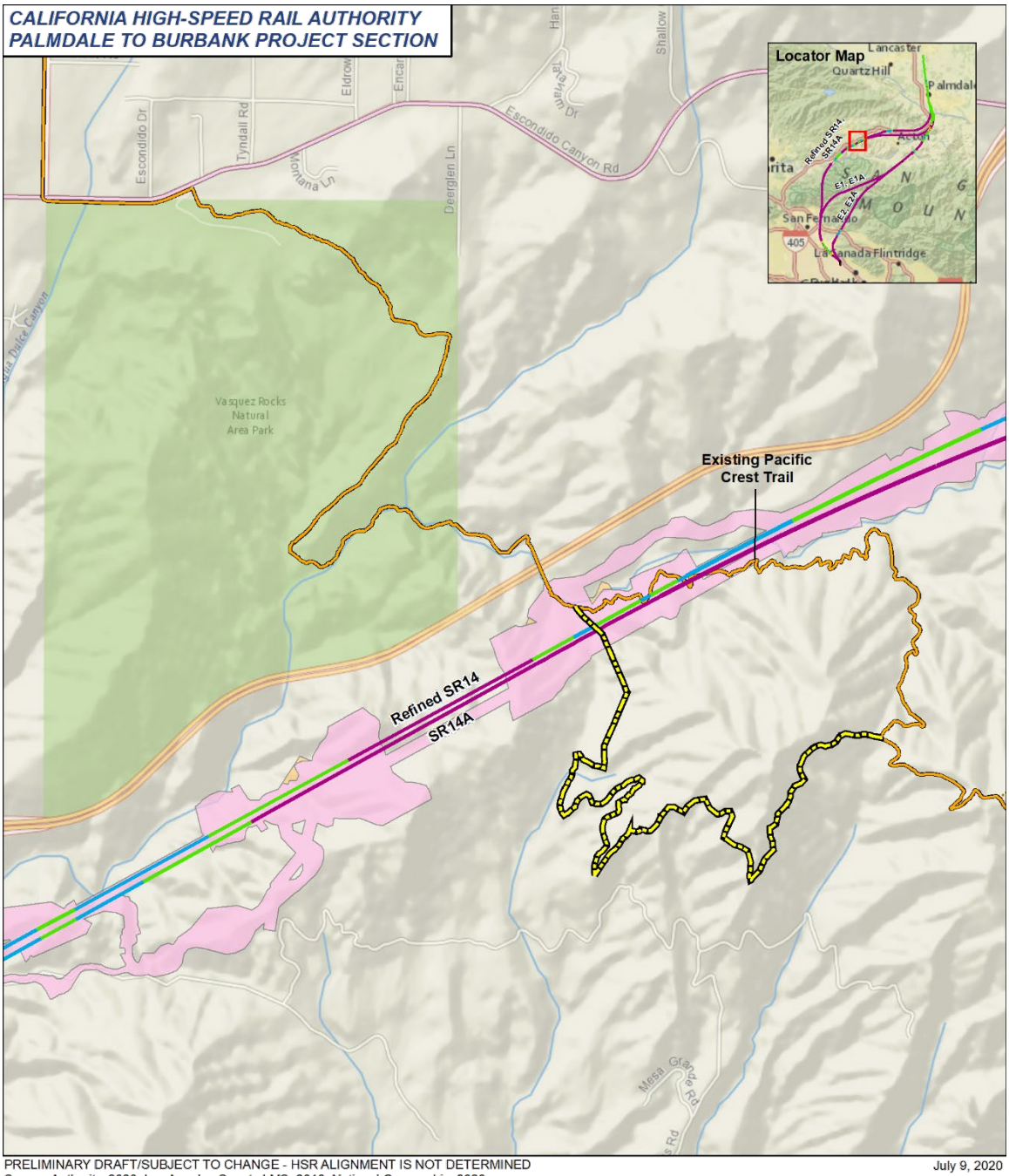

Figure 4-21 Proposed Pacific Crest Trail Realignment—Refined SR14 Build Alternative

San Gabriel Mountains National Monument (Map ID 7)

Permanent Use – De Minimis

The temporary and permanent improvements within the SGMNM are shown in Figure 4-22 through Figure 4-32 for all six Build Alternatives. Because the SGMNM is contained within the ANF, these resources share a map set located at the end of the ANF discussion below.

National monuments are areas of federal land set aside by U.S. Congress or the President in order to protect or enhance prominent or important features of the national landscape. The authority to set aside such lands is granted under the Antiquities Act of 1906. Although the SGMNM is entirely within the boundaries of the ANF, impacts on the SGMNM are discussed separately because it is a national monument while the ANF is a national forest.

The Refined SR14 and SR14A Build Alternatives would include a bored tunnel and at-grade covered tunnel through an approximately 12-mile section of the ANF, including SGMNM. The at-grade covered tunnel and portal would be constructed within the SGMNM boundary at the current Vulcan Mine site which is also located within a Developed Area Interface land use zone, shown on Figure 4-22. As noted above, the Vulcan Mine site is not used for or designated for recreational use and is not open to the public and thus not protected under Section 4(f).

The E1 and E1A Build Alternatives would include a bored tunnel passing beneath an approximately 16.5-mile section of the ANF, including SGMNM. The E1 Build Alternative would require construction activities, grading, utility installation and roadway work within the SGMNM in the Aliso Canyon area. These activities are associated with construction of tunnel portals in the Aliso Canyon area along with a viaduct across the creek and reconstruction of a portion of Aliso Canyon Road. This construction activity would occur within lands designated as Back Country, Back Country Non-Motorized, and Critical Biological. Additionally, this area includes the Aliso-Arrastre Middle and North SIA (Figure 4-26). As depicted in Figure 4-26, the amount of activity within these land use zones in the Aliso Canyon area is limited. Roadway and utility work would occur primarily within the existing Aliso Canyon Road right-of-way and existing utility easements in this area. This would limit the amount of impact from these activities. Other areas within the SGMNM would be used for construction grading, and no permanent facilities would be located within the SGMNM once construction is complete. All Build Alternative facilities, including portals and associated facilities, would be located outside the SGMNM boundary. For this reason, the Authority has preliminarily concluded that the effects of the E1 and E1A Build Alternatives on the SGMNM are considered *de minimis*.

The E2 and E2A Build Alternatives would include a bored tunnel beneath an approximately 16.6-mile section of the ANF, including SGMNM. The E2 and E2A Build Alternatives would require the same construction activities within the SGMNM in the Aliso Canyon area, as described under the E1 and E1A Build Alternatives above. Thus, the Authority has preliminarily concluded that the effects of the E2 and E2A Build Alternatives on the SGMNM are considered *de minimis*.

There is one hydrogeological risk area within the RSA in the SGMNM near Aliso Canyon Road for the E1, E1A, E2, and E2A Build Alternatives. The Authority would commit to state-of-the-art design features and construction methods to avoid and minimize impacts to hydrologic resources, including the use of tunnel boring machines equipped with specific features designed to reduce or prevent inflows and grouting and tunnel lining approaches that have been proven effective at controlling water seepage. These features are described in more detail in HYD-IAMF#5, HYD-IAMF#6, and HYD-IAMF#7. To address impacts on surface water resources, the Authority will implement an Adaptive Management and Monitoring Plan. The Adaptive Management and Monitoring Plan includes monitoring protocols to allow for the detection of changes in groundwater conditions related to tunnel construction and to ensure timely implementation of remedial measures. The probability would be minimal to none that hydrologic resources would be affected in this area. See Section 3.8, Hydrology and Water Resources, for a more detailed analysis that includes the Tunnel Construction RSA.

Preliminary Summary of Findings

The Authority has preliminarily concluded that the Refined SR14 and SR14A Build Alternatives would not affect lands within the SGMNM protected under Section 4(f) (Vulcan Mine site). The E1, E1A, E2, and E2A Build Alternatives would require the permanent use of lands within the SGMNM that are protected by Section 4(f). However, because of the underlying land use designation and current use of these areas, along with Build Alternatives design features to reduce physical impacts (following existing roadway and utility easements), the Authority also has preliminarily concluded that the effects on the SGMNM would meet the criteria for a finding of *de minimis* impact because the effects would not substantially change the attributes or functions of the SGMNM. These preliminary determinations are subject to concurrence by the applicable OWJ for each resource.

Angeles National Forest (Map ID 7)

Permanent Use – De Minimis

The temporary and permanent improvements within the ANF are shown in Figure 4-22 through Figure 4-32 for all six Build Alternatives. Because the SGMNM is contained within the ANF, these resources share a map set located at the end of this discussion.

All six Build Alternative alignments would pass through the ANF below ground in bored tunnels. The use of bored tunnels for the Refined SR14 and SR14A Build Alternatives would require the use of an adit, which would serve as an entry/exit point for tunnel boring machines (see Figure 4-23 for visual representation of adits). The Refined SR14 and SR14A Build Alternatives include one adit option within the ANF boundary, which would require a 28-acre temporary construction area at the surface. However, the adit opening would be located on a private in-holding (private property not for recreational use) near existing roadways within the ANF. This land is not open to the public.

The Refined SR14 and SR14A Build Alternatives would also include permanent utility easements, the installation of overhead utility lines, and a temporary water line within areas designated as Back Country in the LMP (see Figure 4-23). None of the areas where surface construction and activities would occur within the 700,000-acre ANF (outside the SGMNM) would be in areas considered protected by Section 4(f) based on the LMP land use designations. In addition, none of these areas include a specific use that would qualify as a Section 4(f) resource such as a campground, trail, or picnic area. Thus, the Refined SR14 and SR14A Build Alternatives would not result in a Section 4(f) use within the ANF.

The proposed E1 and E1A Build Alternatives include two adit options within the ANF boundary. Adit Option E1-A1 would require a 33-acre temporary construction area at the surface, and adit Option E1-A2 would require a temporary construction staging area in the ANF (see Figure 4-28). However, the adit openings would be located on a private in-holding (private property not for recreational use) near existing roadways within the ANF. This land is not open to the public.

The E1 and E1A Build Alternatives would also include permanent utility easements, the installation of overhead utility lines, and a temporary water line within areas designated as Back Country in the LMP (see Figure 4-28 and Figure 4-29). None of the areas where surface construction and activities would occur within the ANF (outside the SGMNM) would be in areas considered protected by Section 4(f) based on the LMP land use designations. In addition, none of these areas include a specific use that would qualify as a Section 4(f) resource such as a campground, trail, or picnic area. Thus, the E1 and E1A Build Alternatives would not result in a Section 4(f) use within the ANF.

The proposed E2 and E2A Build Alternatives include two adit options within the ANF. Adit Option E2-A1 would require a temporary construction area at the surface, and adit Option E2-A2 would require a 23-acre temporary construction staging area (see Figure 4-30). However, the adit openings would be located on a private in-holding (private property not for recreational use) near existing roadways within the ANF. This land is not open to the public.

The E2 and E2A Build Alternatives would also include permanent utility easements, the installation of overhead utility lines, and a temporary water line within areas designated as Back Country by the LMP (see Figure 4-30 and Figure 4-31). The E2 and E2A Build Alternatives would also include permanent utility easements, the installation of overhead utility lines, and a temporary water line within areas designated as Back Country Non-Motorized by the LMP (see Figure 4-31). The E2 and E2A Build Alternatives would require construction activities on the surface near Lake View Terrace in areas designed as Developed Areas Interface by the LMP (see Figure 4-32).

Areas where surface construction and activities would occur within the ANF (outside the SGMNM) would be in areas considered not to be protected by Section 4(f) based on the LMP land use designations. One exception to this may be activities with Back Country Non-Motorized designated areas. Given that Section 4(f) applicability for this land use is still undetermined, for the purposes of this analysis, it is conservatively assumed to meet the criteria for protection under Section 4(f). None of these areas include a specific use that would qualify as a Section 4(f) resource such as a campground, trail, or picnic area. Thus, the E2 and E2A Build Alternatives would result in a *de minimis* (pending) Section 4(f) use within the ANF.

There is one hydrogeological risk area within the RSA in the ANF near Aliso Canyon Road for the E1, E1A, E2, and E2A Build Alternatives. The Authority would commit to state-of-the-art design features and construction methods to avoid and minimize impacts to hydrologic resources, including the use of tunnel boring machines equipped with specific features designed to reduce or prevent inflows and grouting and tunnel lining approaches that have been proven effective at controlling water seepage. These features are described in more detail in HYD-IAMF#5, HYD-IAMF#6, and HYD-IAMF#7. The probability would be minimal to none that hydrologic resources would be affected in this area. See Section 3.8, Hydrology and Water Resources, for a more detailed analysis that includes the Tunnel Construction RSA.

Preliminary Summary of Findings

The Authority has preliminarily concluded that within the ANF, the Refined SR14 and SR14A Build Alternatives and E1 and E1A Build Alternatives would avoid use of Section 4(f) property because the location of proposed construction and facilities are on lands that are designated under the LMP for purposes primarily other than recreational, and these areas do not include a specific use that would qualify as a Section 4(f) resource such as a campground, trail, or picnic area. The E2 and E2A Build Alternatives would require permanent easement of land for California HSR System infrastructure in areas with a land use designation that may qualify for protection under Section 4(f). The areas that would be included in the permanent easement do not contain specific recreational uses, such as campgrounds or trails. Therefore, the Authority has preliminarily concluded the changes to ANF under the E2 and E2A Build Alternatives qualify for a *de minimis* finding. This preliminary determination is subject to concurrence by the OWJ for this resource (USFS). The final determinations will be made after public review and with consultation with the USFS and will be published in the Final EIR/EIS.

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

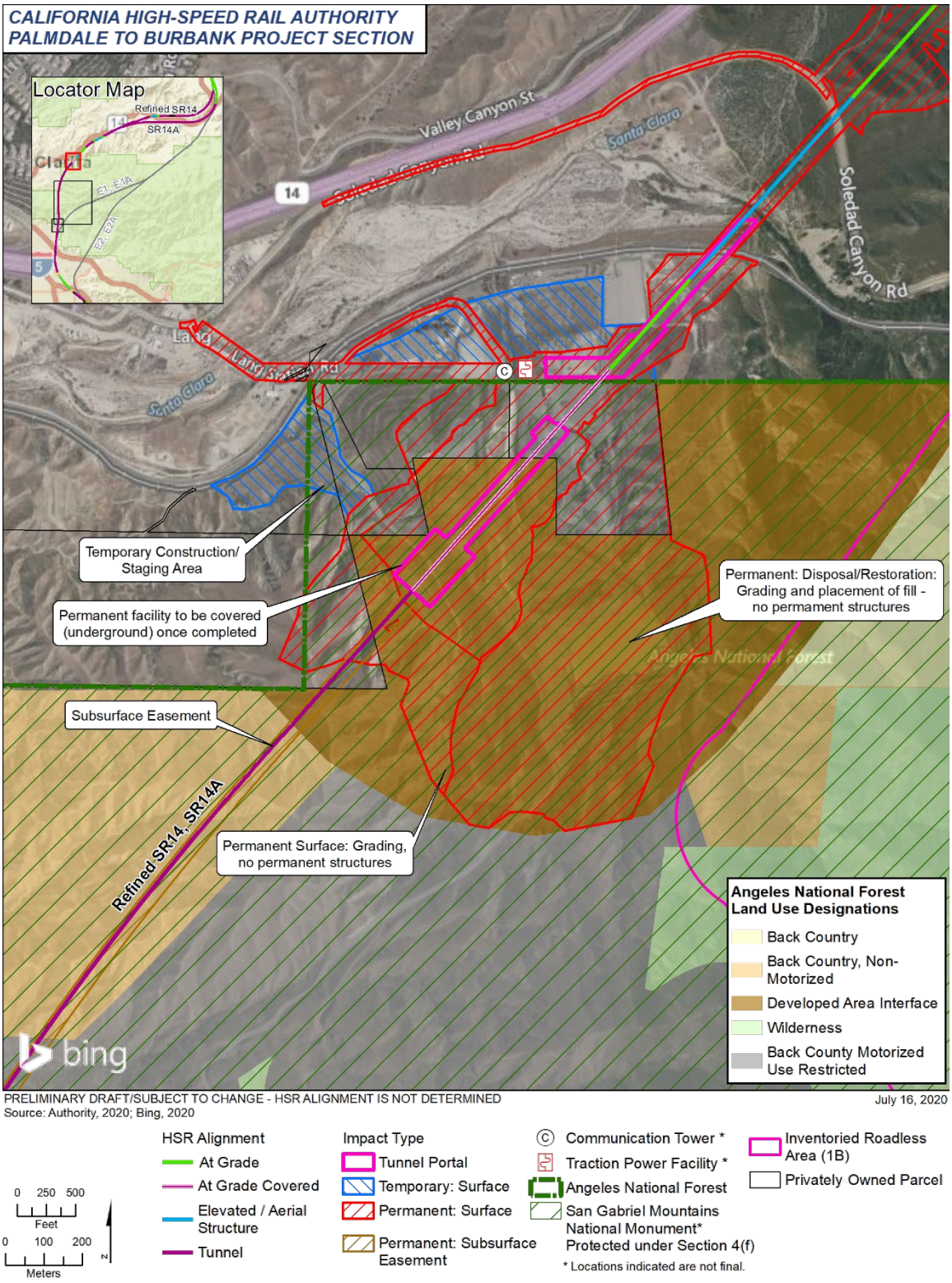

Figure 4-22 ANF Including SGMNM—Refined SR14 and SR14A Build Alternatives (Map 1 of 3)

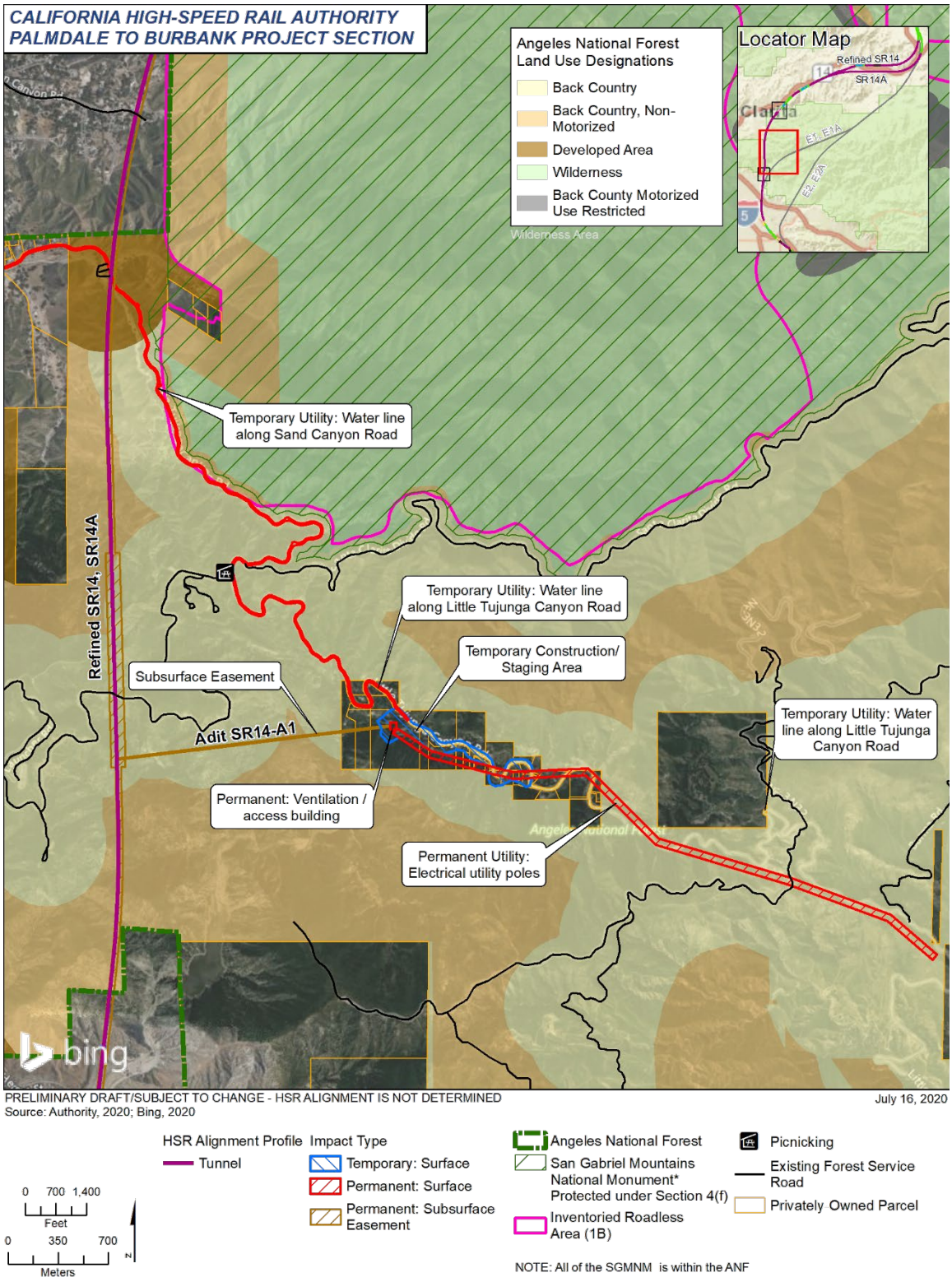

Figure 4-23 ANF Including SGMNM—Refined SR14 and SR14A Build Alternatives (Map 2 of 3)

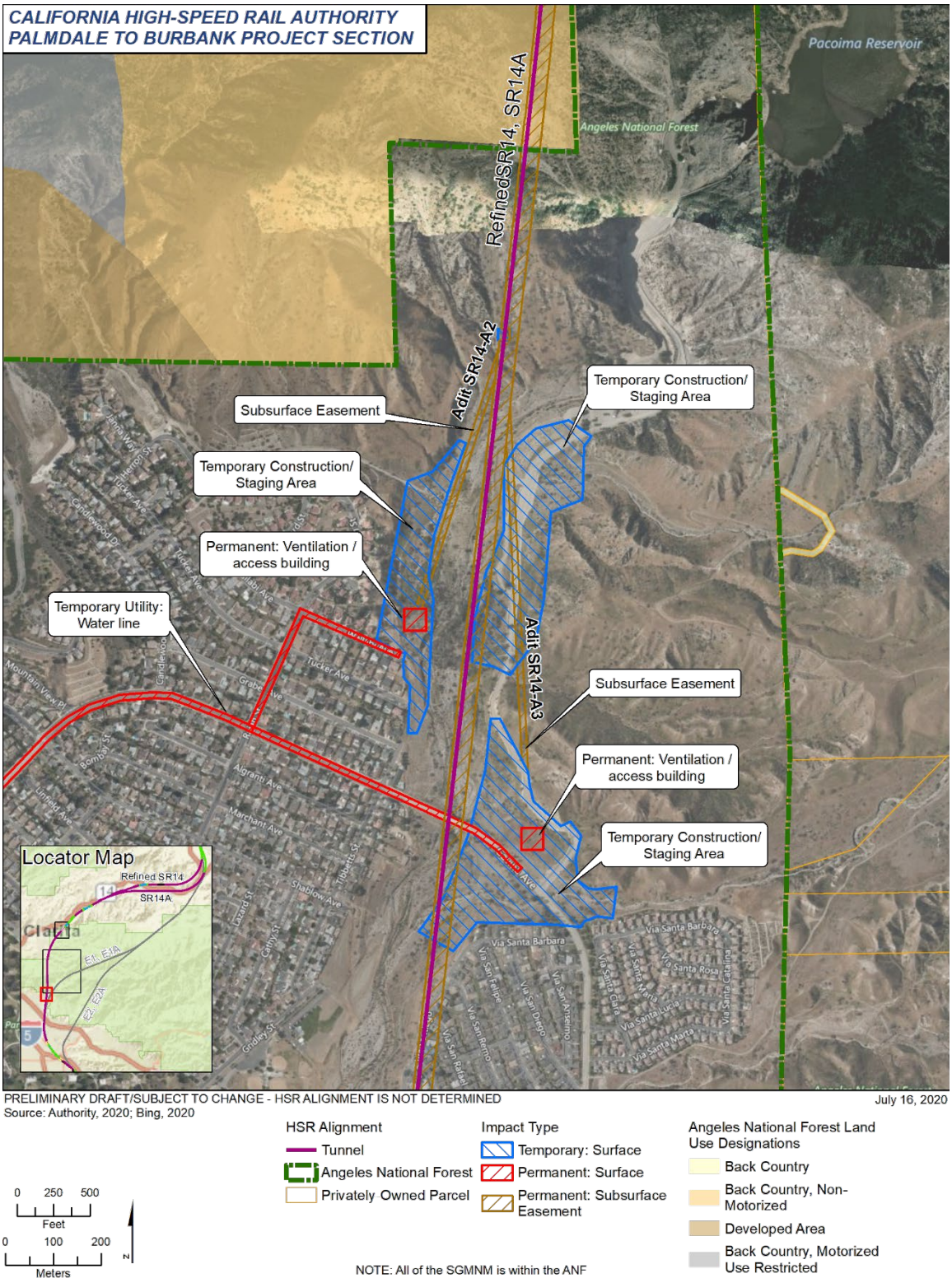

Figure 4-24 ANF Including SGMNM—Refined SR14 and SR14A Build Alternatives (Map 3 of 3)

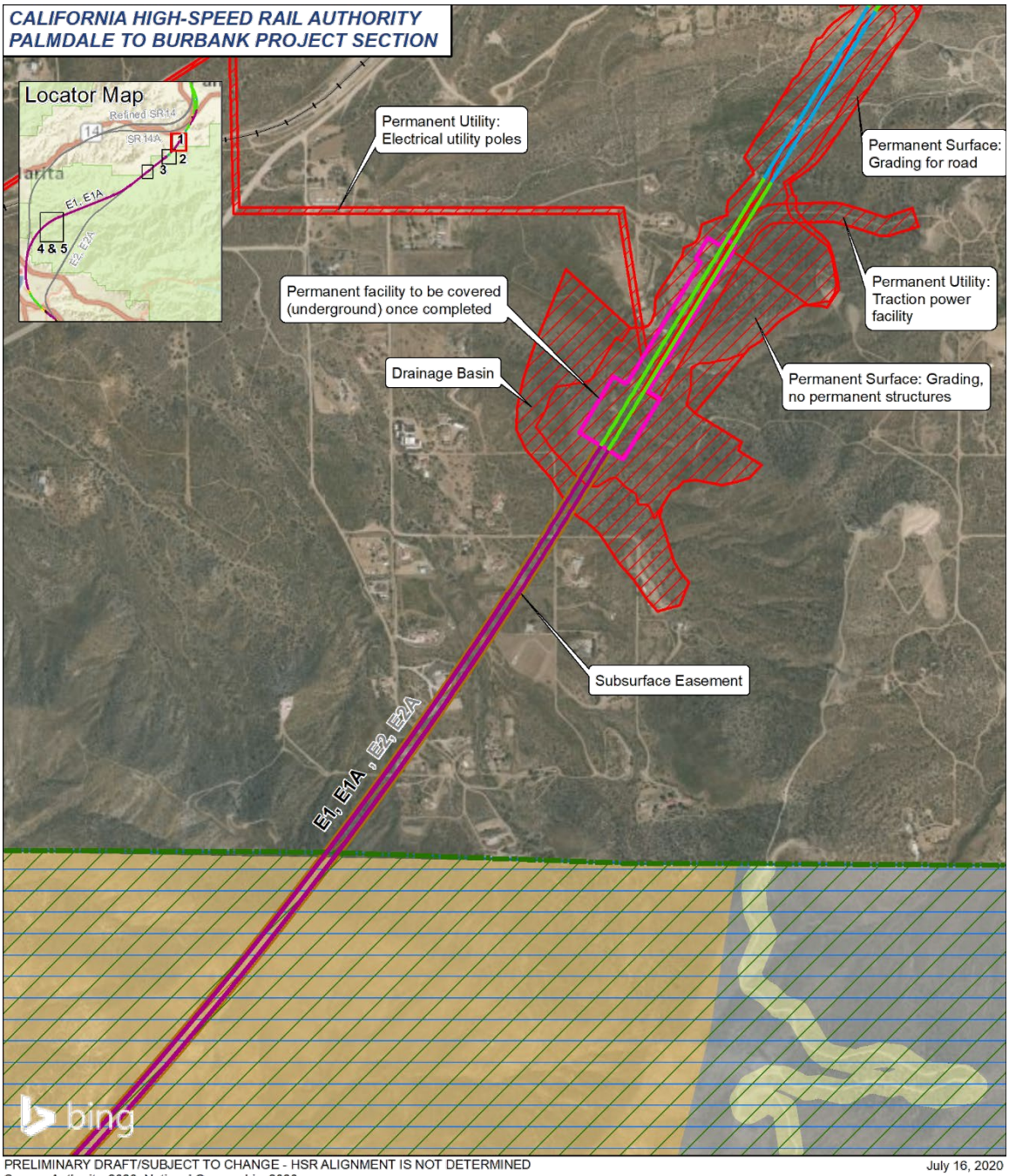

Figure 4-25 ANF Including SGMNM—E1, E1A, E2, and E2A Build Alternatives (Map 1 of 3)

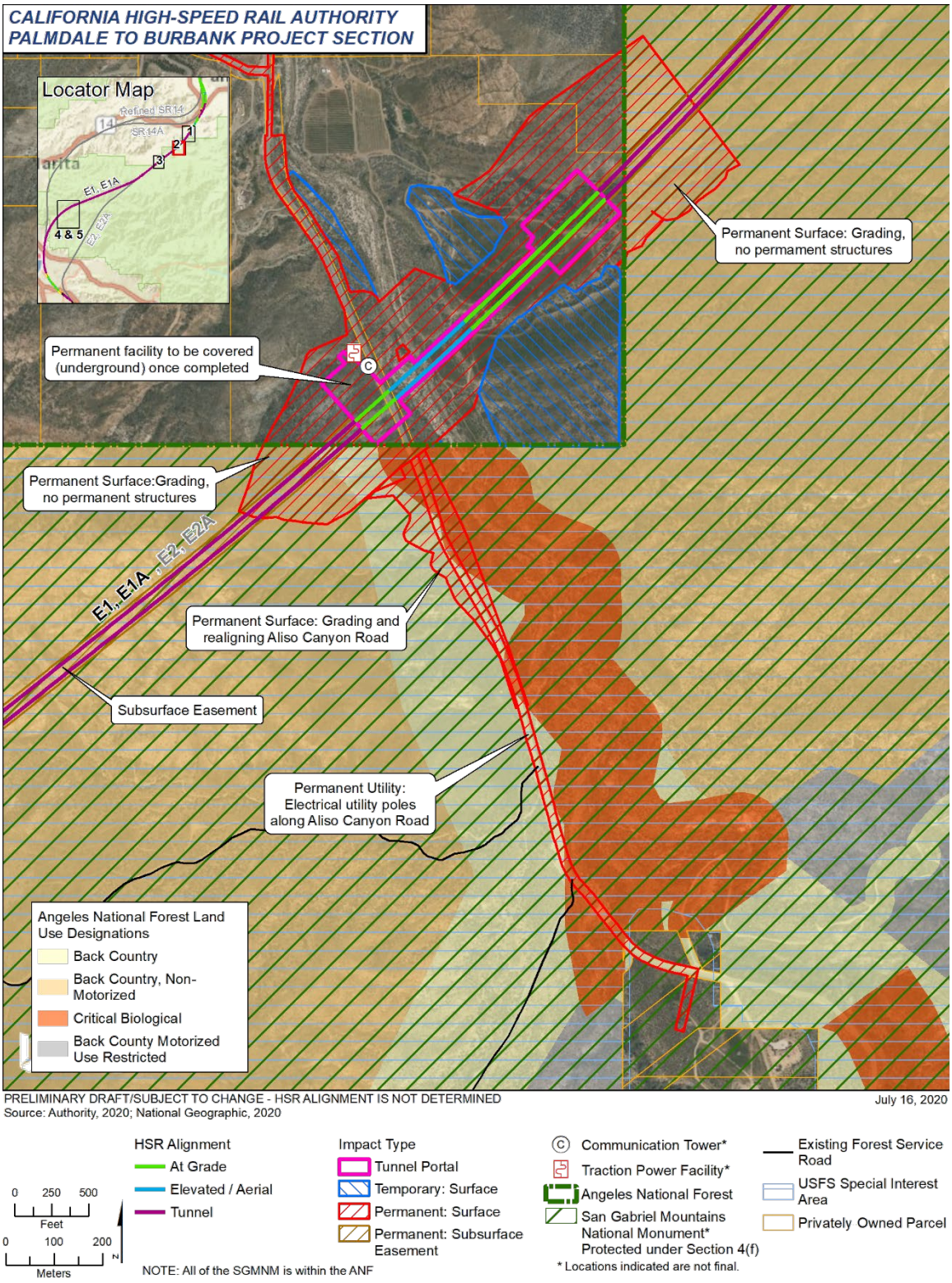

Figure 4-26 ANF Including SGMNM—E1, E1A, E2, and E2A Build Alternatives (Map 2 of 3)

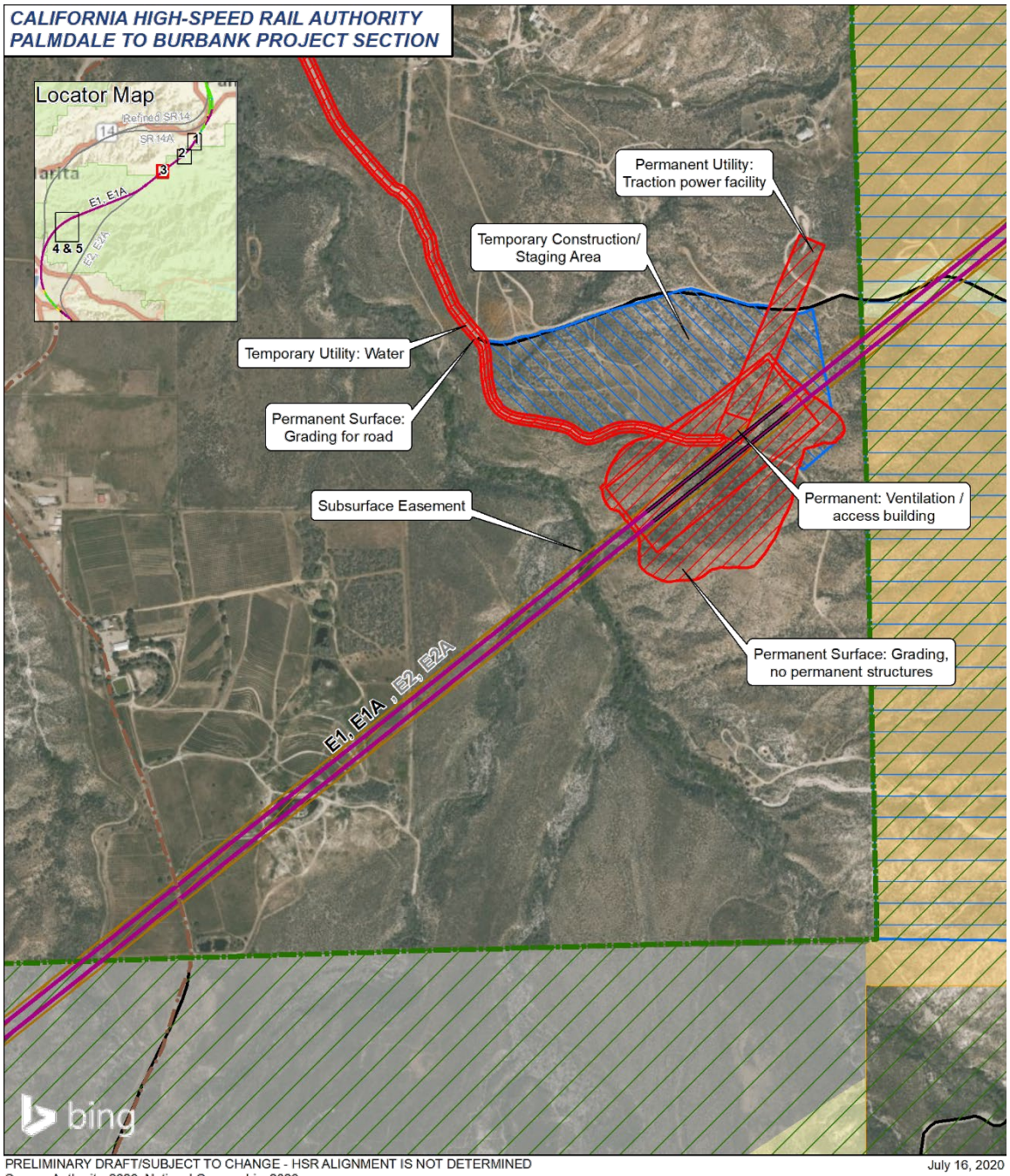

Figure 4-27 ANF Including SGMNM—E1, E1A, E2, and E2A Build Alternatives (Map 3 of 3)

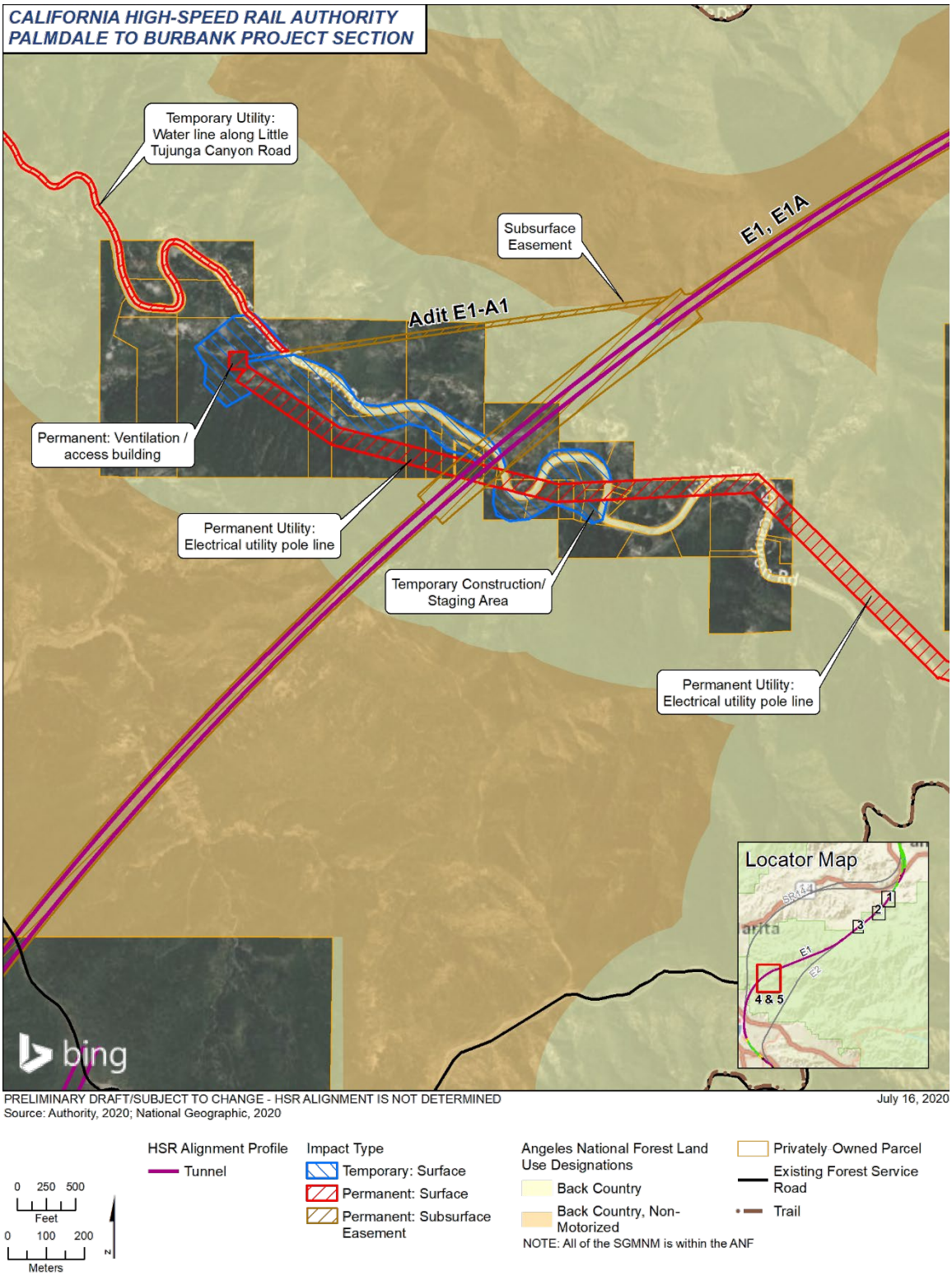

Figure 4-28 ANF Including SGMNM—E1 and E1A Build Alternatives (Map 1 of 2)

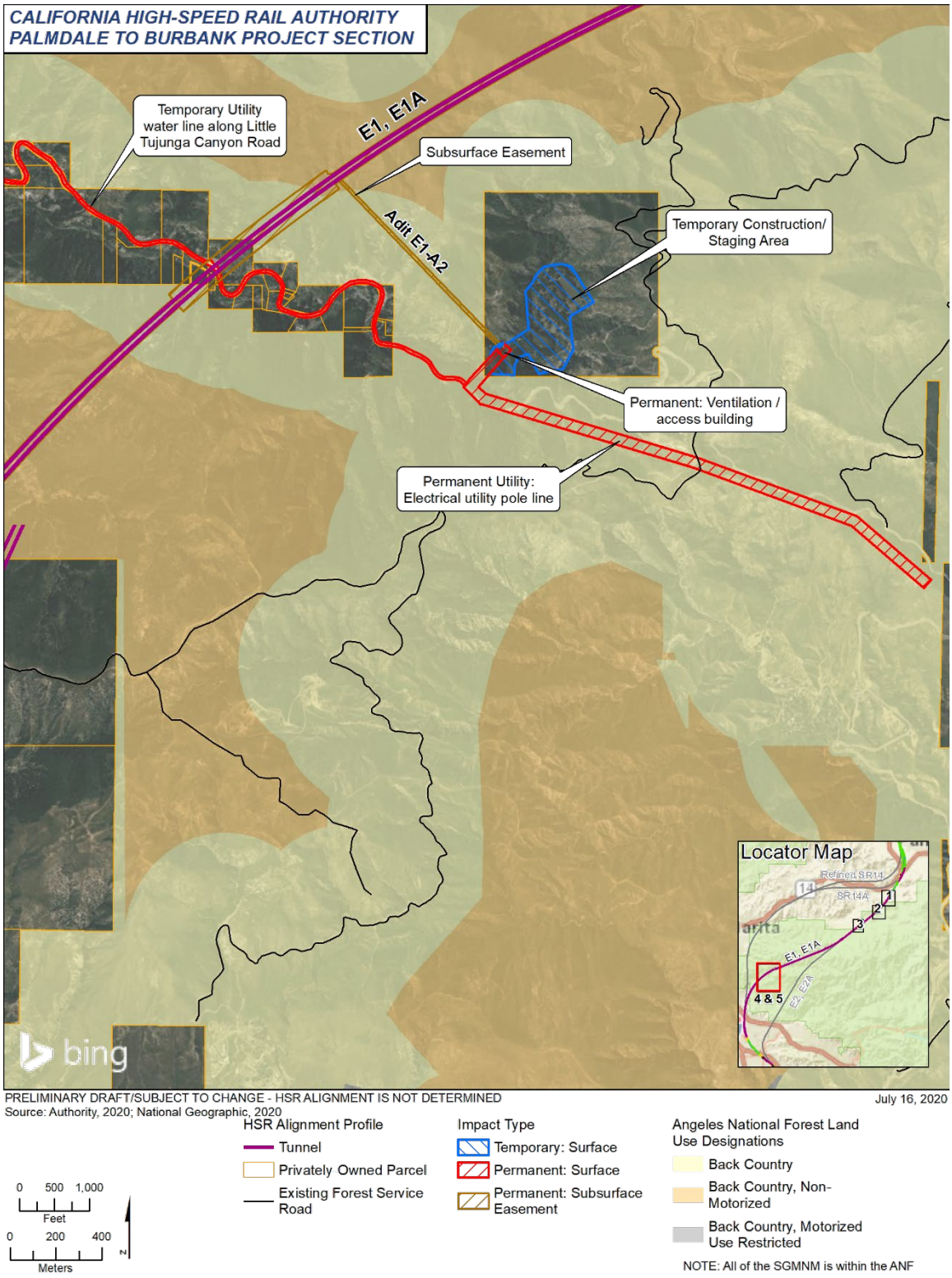

Figure 4-29 ANF Including SGMNM—E1 and E1A Build Alternatives (Map 2 of 2)

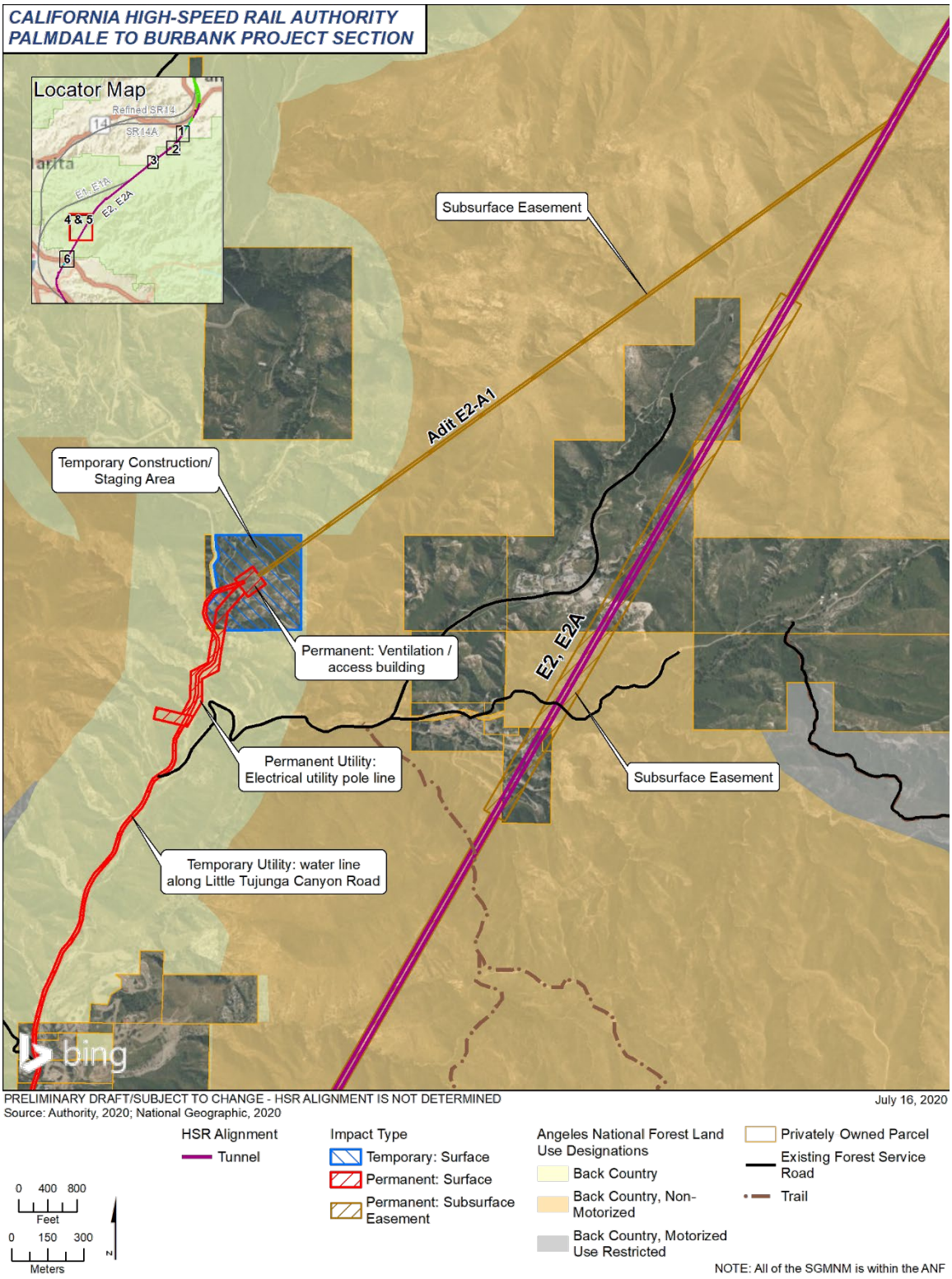

Figure 4-30 ANF Including SGMNM—E2 and E2A Build Alternatives (Map 1 of 3)

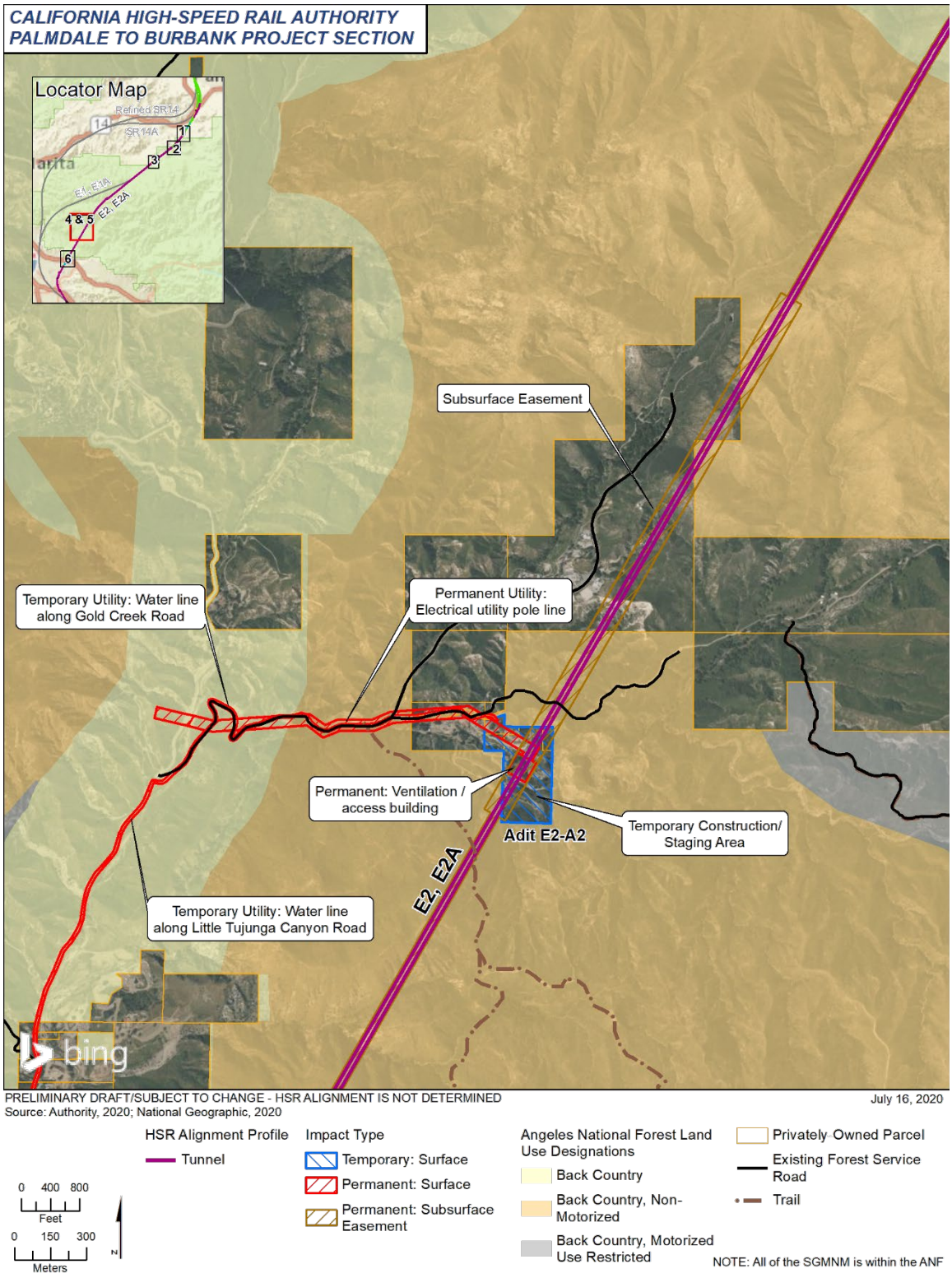

Figure 4-31 ANF Including SGMNM—E2 and E2A Build Alternatives (Map 2 of 3)

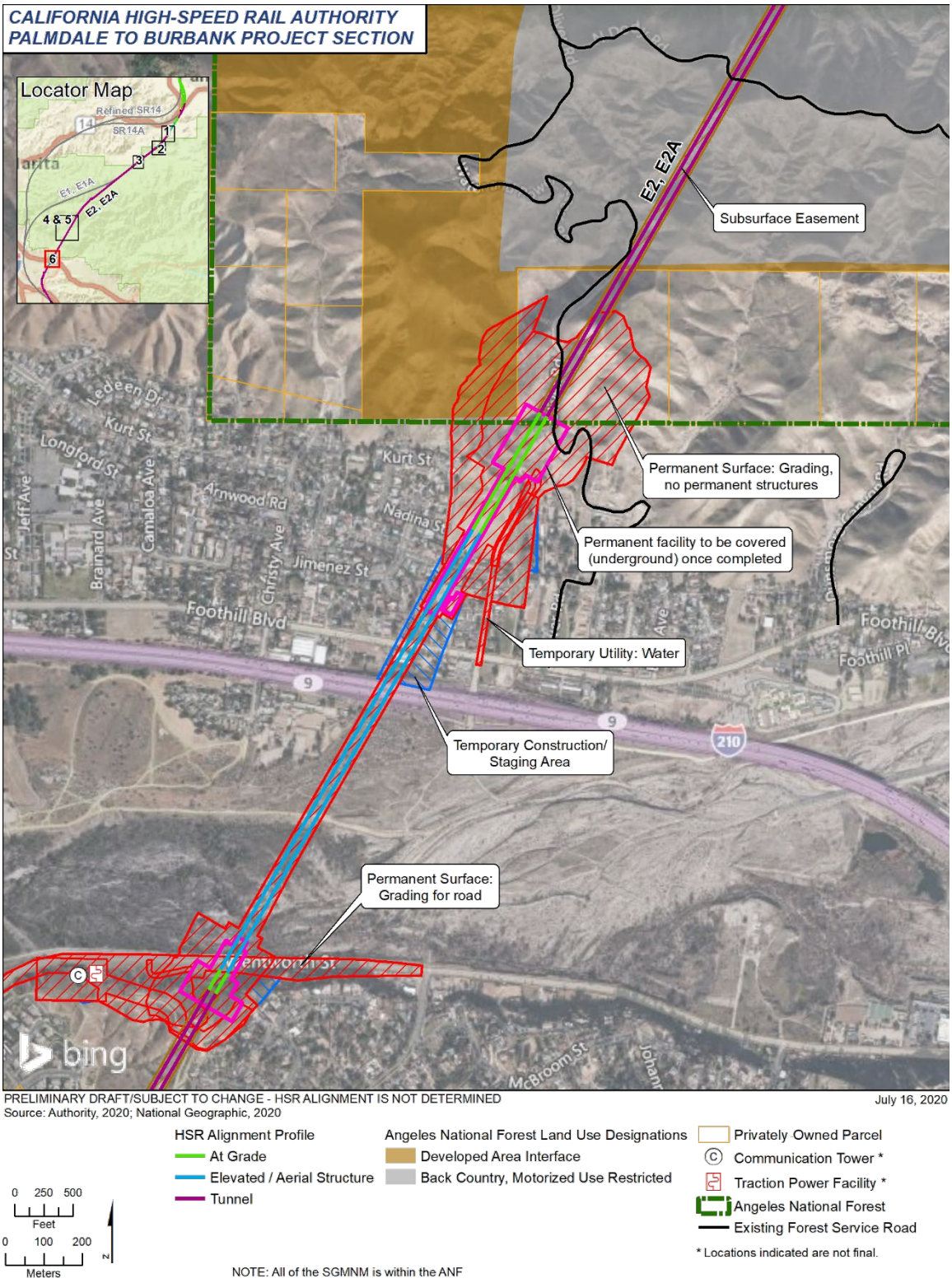

Figure 4-32 ANF Including SGMNM—E2 and E2A Build Alternatives (Map 3 of 3)

Rim of the Valley Trail (Proposed Extension) (Map ID 16)

Temporary Occupancy – No Use

Proposed Extension – Constructed

The temporary impact areas under the Build Alternatives include:

- Two temporary construction impact areas of approximately 500 and 250 feet at adit options SR14-A1 and SR14-A2 under the Refined SR14, SR14A, E1, and E1A Build Alternatives (Figure 4-16)
- A temporary construction impact area of approximately 23 acres at adit option E2-A1 under the E2 and E2A Build Alternatives (Figure 4-17)

All six Build Alternatives would require construction activities adjacent to and within small segments of the Rim of the Valley proposed trial extension. Increases in noise and dust levels would be noticeable to trail users during construction. While these impacts could be a nuisance to patrons, they would be temporary in nature. Potential short-term impacts would be addressed through the application of mitigation measures provid0ed in Section 3.3, Air Quality and Global Climate Change; Section 3.4, Noise and Vibration; and Section 3.16, Aesthetics and Visual Quality. The existing topography, proposed layout of the trail, and vegetation would shield trail users from visual impacts during construction under all six Build Alternatives from the vast majority of vantage points; trail users would generally only see and hear construction when immediately adjacent to construction areas. Access to the trail would be maintained throughout construction via short detours around construction areas. Construction of the six Build Alternatives would not prevent or substantially impair public use of the proposed trail across its 200 miles, including the protected activities (hiking, nature study, and equestrian uses).

Proposed Extension – Not Constructed

If the proposed trail extension is not constructed at the time of the E1, E1A, E2, and E2A Build Alternatives' construction, the trail would not be physically affected. Construction of the Build Alternatives would not prevent construction of the proposed Rim of the Valley Trail extension.

Preliminary Summary of Findings

If the trail extension has not been constructed prior to implementation of the Build Alternatives, no potential use would occur because the Build Alternatives would not preclude future extension of the trail.

All six Build Alternatives would result in temporary occupancy of land along the proposed trail during construction. For the purposes of Section 4(f), such temporary occupancy of a Section 4(f) resource does not constitute use if each of the five conditions listed in 23 C.F.R. 774.13(d) are met (listed in Section 4.1.4.2). The temporary impact areas for construction activities along the proposed Rim of the Valley Trail extension would meet the following five conditions:

- The duration of construction activities in the vicinity of the trail would not exceed the overall construction period for the Build Alternatives. The duration of construction of the adit and use of haul routes would be substantially less than the time needed to construct the entire project. There would be no change in the ownership of the land included in the temporary impact areas.
- The scope of work is minor and would be limited to temporary impact areas adjacent to permanent improvements. The construction of the adit and access for tunnel spoils would not result in changes to the proposed trail's intended function (hiking, nature study, and equestrian uses) through the provision of short detours near the temporary impact areas.
- The construction of the Build Alternatives would not result in any permanent adverse physical impacts to the proposed trail's features included in the temporary impact areas. Access to the trial at its many proposed access points would be maintained throughout construction.

Measure PC-MM#1, provided later in this section, would reduce the effects of the temporary occupancy of land.

- The land temporarily occupied by the temporary impact areas and construction activity would be returned to a condition that is at least as good as that which existed prior to the project at the completion of project construction in the vicinity of the proposed Rim of the Valley Trail.
- In accordance with the requirements of Section 4(f), the Authority (project proponent) is seeking concurrence from the NPS (the OWJ over the park) that the conditions listed above have been met. Consultation with the NPS is ongoing.

This preliminary determination is subject to concurrence by the OWJ for this resource (the NPS [U.S. Department of the Interior]).

Hansen Dam Open Space Area (Map ID 23)

Permanent Use – De Minimis

After tunneling through the ANF, including SGMNM, the E2 and E2A Build Alternative alignments would transition to an elevated viaduct structure within the Lake View Terrace neighborhood. The viaduct would cross over Arnwood Road, Foothill Boulevard, and I-210, and then would continue to cross the Hansen Dam Open Space Area, and cross below Wentworth Street in the Shadow Hills neighborhood in the city of Los Angeles. The viaduct would require the placement of approximately 30 support piers/footings within the Hansen Dam Open Space Area within Big Tujunga Wash. The Hansen Dam Open Space Area is operated by the City of Los Angeles Department of Recreation and Parks, which owns some of the land and leases other portions from the U.S. Army Corps of Engineers.

The total permanent acquisition area would be approximately 13 acres. This would represent a permanent change to Hansen Dam Open Space Area through incorporation of a 13-acre portion of the 813-acre resource (approximately 1.6 percent) into a transportation facility and would constitute a permanent use of land from Hansen Dam Open Space. Temporary construction easements and staging areas within the Hansen Dam Open Space would not extend beyond the permanent acquisition areas.

The placement of piers/footings would not require the relocation or removal of existing hiking or equestrian trails. Most of the resource would remain open and available to the public during construction. After construction, the resource would remain accessible, and trail users would be able to pass under the viaduct to move from one area of the open space to another. Noise from passing trains would be perceptible to patrons of the open space area.

Given the above visual- and noise-related impacts from operation of the viaduct within the Hansen Dam Open Space Area, the E2 and E2A Build Alternatives would change the character of this recreational resource. However, these changes would not diminish or reduce the capacity or value of the open space area to the surrounding communities. The current aquatic activities, equestrian facilities, hiking trails, and picnic areas would remain part of the Hansen Dam Open Space amenities with the implementation of the E2 and E2A Build Alternatives. Given that the nearest recreation facilities within the Hansen Dam Open Space Area are approximately 0.5 mile away from the nearest project improvement, the Hansen Dam Open Space Area would remain open and available to the public and would function as it was before the operation of the E2 and E2A Build Alternatives.

The Hansen Dam Open Space Area is outside the limits of the nearest permanent project improvements proposed for the Refined SR14, SR14A, E1, and E1A Build Alternatives, as shown on Figure 4-4 and Figure 4-19. These HSR alignments would be identical in this area and would pass by the Hansen Dam Open Space Area approximately 1,900 feet to the west. Therefore, the Refined SR14, SR14A, E1, and E1A Build Alternatives would not result in permanent use of this resource.

Preliminary Summary of Findings

The Authority has preliminarily concluded that the E2 and E2A Build Alternatives would result in a *de minimis* impact at the Hansen Dam Open Space Area. Users of this resource would continue to be able to access footpaths for walking, hiking, and equestrian uses, and would be able to cross under the viaduct footings to access both sides of the resource. The permanent use of land at the Hansen Dam Open Space Area for the viaduct footings and acquisition of new right-of-way would constitute a *de minimis* impact because the features and attributes that qualify the resource for protection under Section 4(f) would not be diminished with the E2 and E2A Build Alternatives. Based on the setting of the resource adjacent to an existing highway, noise from the E2 and E2A Build Alternatives is not anticipated to substantially interfere with recreational uses. The hiking trails, equestrian facilities, aquatic park, and picnic areas represent the features and attributes that qualify the resource for protection under Section 4(f).

The viaduct footings and associated rail right-of-way would not occupy or require removal of these features or attributes. The footings would not be sited in areas used for active recreation activities, and trail users would continue to be able to traverse the site along existing trails. This footing area and right-of-way would occupy a small amount of the total land. Impacts on this resource are further discussed in Section 3.16, Aesthetics and Visual Quality, and Section 3.7, Biological Resources and Wetlands.

Therefore, the construction and operation of the E2 and E2A Build Alternatives at the Hansen Dam Open Space Area would constitute a *de minimis* impact, as defined by 49 U.S.C. 303(d). Accordingly, visual and noise impacts would not be of a severity that the protected activities, features, or attributes that qualify the Hansen Dam Open Space for protection under Section 4(f) would be substantially impaired, and no constructive use would result. The analyses described above support a preliminary finding that the Refined SR14, SR14A, E1, and E1A Build Alternatives would not result in a Section 4(f) use of the Hansen Dam Open Space Area due to their distance from the resource and that the alignments would be underground. This preliminary determination is subject to concurrence by the OWJ for this resource (City of Los Angeles Department of Recreation and Parks; U.S. Army Corps of Engineers).

4.6.1.2 Burbank Subsection

There are no parks, recreation areas, or wildlife and waterfowl refuges in the Burbank Subsection that are subject to protection under Section 4(f).

4.6.1.3 Summary of Preliminary Section 4(f) Use Determinations for Park, Recreation Area, and Wildlife and Waterfowl Refuge Resources

Preliminary Section 4(f) use determinations are summarized by Build Alternative in Table 4-6.

Table 4-6 Parks and Recreation: Summary of Preliminary Section 4(f) Use Determinations

Resource	Preliminary Section 4(f) Use Determination for the Build Alternatives					
	Refined SR14	SR14A	E1	E1A	E2	E2A
Palmdale Hills Trail (Proposed Extension)	*de minimis*	*de minimis*	*de minimis*	*de minimis*	*de minimis*	*de minimis*
Acton Community Trail (Proposed Extension)	No use	No use	*de minimis*	*de minimis*	*de minimis*	*de minimis*
Littlerock Trail (Proposed Extension)	*de minimis*	*de minimis*	*de minimis*	*de minimis*	*de minimis*	*de minimis*
Vasquez Loop Trail (Proposed Extension)	*de minimis*	*de minimis*	*de minimis*	*de minimis*	*de minimis*	*de minimis*

Resource	Preliminary Section 4(f) Use Determination for the Build Alternatives					
	Refined SR14	SR14A	E1	E1A	E2	E2A
Pacific Crest Trail	No use	*de minimis*	No use	No use	No use	No use
San Gabriel Mountains National Monument	No use	No use	*de minimis*	*de minimis*	*de minimis*	*de minimis*
Angeles National Forest	No use	No use	No use	No use	*de minimis*	*de minimis*
Rim of the Valley Trail (Proposed Extension)	No use	No use	No use	No use	No use	No use
Hansen Dam Open Space Area	No use	No use	No use	No use	*de minimis*	*de minimis*

Source: Authority, 2019d
Authority = California High-Speed Rail Authority

4.6.2 Cultural Resources

Section 106 of the NHPA requires federal agencies to consider a project's effect on cultural resources in much the same way as Section 4(f). The most important connection between the two statutes is that the Section 106 process is the method by which a cultural resource's significance is determined; resulting protections in addition to those determined through the Section 106 consultation process may be determined under Section 4(f).

The results of the Section 106 analysis are critical in determining the applicability and outcome of the Section 4(f) evaluation. The most important difference between the two statutes is the way each measures impacts on cultural resources. Whereas Section 106 is concerned with "adverse effects," Section 4(f) is concerned with "use" of protected resources. An indirect adverse effect does not necessarily result in a Section 4(f) use unless the indirect effect substantially impairs the attributes and features that qualify the resource for protection under Section 4(f). The following tests apply to evaluation of historic resources under Section 4(f):

- If the effects substantially impair the attributes, then there is a Section 4(f) use.
- If it does not substantially impair the attributes and no property is going to be permanently incorporated, then there is no use under Section 4(f).
- If it would permanently incorporate land from a property, then there is a Section 4(f) use.
- If it does not adversely affect the attributes and property is going to be permanently incorporated, then the impacts should be considered *de minimis*. Supporting documentation for either of the above evaluations must be included in the record.

Section 4(f) historic properties were evaluated by (1) identifying if the project would permanently incorporate land from the property; and (2) reviewing the effects on the property as documented during the Section 106 process. If an alternative would permanently incorporate land from the property or result in an adverse temporary occupancy (i.e., does not meet the criteria of Section 4.1.4.2) and would also result in an "adverse effect," this impact would constitute a Section 4(f) use. If the project would result in a permanent incorporation or temporary occupancy that does not meet the criteria to avoid "use," then the impact would be "use" absent a *de minimis* determination based on SHPO concurrence on a no adverse effects determination.

4.6.2.1 Preliminary Section 4(f) Use Determinations at Historic Sites with Adverse Effects under Section 106

Based on the analysis conducted for cultural resources (see Section 3.17, Cultural Resources), none of the NRHP-listed or eligible historic sites would be adversely affected under Section 106 by any of the six Build Alternatives. Therefore, none of the properties would incur a Section 4(f) use from adverse effects. However, effects determinations are pending SHPO concurrence, as SHPO is the OWJ oversight over NRHP historic sites. Section 4.6.2.3 discusses cultural resources that would be partially incorporated into the project footprint but would not incur an adverse effect. Such properties are analyzed to determine if the use would be *de minimis*, or if temporary occupancy would occur.

The historic properties listed below were analyzed to determine whether the Build Alternatives would result in nonphysical adverse effects. Section 4(f) use determinations are based on analyzing the potential proximity impacts on the properties, taking into account the activities, features, or attributes that qualify the property for protection under Section 4(f). A finding of adverse effect does not automatically result in a Section 4(f) use. Where there is the potential for an adverse effect on a protected property, the Authority will complete a property-specific evaluation to determine whether the adverse effects would substantially impair the attributes that qualify this resource for protection under Section 4(f). The analysis below takes into consideration IAMFs, and mitigation measures identified in other sections of the Draft EIR/EIS, which would reduce project impacts on the resources described in this chapter.

Blum Ranch

Effects under Section 106

The implementation of the E1, E1A, E2, and E2A Build Alternatives would cause an adverse visual effect to Blum Ranch from a change in the historic setting of the resource. Blum Ranch is outside of the Refined SR14 and SR14A Build Alternatives' RSAs.

Blum Ranch is eligible for listing in the NRHP, with SHPO concurrence, and the CRHR at the local level of significance as a contiguous historic district and as a rural historic landscape under Criterion A/1 for its association with the early settlement and development of agriculture in northern Los Angeles County, as well as under Criterion C/3 for the vernacular designs of its buildings, circulation networks, and water conveyance features that date to the farmstead's period of significance—from 1891 to circa 1924.

The E1, E1A, E2, and E2A Build Alternatives would include construction of an aerial structure approximately 1,000 feet south of the historic property. Visual simulations of the E1, E1A, E2, and E2A Build Alternative alignments as viewed from Blum Ranch are provided in Figure 4-33 and Figure 4-34.

Blum Ranch is a rural historic landscape and would be sensitive to such large-scale visual changes within its viewshed. Blum Ranch is significant not only for its on-site historic structures and agricultural features, but also for the setting, which conveys the historic period of the resource. The proximity of the proposed alignment would alter features or attributes of the resource that are considered important contributing elements to the value of the resource. The location of the aerial structure would detract from the setting of the historic site. These changes would result in an adverse effect as a result of the introduction of visual elements, as documented in the Draft Finding of Effect document (Authority 2021).

The E1, E1A, E2, and E2A Build Alternatives would not result in the removal of, the physical destruction of, or damage to any buildings or structures that are contributors to the historic property. The E1, E1A, E2, and E2A Build Alternatives would include a utility easement along Aliso Canyon Road, approximately 400 feet west of the historic property, which would not result in additional effects to the resource.

Implementation of the E1, E1A, E2, and E2A Build Alternatives would entail operation of the aboveground HSR structure outside the historic property boundary. Although the E1, E1A, E2,

and E2A Build Alternatives would be located outside the historic property boundary, operational noise from the rail structure would be highly noticeable. A quiet setting is not a character-defining feature of Blum Ranch. Rather, the general rural setting along with the buildings, agricultural features, and associated infrastructure of a rural farmstead are the primary features qualifying it for NRHP eligibility. These features would not be substantially impaired by implementation of the E1, E1A, E2, and E2A Build Alternatives. Therefore, operational noise would not diminish the integrity of this historic resource. The elevated trackway associated with the E1, E1A, E2, and E2A Build Alternatives would be constructed over a water conveyance system, a contributing element to the Blum Ranch Historic District. However, no piers of this structure would be placed within the historic boundary, and, therefore, the alignments would not physically affect the historic resource.

Standardized Conditions or Treatments Proposed

None.

Property-Specific Conditions or Treatments Proposed

The following mitigation measure will be implemented to reduce the contrast between the HSR structure and its surroundings within Aliso Canyon, and thus, the visual impact on Blum Ranch.

- CUL-MM#5: In the event the E1 or E2 Build Alternatives are selected, prior to construction, the Authority will be required to consult with the SHPO and the owner of Blum Ranch to develop protection measures to minimize effects on the visual integrity of the Blum Ranch viewshed. The alternative design measures will modify the color and design of the HSR structure and portal visible from the historic resources. Implementation of such visual modifications would minimize the contrast between the HSR structure and its surroundings within Aliso Canyon, and thus, the visual impact on Blum Ranch.

Potential for Constructive Use under Section 4(f)

With implementation of the E1, E1A, E2, and E2A Build Alternatives, the HSR alignment would be visible from this historic property. The rail viaduct structure would be approximately 1,000 feet south of the historic property. While the introduction of a new, noticeable visual element would change some views from the resource, the resource would retain its ability to convey its historical significance. All existing physical features within the resource would remain unchanged, and most views from the resource into the surrounding area would remain unchanged. In the event the E1, E1A, E2, or E2A Build Alternatives are selected, prior to construction, the Authority would be required to consult with SHPO and the owner of Blum Ranch in order to develop measures to preserve the visual integrity of the Blum Ranch viewshed. These measures would modify the color and design of the HSR structure and portal visible from the historic resources.

Implementation of such visual modifications would minimize the contrast between the HSR structure and its surroundings within Aliso Canyon, and thus, the visual impact on Blum Ranch.

According to Section 3.2, Transportation, this two-lane portion of Aliso Canyon Road receives approximately three cars per minute during peak traffic hours, producing noticeable traffic noise. Because of its adjacency to noisy traffic on Aliso Canyon Road, the property is not especially sensitive to noise impacts, and additional intermediate noise from the rail viaduct would not diminish the resource's historic setting. Given the distance of the HSR alignment from the historic property, and the fact that the integrity of the contributing structures or key agricultural features would not be diminished, the attributes and features that qualify this historic property for protection under Section 4(f) would not be substantially impaired by views of the E1, E1A, E2, and E2A Build Alternatives from this historic property. Therefore, the Authority has preliminarily concluded that the views of the HSR elevated rail structure from this historic property and the operational noise of the HSR would not constitute a constructive use under Section 4(f). Spanning the underground water line with an aerial structure would not constitute use under Section 4(f).

Implementation of the E1, E1A, E2, and E2A Build Alternatives may require permanent acquisition of land from the Blum Ranch property boundary. In the event that temporary or

permanent acquisitions are required, the Authority would ensure that acquisitions would not affect contributing features within the historic boundary which qualify the resources for protection under Section 4(f). None of the Build Alternatives would require temporary physical occupation of the Blum Ranch, so there would be no temporary occupancy.

The analysis above supports the Authority's preliminarily conclusion that there would be no use and no constructive use of the resource by the Refined SR14 and SR14A Build Alternatives because Blum Ranch is outside of their respective RSAs.

Existing

Simulated Potential View

Figure 4-33 Blum Ranch Photo Simulation—E1, E1A, E2, and E2A Build Alternatives (View 1 of 2)

Existing

Simulated Potential View

Figure 4-34 Blum Ranch Photo Simulation—E1, E1A, E2, and E2A Build Alternatives (View 2 of 2)

Blum Ranch Farmhouse

Effects under Section 106

The implementation of the E1, E1A, E2, and E2A Build Alternatives would cause an adverse visual effect to Blum Ranch Farmhouse from a change in the historic setting of the resource. The Blum Ranch Farmhouse is outside of the Refined SR14 and SR14A Build Alternatives' RSAs.

The Blum Ranch Farmhouse is in the Acton area and falls within the Blum Ranch Historic District described above. The Blum Ranch Farmhouse is an excellent example of an early-20th century Craftsman-style dwelling with Swiss-Chalet style influences. Although the farmhouse features the distinctive characteristics of the Craftsman style and Swiss-Chalet style, the stonework on the 0house is unique as it showcases the skills of Mr. Blum's trade as a stonecutter and his Swiss heritage. As a result, it is also illustrative of a type and period of vernacular construction influenced by the abundance of stone and absence of wood as building materials. Given this, the Blum Ranch Farmhouse is considered eligible for listing in the NRHP, with SHPO concurrence, and CRHR under Criterion C/3, independent of the Blum Ranch Historic District.

Similar to the Blum Ranch, discussed above, the E1, E1A, E2, and E2A Build Alternatives would include construction and operation of an aerial structure south of the historic building. While the farmhouse itself is surrounded by tall mature trees, and views from and toward the proposed HSR bridge structure and portal location would likely be partly obstructed, the proximity of the aerial structure would substantially detract from the setting of the historic site. These changes would result in an adverse effect as a result of the introduction of visual elements, as documented in the Draft Finding of Effect document (Authority 2021).

The E1, E1A, E2, and E2A Build Alternatives would not result in the removal of, the physical destruction of, or damage to the contributing elements to the historic property. The E1, E1A, E2, and E2A Build Alternatives would include a utility easement along Aliso Canyon Road, west of the historic property, which would not result in effects to the resource.

The Refined SR14 and SR14A Build Alternatives would not construct project features in proximity to the Blum Ranch Farmhouse and would not result in an adverse effect.

Standardized Conditions or Treatments Proposed

None are proposed.

Property-Specific Conditions or Treatments Proposed

The following mitigation measure will be implemented to reduce the contrast between the HSR structure and its surroundings within Aliso Canyon, and thus, the visual impact on Blum Ranch.

- CUL-MM#5: In the event the E1 or E2 Build Alternatives are selected, prior to construction, the Authority will be required to consult with the SHPO and the owner of Blum Ranch to develop protection measures to minimize effects on the visual integrity of the Blum Ranch viewshed. The alternative design measures will modify the color and design of the HSR structure and portal visible from the historic resources. Implementation of such visual modifications would minimize the contrast between the HSR structure and its surroundings within Aliso Canyon, and thus, the visual impact on Blum Ranch.

Potential for Constructive Use under Section 4(f)

With implementation of the E1, E1A, E2, and E2A Build Alternatives, the HSR alignment would be partially visible from this historic property, due to screening by tall mature trees. The rail viaduct structure would be located south of the historic property. While the introduction of a new, noticeable visual element would change some views from the resource, the resource would retain its ability to convey its historical significance and most of its contributing features would remain intact. All existing physical features within the resource would remain unchanged, and most views from the resource into the surrounding area would remain unchanged. Given the distance of the HSR alignment from the historic property and the fact that the integrity of the contributing features would not be diminished, the attributes and features that qualify this historic property for

protection under Section 4(f) would not be diminished by views of the E1, E1A, E2, and E2A Build Alternatives from this historic property. Therefore, the Authority has preliminarily concluded that the views of the HSR elevated rail structure from this historic property would not constitute a constructive use under Section 4(f). Given the distance of the rail line from the resource (over 1,000 feet away), noise impacts associated with operation of the HSR alignment would not constitute a use under Section 4(f).

The E1, E1A, E2, and E2A Build Alternatives would not permanently acquire land from the Blum Ranch Farmhouse; therefore, none of the Build Alternatives would result in a permanent use of this historical property. Similarly, none of the Build Alternatives would require temporary physical occupation of the Blum Ranch Farmhouse, so there would be no temporary occupancy.

The Authority has preliminarily concluded that there would be no use of the resource by the Refined SR14 and SR14A Build Alternatives because the Blum Ranch Farmhouse is outside of their respective RSAs.

4.6.2.2 Preliminary Section 4(f) Determinations of Historic Properties with No Adverse Effects under Section 106 of the NHPA

A finding of no adverse effect under Section 106 was made for the Palmdale Ditch, the EBA, and the Eagle and Last Chance Mine Road, discussed below. Therefore, a Section 4(f) use assessment was completed to determine if the use would be *de minimis*.

Palmdale Ditch

Effects under Section 106

The Palmdale Ditch is eligible for listing in the NRHP, with SHPO concurrence, under Criterion A for its association with the development of irrigated farming in the south Antelope Valley area, and the development of the Palmdale and Littlerock Irrigation Districts. However, the portion of the ditch within the Refined SR14, E1, and E2 Build Alternatives' RSA was modified in 2008–2009 from its original, historic configuration as an open-air ditch to its present covered condition. Therefore, the segment of the ditch within the Refined SR14, E1, and E2 Build Alternatives' RSA does not retain its integrity and does not contribute to the larger historic resource. The segment of the Palmdale Ditch that would be affected by the SR14A, E1A, and E2A Build Alternative alignments is an open-air ditch, reminiscent of its original configuration.

With implementation of the E1 and E2 Build Alternatives, East Barrel Springs Road would be altered to construct an underpass, allowing the proposed at-grade HSR alignment to pass over the road. The Palmdale Ditch currently crosses Barrel Springs Road in an underground pipe and would be intersected by the at-grade alignment to the south of East Barrel Springs Road. Changes to East Barrel Springs Road to create an underpass would require relocation of the ditch where it crosses the road, and the at-grade HSR alignment would also require relocation of the ditch. The Palmdale Ditch would be relocated, but would continue to convey water as originally intended, and the portion of the ditch that would be altered by the project does not contribute to the larger historic resource. This would not result in an adverse effect to this resource.

The portion of the Palmdale Ditch that would be affected by the Refined SR14 track alignment was previously culverted and is no longer a contributing feature of the resource. Implementation of the Refined SR14 Build Alternative would entail lowering East Barrel Springs Road in such a way that the road would pass below proposed at-grade tracks at this location. The Palmdale Ditch would be realigned to the east of the improvements in order to maintain gravity flow. Although construction would lower East Barrel Springs Road and realign the resource, all construction impacts would occur where the once-open ditch was covered between 2008 and 2009. Therefore, implementation of the Refined SR14 Build Alternative would not result in actions during construction or operation that would cause damage or destruction to this historic property.

The portion of the Palmdale Ditch that would be affected by the SR14A, E1A, and E2A Build Alternative alignments is an open, earthen channel, a contributing portion of the historic property.

Implementation of the SR14A, E1A, and E2A Build Alternatives would entail the construction of an at-grade track over the resource and would include culverting up to 0.06 mile (320 feet) of the Palmdale Ditch alignment. Construction of the SR14A, E1A, and E2A Build Alternative alignments and associated elements would not result in actions during construction or operation that would cause damage or destruction to this historic property and would likely not impede the character or use of the Palmdale Ditch as a historic property. This would not result in an adverse effect to this resource.

Standardized Conditions or Treatments Proposed

The Palmdale to Burbank Project Section MOA and BETP would address avoidance, minimization, and mitigation conditions and treatments for the Palmdale Ditch.

Property-Specific Conditions or Treatments Proposed

The Palmdale to Burbank Project Section MOA and BETP would address avoidance measures for the Palmdale Ditch, such as the preparation of pre-construction condition assessments and the preparation of a plan outlining the protection of the resource. The MOA and BETP are discussed further in Section 3.17, Cultural Resources.

Potential for Use under Section 4(f)

The portion being altered does not contribute to the historic resource, and protective measures would be implemented to ensure that the contributing portions would be avoided. Therefore, based on the finding that while a portion of the resource permanent would be permanently acquired, the Authority has preliminarily concluded that there would be no adverse effect with implementation of the Refined SR14, SR14A, E1, E1A, E2, and E2A Build Alternatives, and the Section 4(f) use of the Palmdale Ditch would be *de minimis*.

East Branch of the California Aqueduct

Effects under Section 106

The EBA is eligible for listing in the NRHP, with SHPO concurrence, and CRHR under Criterion A, representing a comprehensively planned and publicly sanctioned water conveyance public works project, and Criterion C, for its complex design necessary to redistribute water throughout the state. The E1 and E2 Build Alternative alignments would cross this resource on an at-grade alignment, requiring an approximately 1,500-foot-long section of the aboveground aqueduct to be converted to one or more underground pipes. As a result, the existing historic features of this section of the aqueduct would be removed. The historic features include the unreinforced concrete channel, concrete lining, alignment curvature, and associated access roads. Although the historic features of this section would be removed, the aqueduct would retain its primary function—the conveyance of water. Water would still be able to flow through the aqueduct but would flow through this area underground. Moreover, infrastructure, such as the EBA, undergoes routine maintenance and replacement of original material throughout the years. Therefore, minor alteration of historic features of the EBA would not constitute an adverse effect. The Authority will consult with SHPO to review plans for rehabilitation in accordance with the SOI's standards.

The Refined SR14 Build Alternative would approach this resource from the north and would involve excavation around and under the aqueduct to shore it up during and after construction of the tunneling below the property. No temporary or permanent physical damage is anticipated. The aqueduct would retain its primary function—the conveyance of water.

The SR14A, E1A, and E2A Build Alternative alignments would cross this resource on an elevated viaduct and would require modification of an ancillary structure. There would be no modifications or realignments of the EBA itself. No temporary or permanent physical damage is anticipated. The aqueduct would retain its primary function—the conveyance of water.

Standardized Conditions or Treatments Proposed

The Palmdale to Burbank Project Section MOA and BETP would address avoidance measures, minimization, and mitigation conditions and treatments for the aqueduct.

Property-Specific Conditions or Treatments Proposed

The Palmdale to Burbank Project Section MOA and BETP would address avoidance, minimization, and mitigation conditions and treatments for the EBA. The MOA and BETP are discussed further in Section 3.17, Cultural Resources.

Potential for Use under Section 4(f)

Based on the finding that with the application of conditions stipulated in the Finding of Effect, the Authority has preliminarily concluded that there would be no adverse effect with implementation of the Refined SR14, E1, and E2 Build Alternatives. The minor alterations of the EBA under the E1 and E2 Build Alternatives would not inhibit the function of the resource as a water conveyance facility and would have no adverse effect to the historic resource. Construction and operation of the Refined SR14 Build Alternative would not substantially impair the protected features or attributes of the resource. Additionally, the modification of an ancillary structure under the SR14A, E1A, and E2A Build Alternatives would not inhibit the function of the resource as a water conveyance and would not substantially impair the protected features or attributes of the EBA. Therefore, the Section 4(f) use of the EBA would be *de minimis* under all six Build Alternatives.

Eagle and Last Chance Mine Road

Effects under Section 106

The Eagle and Last Chance Mine Road is a historic dirt wagon road that is eligible for listing in the NRHP, with SHPO concurrence, under Criterion A/1, B/2, and C/3. The historic boundary of the Eagle and Last Chance Mine Road is defined as the alignment of the existing roadway that remains visible on the landscape within the historic built APE. Character-defining features of this linear resource consist of the alignment, road width, grade, roadcuts, and road surface, which is eroded in some locations and regraded in the northern portions.

Implementation of the E1, E1A, E2, and E2A Build Alternatives would entail the placement of a construction staging area just east of the historic property. In addition, construction of the E1, E1A, E2, and E2A Build Alternatives would require the laying of asphalt over the historic dirt wagon road and may involve temporary (and potentially permanent) utility easements within the road right-of-way. Assuming that permanent utility easements are required by the E1, E1A, E2, and E2A Build Alternatives, such activities would not diminish the resource's ability to continue to operate as a road. Accordingly, the laying of asphalt and the establishment of a construction staging area would be temporary activities that would not diminish the resources' character-defining features, including its alignment, width, grade, and surface. Protective measures, such as the placement of geo-fabric prior to laying asphalt would allow the road to be restored to preconstruction conditions following construction activities. This would not result in an adverse effect to this resource.

The Eagle and Last Chance Mine Road is outside of the Refined SR14 and SR14A Build Alternatives' APE. With implementation of the Refined SR14 and SR14A Build Alternatives, no action would be taken during construction or operation that would cause damage or destruction to this historic property.

Standardized Conditions or Treatments Proposed

The Palmdale to Burbank Project Section MOA and BETP would address avoidance measures, minimization, and mitigation conditions and treatments for the Eagle and Last Chance Mine Road.

Property-Specific Conditions or Treatments

The Palmdale to Burbank Project Section MOA and BETP would address avoidance, minimization, and mitigation conditions and treatments for the Eagle and Last Chance Mine Road. The MOA and BETP are discussed further in Section 3.17, Cultural Resources.

Potential for Use under Section 4(f)

Based on the finding that with the application of conditions stipulated in the Finding of Effect, the Authority has preliminarily concluded that no adverse effect would occur with implementation of any of the six Build Alternatives. Construction activities on and around the Eagle and Last Chance Mine Road would result in a temporary physical effect to the property; however, effects would be mitigated, and the road would be restored to preconstruction conditions following construction activities. Construction of the Build Alternatives would not substantially impair the protected features or attributes of the resource. Therefore, the Section 4(f) use of the Eagle and Last Chance Mine Road would be *de minimis* with implementation of the E1, E1A, E2, and E2A Build Alternatives, and there would be no use with implementation of the Refined SR14 and SR14A Build Alternatives.

Site 19-003890 (Vasquez Rocks Archaeological District)

Effects under Section 106

This resource is described in detail in Section 4.5.2.1, and in Section 3.17, Cultural Resources. Site 19-003890 is listed on the NRHP as part of the Vasquez Rocks Archaeological District under Criterion A, C, and D. With implementation of the Refined SR14 and SR14A Build Alternatives, project activities include construction of a temporary water line in an existing utility easement within public right-of-way that intersects the northern and western edges of the resource, the Vasquez Rocks Archaeological District. It is a cluster of 25 sites within a 200-acre area that includes rock shelter sites, habitation sites, large and small lithic sites, multi-activity workshop sites, rock art sites, an earthen oven site, and a cemetery site. Construction of a temporary water line within the edges of the site boundary would result in a physical effect but would not adversely affect the property. However, effects can be minimized with a project-specific mitigation measure requiring either locating the water line aboveground—resulting in relatively minor surface work within the site boundary—or avoidance (e.g., locating the water line outside the boundary of the site). This would not substantially impair the protected features or attributes of the resource, such as rock shelter sites, habitation sites, and rock art, and would not result in an adverse effect. Therefore, a Section 4(f) use of Site 19-003890 would occur with implementation of the Refined SR14 and SR14A Build Alternatives and would be *de minimis*.

This resource is not within the Section 4(f) RSA of the E1, E1A, E2, and E2A Build Alternatives; therefore, these Build Alternatives would not result in a use under Section 4(f).

Standardized Conditions or Treatments Proposed

The following condition or treatment would avoid, minimize, or mitigate adverse effects on this contributor to a historic property:

- CUL-MM#4: Minimize adverse effects to archaeological resources through best management practices:
  - The Authority-prepared MOA and ATP may identify archaeological sites and resources that may be protected-in-place through implementation of best management practices to reduce ground disturbing activities.

Property-Specific Conditions or Treatments Proposed

The Palmdale to Burbank Project Section MOA and ATP would address avoidance, minimization, and mitigation conditions and treatments for Site 19-003890 (Vasquez Rocks Archaeological District). The MOA and ATP are discussed further in Section 3.17, Cultural Resources.

Potential for Use under Section 4(f)

This resource would not experience an adverse effect under Section 106, and the protected features or attributes of the resource would not be diminished. Construction activities of the Refined SR14 and SR14A Build Alternatives would result in a physical effect to the property; however, effects would be mitigated and would not substantially impair the protected features or attributes of the resource. Therefore, the Authority has preliminarily concluded that with

implementation of the Refined SR14 and SR14A Build Alternatives, impacts on this resource would be *de minimis*. There would be no use of the resource by the E1, E1A, E2, and E2A Build Alternatives.

Pink Motel and Café

Effects under Section 106

The implementation of the Refined SR14, SR14A, E1, and E1A Build Alternatives would cause noise effects to the Pink Motel and Café from a change in the historic setting of the resource due to operational noise of the train.

The Pink Motel and Café (now branded as Cadillac Jacks) are rare examples of post-World War II roadside architecture in the Los Angeles area, and together are a remarkable example of post-war roadside commercial development. The properties are eligible under NRHP, with SHPO concurrence, and CRHR Criterion C/3, as rare and outstanding examples of the late-1940s Googie-style roadside architecture.

The Refined SR14, SR14A, E1, and E1A Build Alternatives would include operation of elevated HSR tracks approximately 0.05 mile outside of the historic property boundary, resulting in noise effects to the Pink Motel and Café. However, a quiet setting is not a character-defining feature of the Pink Motel and Café. While the historic built resource would experience noise impacts on site, the vibration levels associated with Refined SR14, SR14A, E1, and E1A Build Alternative operations would not exceed the FRA impact criteria and would not pose a threat to the integrity of the Pink Motel and Café. The Authority has made a finding of *no adverse effect* on the Pink Motel and Café.

The Refined SR14, SR14A, E1, and E1A Build Alternatives would not result in the removal of, the physical destruction of, or damage to the contributing elements of the historic property.

This resource is not within the Section 4(f) RSA of the E2 and E2A Build Alternatives; therefore, these build alternatives would not result in an adverse effect to this resource.

Standardized Conditions or Treatments Proposed

The Palmdale to Burbank Project Section MOA and BETP would address avoidance measures, minimization, and mitigation conditions and treatments for the Pink Motel and Café.

Property-Specific Conditions or Treatments Proposed

The Palmdale to Burbank Project Section MOA and BETP would address avoidance, minimization, and mitigation conditions and treatments for the Pink Motel and Café. The MOA and BETP are discussed further in Section 3.17, Cultural Resources.

Potential for Use under Section 4(f)

Given the distance of the Refined SR14, SR14A, E1, and E1A Build Alternative alignments from the historic property and the fact that the integrity of the contributing features would not be diminished, the attributes and features that qualify this historic property for protection under Section 4(f) would not be diminished by noise from the Build Alternatives' operations. Therefore, the Authority has preliminarily concluded that the introduction of noise from HSR operation would not constitute a constructive use under Section 4(f). There would be no use of the resource by the E2 and E2A Build Alternatives.

4.6.2.3 Summary of Preliminary Section 4(f) Use Determinations of Historic Properties

A summary of Section 4(f) uses of NRHP-listed or eligible historic resources is provided in Table 4-7. In some cases, historic properties are located within the alignment of more than one Build Alternative.

Table 4-7 Historic Resources: Summary of Preliminary Section 4(f) Use Determinations

Resource	Preliminary Section 4(f) Use Determination for the Build Alternatives					
	Refined SR14	SR14A	E1	E1A	E2	E2A
Palmdale Ditch	No use	No use	*de minimis*	*de minimis*	*de minimis*	*de minimis*
East Branch of the California Aqueduct	*de minimis*	*de minimis*	*de minimis*	*de minimis*	*de minimis*	*de minimis*
Site 19-003890 (Vasquez Rocks Archaeological District)	*de minimis*	*de minimis*	No use	No use	No use	No use
Blum Ranch	No use	No use	No use	No use	No use	No use
Blum Ranch Farmhouse	No use	No use	No use	No use	No use	No use
Pink Motel and Café	No use	No use	No use	No use	No use	No use
Eagle and Last Chance Mine Road	No use	No use	*de minimis*	*de minimis*	*de minimis*	*de minimis*

Source: Authority, 2019d
Authority = California High-Speed Rail Authority

4.7 Section 4(f) Avoidance Alternatives

Avoidance alternatives must be considered when there is a use of a Section 4(f) resource and a preliminary determination of *de minimis* impact is not made for that use.

4.7.1 No Project Alternative

The No Project Alternative would not include the construction of the California HSR System or associated facilities and would thus have no impact on Section 4(f) or Section 6(f) resources associated with the construction and operation of the HSR. This alternative would not address the State's purpose and need for the project. The No Project Alternative is insufficient to meet existing and future travel demand; current and projected future congestion of the transportation system would continue to result in deteriorating air quality, reduced reliability, and increased travel times.

4.7.2 Build Alternatives

As shown in Table 4-6 and Table 4-7, the Authority has preliminarily concluded that none of the Build Alternatives would result in a Section 4(f) use for which a preliminary determination of *de minimis* impact was not made, and therefore, no avoidance alternatives are necessary to avoid a Section 4(f) use.

4.8 Section 4(f) Measures to Minimize Harm

Measures to minimize harm are identified when there is no prudent and feasible alternative to the use of a Section 4(f) resource. As all uses identified in this analysis would be *de minimis*, the identification of additional measures to minimize harm is not required.

4.9 Preliminary Section 4(f) Least Harm Analysis

When there is no feasible and prudent avoidance alternative to using Section 4(f) resources, the FRA must approve the alternative that causes the least overall harm to Section 4(f) resources, taking into consideration the preservation purpose of the statute.

Since all of the Build Alternatives would result in a *de minimis* use of Section 4(f) resources, the Authority has preliminarily concluded that any of the six Build Alternatives may be selected and would not cause harm to Section 4(f) resources.

4.10 Section 6(f) Analysis

Based on a thorough investigation of properties in the Palmdale to Burbank Project Section, Section 4(f) RSA, documented in Appendix 5-A, no LWCF monies were used to acquire or develop recreational resources in the RSA. Therefore, there are no Section 6(f) resources in the Section 4(f) RSA, and no further analysis of potential conversion of Section 6(f) resources is needed.

4.11 United States Forest Service Resources Analysis

This section summarizes effects to Section 4(f) resources associated with the Refined SR14, SR14A, E1, E1A, E2, and E2A Build Alternatives on the ANF including lands within the ANF that are a part of the USFS-controlled SGMNM.

4.11.1 Consistency with Applicable United States Forest Service Policies

Appendix 3.1-B, USFS Policy Consistency Analysis, contains a comprehensive evaluation of relevant laws, regulations, plans, and policies relative to portions of the Build Alternative alignments within the ANF, including SGMNM. Policies in the Angeles National Forest Management Plan regarding Section 4(f) resources are generally related to USFS's ability to maintain and protect park lands, archaeological sites, and historic built resources. This analysis determined that the portions of the Build Alternatives on lands managed by the USFS would be consistent with applicable policies pertaining to Section 4(f) resources.

4.11.2 United States Forest Service Resource Analysis

All six Build Alternatives would be primarily underground in bored tunnels within the boundaries of the ANF, including the SGMNM. At such depths, the Build Alternatives would avoid park lands, archaeological sites, and historic built resources located above-ground within the boundaries of the ANF including the SGMNM. Under Section 4(f), the underground tunnels would not affect surface resources, including aboveground park land, hydrology, or historic built resources.

The Refined SR14, SR14A, E1, and E1A Build Alternatives would not use lands protected under Section 4(f) within the ANF. The Refined SR14 and SR14A Build Alternatives would also not use lands protected under Section 4(f) within the SGMNM. The E2 and E2A Build Alternatives would result in a *de minimis* use of lands protected under Section 4(f) within the ANF. The E1, E1A, E2, and E2A Build Alternatives would result in a *de minimis* use of lands protected under Section 4(f) within the SGMNM. The use within USFS lands under the E1, E1A, E2, and E2A Build Alternatives would be *de minimis* as the use would be minor and would not affect active recreation uses or facilities (such as campgrounds, trails, or recreation areas) or historic properties. Refer to Section 4.6.1 for a detailed discussion of the ANF, including the SGMNM.

4.11.2.1 Park, Recreation Area, and Wildlife and Waterfowl Refuge Resources

Parks, recreation area, and wildlife refuge resources that are eligible for Section 4(f) are discussed below.

Pacific Crest Trail

The PCT is a series of ridgeline trails that extend approximately 2,659 miles along the Sierra Nevada and Cascade Mountain Ranges, from Mexico through California (including Los Angeles and Kern Counties), Oregon, and Washington to Canada. Approximately 3 miles of the trail cross the Section 4(f) RSA within the ANF. The trail is a designated National Scenic Trail and is open to use by hikers and equestrians, but not bicyclists or motorized vehicles.

The Refined SR14 Build Alternative does not intersect the PCT within the ANF.

The SR14A, E1, E1A, E2, and E2A Build Alternative alignments would be located beneath the PCT several hundred feet below ground, thereby avoiding impacts on the trail.

Angeles National Forest/San Gabriel Mountains National Monument

The ANF, including SGMNM, includes areas designated for recreational activities. ANF offers natural environments and developed recreation areas including hiking trails, skiing trails, picnic areas, horseback riding, and campgrounds. According to the ANF Land and Resources Management Plan, 5 million visitors use the forest annually for recreation.

As detailed in Section 4.6.1.1, all six Build Alternatives would require the permanent use of lands within the ANF. However, The Refined SR14 and SR14A Build Alternatives would affect lands within the ANF that are currently neither used or designated for recreational uses nor open to the public (Vulcan Mine site). As such, these lands are not subject to the requirements of Section 4(f). The E1, E1A, E2, and E2A Build Alternatives would affect lands within the ANF that are covered under Section 4(f); however, because of the underlying land use designation and current use of these areas, along with project design features to reduce physical impacts (following existing roadway and utility easements), the Authority has preliminarily concluded that the effects of the E1, E1A, E2, and E2A Build Alternatives on the ANF would be *de* minimis as those effects would not substantially change the attributes or functions of the ANF recreational areas.

There is one hydrogeological risk area within the E1, E1A, E2, and E2A Build Alternatives' RSA south of the improvements along Aliso Canyon Road. As described in Section 3.8, Hydrology and Water Resources, the probability would be minimal to none that hydrologic resources would be affected in the area.

The Authority has preliminarily concluded that all six Build Alternatives would not result in the use of lands within the ANF that are covered under Section 4(f). These alternatives would generally avoid surface impacts in the ANF, and permanent easements would be limited to private land and land uses that do not qualify for Section 4(f) protection. The Authority has preliminarily concluded that the E2 and E2A Build Alternatives would require permanent easement of land that may qualify for protection under Section 4(f). However, the private in-holdings that would be included in the permanent easement under the E2 and E2A Build Alternatives do not contain recreational facilities or amenities, such as trails, campgrounds, or other recreation facilities that would qualify for protection under Section 4(f). Because these qualifying features are not present in the area to be included in the permanent easement, the E2 and E2A Build Alternatives would result in a *de minimis* use of a Section 4(f) resource. Parks and recreation resources in the ANF including SGMNM are detailed below in Table 4-8.

Table 4-8 Parks and Recreation Resources within the ANF, including SGMNM, Boundaries Evaluated for Section 4(f) Use

Resource Name	Ownership/ Official with Jurisdiction	Section 4(f) Use Analysis	Applicable Build Alternatives	Distance from Project Footprint
Potential Use				
Pacific Crest Trail	Various public and private lands	**Location:** PCT runs from Manning Park on the U.S.-Canada border to the U.S.-Mexico border, just south of Campo, California. In the project vicinity, from the north, the PCT follows Agua Dulce Canyon Road and then traverses Vasquez Rocks Natural Area Park before crossing SR 14 and continuing in a southeast direction. **Size:** The PCT's entire length is 2,659 miles. Approximately 3 miles of the trail are within the Refined SR14 and SR14A Build Alternative RSAs outside of the ANF including SGMNM. **Features:** Hiking, equestrian activities	E1, E1A, E2, E2A	**Nearest HSR Improvements/ Distance from Centerline:** The E1, E1A, E2, and E2A Build Alternatives would tunnel underneath the PCT where the PCT travels through the ANF, including SGMNM.

Source: Authority, 2019d
ANF = Angeles National Forest; Authority = California High-Speed Rail Authority; HSR = high-speed rail; PCT = Pacific Crest Trail; RSA = Resource Study Area; SGMNM = San Gabriel Mountains National Monument; SR = State Route

4.11.2.2 Cultural Resources

Under Section 106, the APE for archaeological and historic built resources is utilized to identify and analyze impacts on cultural resources that are considered eligible for listing in the NRHP and the CRHR. Although all six Build Alternatives would encounter archaeological resources throughout their alignments, none of the known archaeological resources within the ANF, including SGMNM boundaries are eligible for protection under Section 4(f) as detailed in Section 4.5.2. Given this, only historic built resources are discussed below. For more information regarding archaeological resource sites on USFS managed lands, refer to Section 3.17, Cultural Resources.

Seven historic built resources are located within the Build Alternative RSAs and were evaluated under Section 4(f). Due to the depth of bored tunnels (potential depths of bored tunnels under the ANF, including SGMNM, are over 2,000 feet below ground surface), the Build Alternatives would result in no use of the following resources in the ANF, including SGMNM:

- Big Creek Hydroelectric System Historic District - Vincent Transmission Line (Map ID 3862)
- Los Pinetos Nike Missile Site (Map ID 152)
- LADWP Boulder Transmission Line 3 (Map ID 2500)
- 1890s Acton Ford Road (Map ID 2920)
- Monte Cristo Wagon Road System (Map ID 2990/3000/3002)

The remaining historic built resources within the ANF pertain to the E1, E1A, E2, and E2A Build Alternatives: Blum Ranch and the Eagle and Last Chance Mine Road, discussed below. The Refined SR14 and SR14A Build Alternatives would not encounter historic built resources on USFS lands.

Blum Ranch (Map ID 2947)

The Blum Ranch is in the Acton area and is eligible for listing in the NRHP under Criterion A/1 and Criterion C/3. Although the Blum Ranch itself is not directly located within the ANF, the Blum Ranch Historic District boundary encompasses the footprint of a buried historic concrete irrigation pipeline that extends through Assessor's Parcel Number 3058-007-010, approximately 370 feet into the ANF, and Assessor's Parcel Number 3058-010-900. Although the E1, E1A, E2, and E2A Build Alternatives would be located outside the historic property boundary, operation of these Build Alternatives would be highly noticeable and audible. A quiet setting is not a character-defining feature of the property. Rather, the general rural setting along with the buildings, agricultural features, and associated infrastructure of a rural farmstead are the primary features qualifying it for NRHP eligibility. These features would not be substantially impaired by implementation of the Build Alternatives. Therefore, operational noise would not diminish the integrity of this historic resource. An elevated trackway would be constructed over a water conveyance system, a contributing element to the Blum Ranch Historic District. However, no piers of this structure would be placed within the historic boundary; therefore, the E1, E1A, E2, and E2A Build Alternative alignments would not affect the historic resource. The E1, E1A, E2, and E2A Build Alternatives would also introduce "visual elements that diminish the integrity of the property's" setting and feeling. While it is likely that this visual change would not alter the characteristics of the property that qualify it for the NRHP, construction would have an adverse visual effect on Blum Ranch. Impacts on Blum Ranch are discussed in greater detail in Section 4.6.2.1. No use would occur under the six Build Alternatives. Impacts on Blum Ranch are discussed in greater detail in Section 4.6.2.1.

Eagle and Last Chance Mine Road (Map ID 2593)

The Eagle and Last Chance Mine Road is located in the ANF and is eligible for listing in the NRHP under Criterion A/1, B/2, and C/3. Implementation of the E1, E1A, E2, and E2A Build Alternatives would entail the placement of a construction staging area just east of the historic property and may involve temporary (and potentially permanent) utility easements within the road right-of-way. Although the E1, E1A, E2, and E2A Build Alternatives would require placement of construction staging areas within the road right-of-way, such impacts would be temporary and would not diminish the continued operation of the Eagle and Last Chance Mine Road.

Construction of the E1, E1A, E2, and E2A Build Alternatives would also require the laying of asphalt; however, protective measures, such as the placement of geo-fabric prior to laying asphalt, would allow the road to be restored to preconstruction conditions of the Eagle and Last Chance Mine Road. Given this, the Build Alternatives would not result in a change of the character or historic property's use or features within its setting. As construction and operation of the E1, E1A, E2, and E2A Build Alternatives would not substantially impair the resource's protected activities, features, or attributes, implementation of the E1, E1A, E2, and E2A Build Alternatives would result in a *de minimis* use of this resource. Impacts on the Eagle and Last Chance Mine Road are discussed in greater detail in Section 4.6.2.1.

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