4.0 Draft Section 4(f)/6(f) Evaluation

4.1 Introduction

This chapter provides the analysis to support preliminary determinations necessary to comply with the provisions of 49 United States Code (U.S.C.) 303 (hereinafter referred to as "Section 4(f)") and the Land and Water Conservation Fund (LWCF) Act of 1965 (hereinafter referred to as "Section 6(f)"). Section 4(f) properties are publicly owned lands of a park, recreation area, or wildlife and water fowl refuge or land of a historical site of national, state, or local significance as determined by the federal, state, regional, or local officials having jurisdiction over the resource. Under Section 4(f) an operating agency of the U.S. Department of Transportation may not approve a project that uses protected properties unless there are no prudent or feasible alternatives and the project includes all possible planning to minimize harm to such properties.

Section 6(f) properties are recreation resources funded by the LWCF Act. Land purchased with these funds cannot be converted to a non-recreation use without coordination with the National Park Service (NPS) and mitigation that includes replacement of the quality and quantity of land used. Additional information on publicly owned parklands, recreation lands, wildlife, waterfowl refuges, and historic sites is provided in Section 3.7, Biological Resources and Wetlands, Section 3.15, Parks, Recreation, and Open Space; Section 3.17, Cultural and Paleontological Resources; and the *California High-Speed Train Fresno to Bakersfield Section: Historic Property Survey Report* (Authority and FRA 2011a).

This chapter describes the statutory requirements associated with Section 4(f) and Section 6(f) and identifies the potential protected properties in the project area; the use of those properties that would result from the Fresno to Bakersfield Section of the HST project; feasible and prudent alternatives that would avoid or minimize the use of the properties; measures to minimize harm; and mitigation measures that have been considered.

4.1.1 Study Area

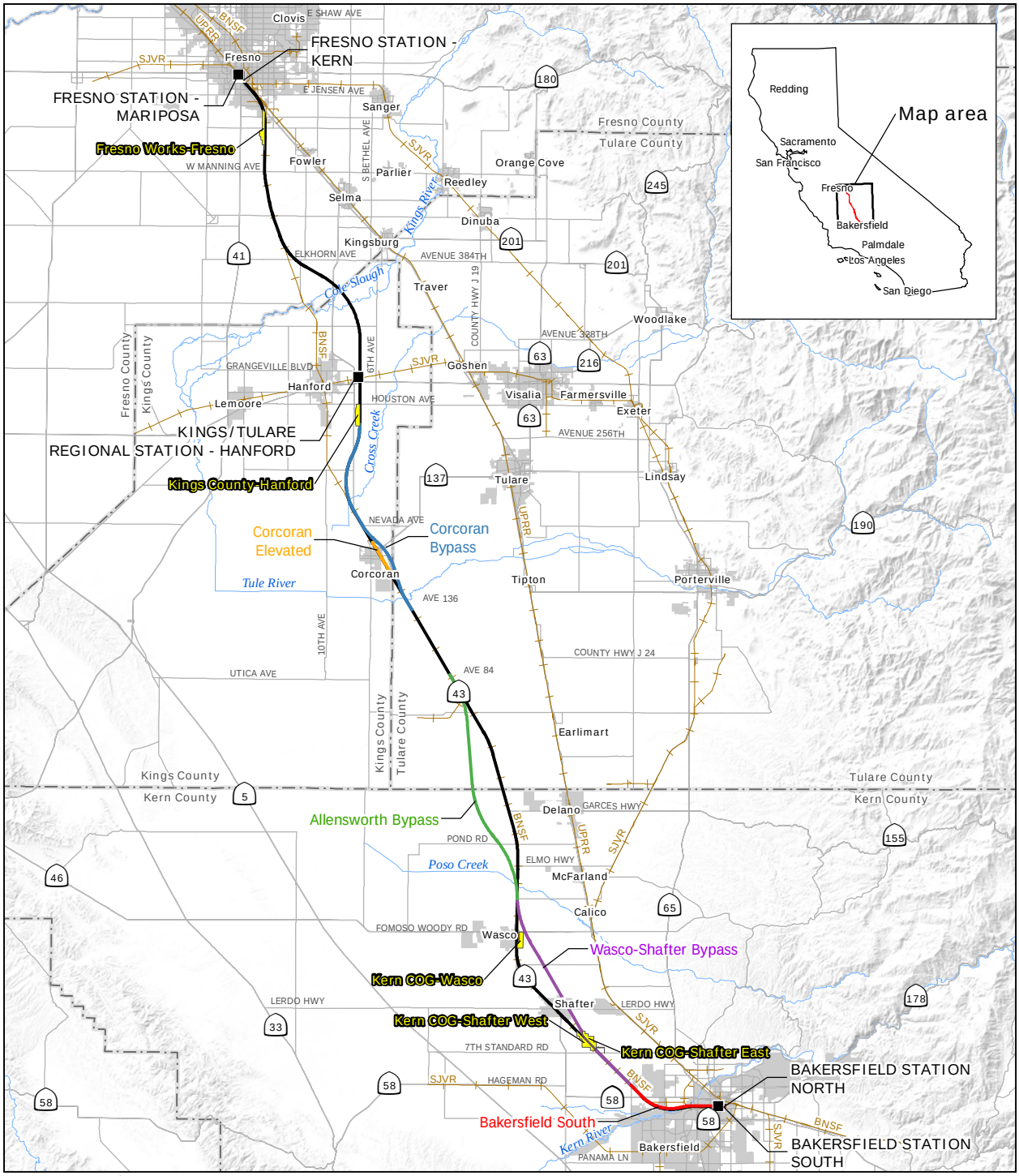
The study area as defined below identifies the Section 4(f) and Section 6(f) properties considered for evaluation. Figure 4-1 depicts the alternative alignments and the heavy maintenance facility (HMF) site alternatives for the Fresno to Bakersfield Section of the HST System.

A. PUBLIC PARK AND RECREATION LANDS, OPEN SPACE, AND WILDLIFE AND WATERFOWL REFUGES

The study area for parks, recreational facilities, and open space is defined as 1,000 feet on either side of the alternative alignments and 0.5 mile around the HMF sites, station areas, and support facilities for the HST alternatives, with one exception—existing transportation corridors. In those areas where these resources are separated from the project element by an existing transportation corridor, such as SR 43 or the BNSF right-of-way, the 1,000-foot study area does not extend beyond these transportation rights-of-way because they provide a barrier to potential impacts on park and recreation resources.

B. HISTORIC PROPERTIES

Because this project is a federal undertaking, Title 36 Code of Federal Regulations (CFR) 800.4(a)(1) requires the establishment of an Area of Potential Effects (APE). The APE is the geographic area or areas within which an undertaking may directly or indirectly alter the character or use of historic properties, if any such properties exist. A specific APE tailored to archaeological resources and one tailored to historic properties are presented below.



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

May 11, 2011

Source: URS, 2011

BNSF Alternative

Corcoran Elevated

Corcoran Bypass

Allensworth Bypass

Wasco-Shafter Bypass

Bakersfield South

Station

Alternative heavy maintenance facility (HMF)

Stream

Existing rail line

Community/Urban area

County boundary

N

0 5 10 Miles

0 10 20 Kilometers

Figure 4-1
HST alternatives and HMF sites carried forward for further study

Archaeological APE

The APE for archaeological properties is the area of ground proposed to be disturbed during construction of the undertaking, including construction involving grading, cut-and-fill, easements, staging areas, utility relocation, borrow pits, and biological mitigation areas.

Historic Properties APE

The APE for historic architectural properties includes all properties that contain buildings, structures, objects, sites, landscapes, and districts more than 50 years of age at the time the cultural resources survey was conducted (2010). The historic architectural resources APE for the Fresno to Bakersfield Section includes all legal parcels intersected by the proposed HST right-of-way, construction of proposed ancillary features (such as grade separations or HMF sites), and construction staging areas. The APE for historic architectural resources was defined in accordance with Attachment B of the Draft Section 106 PA as follows:

- 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 National Register.
- Properties near the undertaking that were either used by a railroad or served by a railroad, or where railroad materials, features, and activities have long been part of their historic setting, but only in such cases where the undertaking would result in a substantial change from the historic use, access, or noise and vibration levels that were present 50 years ago or during the period of significance of a property, if different.

The revised APE limits are the result of updated project understanding as well as ongoing field efforts that clarify the ability for individual properties to meet the above stipulations. This analysis is based on 15% design development. As possible future project revisions take place, updated APE maps would be produced and authorized as per the stipulations of the Draft Programmatic Agreement with the State Historic Preservation Officer (SHPO).

4.1.2 Laws, Regulations, and Orders

This section includes the federal laws and regulations that pertain to Section 4(f) and Section 6(f) properties in the study area.

A. FEDERAL

The project is an intercity passenger rail project that is receiving federal funding through the FRA. Therefore, compliance with Section 4(f) is required. Whereas Section 4(f) applies only to programs and policies undertaken by the U.S. Department of Transportation, Section 6(f) applies to programs and policies of any federal agency and is therefore relevant here.

U.S. Department of Transportation Act 49 U.S.C. 303(c) (Section 4[f])

Compliance with Section 4(f) is required for transportation projects undertaken by an operating administration of the U.S. Department of Transportation or that may receive federal funding and/or discretionary approvals. Section 4(f) protects publicly owned land of parks, recreational

areas, and wildlife refuges. Section 4(f) also protects historic sites of national, state, or local significance located on public or private land. FRA's Procedures for Considering Environmental Impacts (64 FR 25445, May 26, 1999) contains FRA processes and protocols for analyzing the potential use of 4(f) protected properties. In addition, although not subject to Title 23 Section 774 regarding Section 4(f) for highways and transit projects FRA uses this regulation as additional guidance regarding the requirements established in 49 U.S.C. 303.

FRA may not approve the use of a Section 4(f) property, as defined 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 according to U.S.C. 49 303(d). An alternative is not feasible if it cannot be built as a matter of sound engineering judgment. In determining whether an alternative is not prudent, the FRA may consider if the alternative will result in any of the following:

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

If there is no prudent and feasible alternative, the project must include all possible planning to minimize harm to the site, which includes all reasonable measures to minimize harm or mitigate impacts (49 U.S.C. 303[c][2]). In evaluating the reasonableness of measures to minimize harm, the FRA may consider the following:

- The preservation purpose of the statute.
- The views of the official(s) with jurisdiction over the Section 4(f) property.
- The cost of the measures if a reasonable public expenditure in light of the adverse impacts of the project on the Section 4(f) property and the benefits of the measure to the property.
- Impacts or benefits of the measures to communities or environmental resources outside of the Section 4(f) property.

If there is no feasible and prudent avoidance alternative, the project must include all possible planning to minimize harm to the site, which includes all reasonable measures to minimize harm or mitigate impacts (49 U.S.C. 303(c)(2)). After making a preliminary 4(f) determination and identifying the reasonable measures to minimize harm, FRA may also compare the alternatives to determine which alternative has the potential to cause the least overall harm. The least overall harm may be determined by balancing the following factors:

- The ability to mitigate adverse impacts on each Section 4(f) property (including any measures that result in benefits to the property).

- The relative severity of the remaining harm, after mitigation, to the protected activities, attributes, or features that qualify each Section 4(f) property for protection.
- The relative significance of each Section 4(f) property.
- The views of the official(s) with jurisdiction over each Section 4(f) property.
- The degree to which each alternative meets the purpose and need for the project.
- After reasonable mitigation, the magnitude of any adverse impacts to resources not protected by Section 4(f).
- Substantial differences in costs among the alternatives.

Land and Water Conservation Fund Act of 1965, Public Law 88-578 Title 16, United States Code (Section 6[f])

The purpose of the LWCF Act is to assist in preserving, developing, and ensuring accessibility to outdoor recreation resources as to strengthen the health and vitality of the citizens of the U.S. by providing funds planning, acquisition, and development of facilities. Recreation facilities awarded such funds are subject to the provisions of this Act. The Fund's most important tool for ensuring long-term stewardship is its "conversion protection" requirement. Section 6(f)(3) strongly discourages conversions of state and local park and recreation facilities to other uses. Conversion of property acquired or developed with assistance under the program requires approval of the NPS and substitution of other recreation properties of at least equal fair market value and of reasonably equivalent usefulness and location.

4.2 Section 4(f) Use Definition

A "use" of a Section 4(f) resource occurs in the following circumstances:

1. When the protected property is permanently incorporated into a transportation facility – this is known as a "permanent use";
2. When there is a temporary occupancy of a Section 4(f) property that is adverse in terms of the statute's preservationist purpose; this is known as a "temporary use"
3. When the transportation project does not incorporate land, but its proximity results in impacts (e.g., noise, vibration, visual, access, ecological) that substantially impair the activities, features, or attributes that qualify a resource for protection under Section 4(f); this is known as a "constructive use." Substantial impairment occurs only if the protected activities, features, or attributes of the resource are diminished. This determination is made through the following analysis:

    - Identifying the current activities, features, or attributes of the resource that may be sensitive to proximity impacts.
    - Analyzing the potential proximity impacts on the resource.
    - Consulting with the appropriate officials having jurisdiction over the resource.
    - In addition, it is important to note that erecting a structure over a Section 4(f) property, and thus requiring an air lease, does not in and of itself constitute a use.

4.2.1 Section 4(f) Use Definitions

A. PERMANENT USE

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

B. TEMPORARY USE

A temporary use of a Section 4(f) resource occurs when there is a temporary occupancy of property that is considered adverse in terms of the preservationist purposes of the Section 4(f) statute. A temporary occupancy of property does not constitute a use of a Section 4(f) resource when the following conditions are satisfied:

- The occupancy must be of temporary duration (e.g., shorter than the period of construction) and must not involve a change in ownership of the property.
- The scope of work must be minor, with only minimal changes to the protected resource.
- There must be no permanent adverse physical impacts on the protected resource or temporary or permanent interference with 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 officials having jurisdiction over the resource regarding the foregoing requirements.

C. CONSTRUCTIVE USE

A constructive use of a Section 4(f) resource occurs when a transportation project does not permanently incorporate land from the resource, but the proximity of the project results in impacts (e.g., noise, vibration, visual, access, ecological) 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 diminished. This determination is made through the following:

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

In addition, it is important to note that erecting a structure over a Section 4(f) property, and thus requiring an air lease, does not in and of itself constitute a use unless a constructive use is present.

D. 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 a transportation project will not adversely affect the activities, features, and attributes qualifying the property for protection under Section 4(f) after mitigation. In addition, to make a de minimis impact determination there must be:
  - Public notice and opportunity for public review and comment.
  - Written concurrence received from the officials with jurisdiction over the property.
- For a historic site, a *de minimis* impact determination may be made only if, in accordance with the Section 106 process of the National Historic Preservation Act and written concurrence from the SHPO, it is found that the transportation program or project will have no effect or no adverse effect on historic properties. In addition, FRA must inform these officials of its intent to make a *de minimis* impact determination based on their concurrence in the finding of "no adverse effect" or "no historic properties affected."

4.2.2 Section 4(F) Applicability

A park qualifies for protection under Section 4(f) if (1) the property is publicly owned, (2) the park is open to the general public, (3) it is being used for outdoor recreation, and (4) it is considered significant by the authority with jurisdiction. The park must be publicly owned at the point at which "use" occurs.

A historic site eligible for the NRHP qualifies for protection under Section 4(f), and a use may occur if land from the site is permanently or temporarily incorporated into the project. If a project does not physically take (permanently incorporate) historic property but causes an adverse effect, the proximity impacts must be evaluated to determine if the proximity impacts will substantially impair the features or attributes that contribute to the National Register eligibility of the historic site or district. While the statutory requirements of Section 106 and Section 4(f) are similar, even if a proposed action results in an "adverse effect" under Section 106, there will not automatically be a Section 4(f) "use" absent a separate analysis and determination by FRA.

In order for a cultural resource to be protected by Section 4(f), it must be eligible for the National Register under specific criteria. Specifically, archaeological sites whose importance as a resource can be documented through a data recovery process alone are not protected under Section 4(f). In other words, Section 4(f) does not apply to a site if, a Federal agency, after consultation with the SHPO and the appropriate Native American Tribes and/or Tribal Historic Preservation Officer (THPO), concludes that the archaeological resource is important chiefly because of what can be learned by data recovery and has minimal value for preservation in place.

The NHPA provides specific criteria to assist in making this determination. An archaeological resource that is eligible only under NHPA "Criterion D" is considered valuable only in terms of the data that can be recovered from it. For such resources (such as pottery scatters and refuse deposits), it is generally assumed that there is minimal value attributed to preserving such resources in place. Conversely, resources eligible under Criteria A, B, and/or C are considered to have value intrinsic to the resource's location.

4.3 Coordination

49 U.S.C. 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 the states in development of transportation plans. Throughout the EIR/EIS process, the Authority and FRA consulted with the SHPO, local jurisdictions, the California Department of Fish and Game, and the Native American Heritage Commission and interested tribes. Section 4(f)

determinations may be aided by consultation with the SHPO, pursuant to 36 CFR part 800, and agencies of jurisdiction in identifying Section 4(f) properties and assessing impacts on the properties. Table 4-1 lists the FRA and Authority coordination to date with these agencies. The Authority is consulting with the agencies that have jurisdiction over the public park properties, including the California Department of Parks and Recreation, and the cities of Corcoran and Bakersfield, regarding potential park impacts. Staff also coordinated with the California Department of Fish and Game regarding impacts on the Allensworth Ecological Reserve.

On June 29, 2009, the Authority met with staff of the SHPO to define the APE for the archaeology and historic property evaluation, discuss the method of analysis proposed for all of the HST Section EIR/EIS documents, and prepare a Programmatic Agreement for the overall HST project. The FRA and the Authority consulted with the SHPO regarding eligibility of historic resources for the National Register of Historic Places (NRHP) and determinations of effect throughout the EIR/EIS process. The SHPO concurred with the Fresno to Bakersfield Section APEs defined in Section 4.1.1(B), Historic Properties, on August 4, 2010.

The FRA and the Authority also consulted with the Native American Heritage Commission for a search of its Sacred Lands file and lists of Native American contacts. The contacts were sent letters providing information about the proposed project alternatives and requesting information about any traditional cultural properties that could be affected by the project. The Authority and FRA have also met with tribal representatives. Table 4-1 summarizes these consultations.

Table 4-1
Section 4(f) and Section 6(f) Evaluation Consultation Summary

Date	Form	Participants	General Topic(s)
January 29, 2009	Meeting	SHPO, Authority, and project consultant staff	Analysis methodology review, mitigation measures from the Program EIR/EIS, developing a Memorandum of Agreement
July 29, 2009	Meeting	SHPO, Authority, and project consultant staff	Area of potential effect, analysis methodology, Program Agreement for the overall HST
September 25, 2009	Meeting	California Department of Fish and Game, U.S. Army Corps of Engineers, and U.S. Fish and Wildlife Service staff; Authority, and project consultant staff.	Review potential impacts to Pixley National Wildlife Refuge and Allensworth Ecological Reserve
October 16, 2009	Letter	Authority to tribes in Fresno to Bakersfield study area	Initiating consultation, providing project background
October 30, 2009	Letter	Kawaiisu Tribe of the Tejon Reservation	Requested additional information and to be informed of project progress.
November, 2009	Phone Calls	Authority contacted all 44 tribal representatives in the study area.	Initiated consultation, provided project background
November 5, 2009	Meeting	California Department of Fish and Game, U.S. Army Corps of Engineers, and U.S. Fish and Wildlife Service staff, Authority, and project consultant staff.	Review potential impacts to Pixley National Wildlife Refuge and Allensworth Ecological Reserve

Table 4-1
Section 4(f) and Section 6(f) Evaluation Consultation Summary

Date	Form	Participants	General Topic(s)
November 12, 2009	Letter	Picayune Rancheria of the Chukchansi Indians	Requested to be informed of potential cultural disturbances and the progress of the project
February 25, 2010	Letter	FRA to tribes.	Invited participation, provided project background
April 23, 28, 29, and May 3, 2010	Telephone contacts	Native American tribes	Made calls to all tribes identified in the Tribal Consultation Plan to initiate communication
June 2, 2010	e-mail	Dumna Tribal Council.	Requested participation in the Section 106 process as an interested party
June 28, 2010	Letter	SHPO	Approval of archaeological and historic properties APEs
August 16, 2010	Telephone Conference	FRA, Authority, and representatives from Dumna, Amah Mutsun, Choinumni Tribes, and Big Sandy Rancheria.	Held consultation Meeting for all interested tribal members
March 22, 2011	Meeting	California Department of Parks and Recreation	Reviewed potential impacts of project alternatives on Allensworth State Historic Park
March 23, 2011	Meeting	City of Bakersfield Recreation and Parks Department	Reviewed potential impacts of project alternatives on Kern River Parkway

Abbreviations and Acronyms:
APE area of potential effects
Authority California High-Speed Rail Authority
EIR/EIS environmental impact report/environmental impact statement
FRA Federal Rail Administration
HST high-speed train
SHPO State Historic Preservation Office**(r)**
U.S. United States

The Authority and FRA will continue to consult with these agencies and tribal representatives regarding the effects of the project on the features and attributes of Section 4(f) properties and provide opportunity for public comment. Through the NEPA EIS process, this Section 4(f) statement has been provided to the agencies of jurisdiction for coordination and comment and to the public for comment as required before making a Section 4(f) determination.

Section 6(f) conversion requires additional coordination with the agency of jurisdiction and California State Parks, which oversees the LWCF program for the National Park Service, and the National Park Service regarding the project effects and conversion area and replacement property. If the alternative selected requires conversion of Section 6(f) property, FRA and the Authority will coordinate with California State Parks, and the NPS to establish the value of the converted area and to identify replacement property of at least equal value and function, and to provide environmental analysis of development of the replacement property, including opportunity for public comment, as required by Section 6(f)(3).

4.4 Purpose and Need

The purpose of the statewide HST System is to provide a reliable high-speed electric-powered 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 to relieve capacity constraints of the existing transportation system as increases occur in California intercity travel demand, in a manner sensitive to and protective of California's unique natural resources (Authority and FRA 2005).

The purpose of this Fresno to Bakersfield Section project is to implement the California HST System between Fresno and Bakersfield to provide the public with electric-powered high-speed rail service that provides predictable and consistent travel times between major urban centers and connectivity to airports, mass transit, and the highway network in the south San Joaquin Valley, and connect the northern and southern portions of the system.

4.4.1 Project Objectives for the HST System in California and in the Southern San Joaquin Valley Region

The Authority's statutory mandate is to plan, build, and operate a HST system that is coordinated with California's existing transportation network, particularly intercity rail and bus lines, commuter rail lines, urban rail transit lines, highways, and airports. The Authority has responded to this mandate by adopting the following objectives and policies for the proposed HST System:

- Provide intercity travel capacity to supplement critically overused interstate highways and commercial airports.
- Meet future intercity travel demand that will be unmet by present transportation systems and increase capacity for intercity mobility.
- Maximize intermodal transportation opportunities by locating stations to connect with local transit systems, airports, and highways.
- Improve the intercity travel experience for Californians by providing comfortable, safe, frequent, and reliable high-speed travel.
- Provide a sustainable reduction in travel time between major urban centers.
- Increase the efficiency of the intercity transportation system.
- Maximize the use of existing transportation corridors and rights-of-way to the extent feasible.
- Develop a practical and economically viable transportation system that can be implemented in phases by 2020; and generate revenues that exceed operations and maintenance costs.
- Provide intercity travel in a manner that is sensitive to and protective of the region's natural and agricultural resources by reducing emissions and vehicle miles traveled for intercity trips.

The approximately 114-mile-long corridor between Fresno and Bakersfield is an essential part of the statewide HST System. The Fresno to Bakersfield Section would connect northern and southern California branches of the HST System and provide a potential location for the HMF, where the HSTs would be assembled and maintained. As part of the Central Valley section of the HST System, it would provide access to a new transportation mode for Fresno, Visalia, Tulare, Hanford, and Bakersfield, and would contribute to increased mobility throughout California.

4.4.2 Need for the HST System Statewide and within the Southern San Joaquin Valley Region

The need for a HST System exists statewide, with regional areas contributing to this need. Chapter 1 describes the need for the HST System and the Fresno to Bakersfield Section in detail and the following is a summary.

The capacity of California's intercity transportation system, including the southern San Joaquin Valley, is insufficient to meet existing and future travel demands. The current and projected future system congestion will continue to result in deteriorating air quality, reduced reliability, and increased travel times. The system has not kept pace with the tremendous increase in population, economic activity, and tourism in the state, including that in the southern San Joaquin Valley. The interstate highway system, commercial airports, and conventional passenger rail system serving the intercity travel market, such as the southern San Joaquin Valley, are operating at or near capacity and will require large public investments for maintenance and expansion to meet existing demand and future growth over the next 25 years and beyond. Moreover, the ability to expand many major highways and key airports is uncertain; some needed expansions may be impractical or may be constrained by physical, political, and other factors. The need for improvements serving intercity travel in California relates to the following issues.

- Future growth in demand for intercity travel, including the growth in demand in the southern San Joaquin Valley.
- Capacity constraints that will result in increasing congestion and travel delays, including those in the southern San Joaquin Valley, particularly along the State Route (SR) 99 corridor.
- Unreliability of travel stemming from congestion and delays, weather conditions, accidents, and other factors that affect the quality of life and economic well-being of residents, businesses, and tourism in California, including the southern San Joaquin Valley.
- Reduced mobility as a result of increasing demand on limited modal connections between major airports, transit systems, and passenger rail in the state, including the southern San Joaquin Valley.
- Poor and deteriorating air quality and pressure on natural resources as a result of expanded highways and airports and urban development pressures, including those in the southern part of the San Joaquin Valley.

The southern part of the San Joaquin Valley is a major state population and economic center and contributes significantly to the statewide need for a new intercity transportation service that will connect it with the major population and economic centers and to other regions of the state.

4.5 Alternatives

This section describes the project alternatives beginning with the No Project Alternative and then the HST alternatives. The HST alternatives begin with a single continuous alignment, hereinafter termed the "BNSF Alternative." This alternative extends from the northern end of the Fresno station tracks near Amador Street to the southern end of the Bakersfield station tracks in the vicinity of Baker Street. This alternative most closely follows the preferred alignment identified in the Record of Decision (ROD) for the Statewide Program EIR/EIS. Descriptions then follow of the five alternative alignments that deviate from the BNSF Alternative for portions of the route. In addition to the alternative alignments, two alternatives for the station in Fresno are being considered, a potential station is being considered in the Hanford area, two alternatives for the

station in Bakersfield are being considered, and five alternative sites are being considered for the HMF. The project alternatives for the Fresno to Bakersfield Section are described in more detail in Chapter 2, Alternatives, and are briefly summarized below. Figure 4-1 shows the location of the alternative alignments.

More detailed information on these alternatives and those considered but dismissed can be found in Chapter 2.

4.5.1 No Project Alternative

The No Project Alternative would not include the construction of the HST or any associated facilities, and would thus have no impact on any Section 4(f) or Section 6(f) resources. However, it would not address the state's purpose and need for the project. 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 project purpose and need, it is neither feasible nor prudent, and is not discussed further as an avoidance alternative for any Section 4(f) or Section 6(f) resources.

4.5.2 BNSF Alternative Alignment

The BNSF Alternative would extend from Fresno to Bakersfield; it would run adjacent to the BNSF Railway line to the extent feasible. The BNSF Alternative is approximately 114 miles long and would cross through Fresno, Kings, Tulare, and Kern counties.

The BNSF Alternative Alignment would begin at the north end of the Fresno station tracks adjacent to the western side of the UPRR right-of-way in the vicinity of Amador Street. The alignment would run southeast through Fresno on the western side of the UPRR until reaching East Jensen Avenue. The alignment would then curve to the south to join the BNSF Railway right-of-way on its western side at East Malaga Avenue south of Fresno. The BNSF Alternative would continue south through Kings County, generally following the BNSF tracks, passing east of the City of Hanford and through the eastern edge of the City of Corcoran. Continuing south into Tulare County, the alignment would be at grade and adjacent to the BNSF right-of-way for approximately 25 miles. Finally, entering Kern County, this alternative would cross through the cities of Wasco, Shafter, and Bakersfield, generally following the BNSF right-of-way to the project terminus at the southern end of the Bakersfield station tracks.

The BNSF Alternative includes stations in Fresno and Bakersfield. A potential station serving the Visalia/Tulare/Hanford area (the Kings/Tulare Regional Station) would be located east of Hanford near the SR 198 and SR 43 interchange.

Two alternative station sites are under consideration in Fresno. The Fresno station alternatives would be similarly situated in Downtown Fresno east of SR 99 on the BNSF Alternative Alignment. The Fresno Station–Mariposa Alternative would be centered on Mariposa Street and would be bordered by Fresno Street on the north, Tulare Street on the south, H Street on the east, and G Street on the west. The Fresno Station–Kern Alternative would be centered on Kern Street between Tulare Street and Inyo Street. Both station alternatives would occupy approximately 13 acres and include a station building, a bus transit center, and parking facilities.

The potential Kings/Tulare Regional Station would be located east of SR 43 (Avenue 8) and north of the Central Valley Rail Line (San Joaquin Valley Railroad). The entire site would cover 28 acres and include a station building, a bus transit center, and parking facilities.

Two alternative station sites are also under consideration for the Bakersfield Station. The Bakersfield Station–North Alternative would be on the BNSF Alternative at the corner of Truxtun and Union Avenue/SR 204, east of the existing Amtrak station. The Bakersfield Station–South Alternative would be situated along the Bakersfield South Alternative Alignment, discussed below in Section 4.5.7, Bakersfield South Alternative Alignment. Both station alternatives would occupy approximately 20 acres and include a station building, a bus transit center, and parking facilities.

4.5.3 Corcoran Elevated Alternative Alignment

The Corcoran Elevated Alternative Alignment would be the same as the corresponding section of the BNSF Alternative except that it would pass through the city of Corcoran on the east side of the BNSF Railway right-of-way on an elevated structure. The elevated structure would reach a maximum height of approximately 40 feet to the top of the rail.

4.5.4 Corcoran Bypass Alternative Alignment

The Corcoran Bypass Alternative Alignment would parallel the BNSF Alternative from approximately Idaho Avenue south of Hanford, to approximately Nevada Avenue north of Corcoran. The Corcoran Bypass Alternative would then diverge from the BNSF Alternative and swing east of Corcoran, rejoining the BNSF Railway route at Avenue 136. The total length of the Corcoran Bypass would be approximately 21 miles. Similar to the corresponding section of the BNSF Alternative, the majority of the Corcoran Bypass Alternative would be at grade. However, two elevated structures would carry the HST over Cross Creek and the Tule River.

4.5.5 Allensworth Bypass Alternative Alignment

The Allensworth Bypass Alternative Alignment would diverge from the BNSF Alternative at Avenue 84 in Tulare County, run west of the BNSF Railway right-of-way and Allensworth State Historic Park, and rejoin the BNSF Alternative at Elmo Highway in Kern County. This alternative was developed to avoid Allensworth State Historic Park and the Allensworth Ecological Reserve. The total length of the Allensworth Bypass Alternative Alignment would be approximately 19 miles. The Allensworth Bypass Alternative would be at-grade except where it would be on an elevated structure to cross the Alpaugh railroad spur. The majority of the alignment would pass through Tulare County at-grade.

The Allensworth Bypass Alternative would also include an option to relocate the existing BNSF Railway tracks to be adjacent to the HST right-of-way for the length of this alignment. The possibility of relocating the BNSF Railway tracks along this alignment has not yet been discussed with BNSF Railway. If this option is selected, it is assumed that the existing BNSF Railway right-of-way would be abandoned between Avenue 84 and Elmo Highway and the relocated BNSF Railway right-of-way would be 100 feet wide and adjacent to the eastern side of the right-of-way for the Allensworth Bypass Alternative.

4.5.6 Wasco-Shafter Bypass Alternative Alignment

The Wasco-Shafter Bypass Alternative Alignment would diverge from the BNSF Alternative between Sherwood Avenue and Fresno Avenue, crossing over to the eastern side of the BNSF Railway tracks and bypassing Wasco and Shafter to the east. The Wasco-Shafter Bypass Alternative would rejoin the BNSF Alternative at 7th Standard Road. The total length of the alternative alignment would be 24 miles, and the alignment would be at-grade.

4.5.7 Bakersfield South Alternative Alignment

The Bakersfield South Alternative parallels the BNSF Alternative at varying distances to the north from the Rosedale Highway (SR 58) to Chester Avenue. The alternative then curves south and parallels California Avenue. As with the corresponding segment of the BNSF Alternative, the Bakersfield South Alternative would begin at-grade but then be elevated starting at Palm Avenue through Bakersfield to its terminus at the southern end of the Bakersfield station tracks.

This alternative would include the Bakersfield Station–South Alternative, situated along Union and California avenues in Downtown Bakersfield, just south of the BNSF Alternative and the BNSF Railway right-of-way. This entire station alternative would cover approximately 20 acres.

4.5.8 Heavy Maintenance Facility Site Alternatives

The Authority has determined that a HST rail heavy vehicle maintenance and layover facility would be sited in either the Merced to Fresno Section or the Fresno to Bakersfield Section of the California HST System. The HMF would be situated on a parcel of approximately 154 acres in proximity to the HST alignment. The HMF would also have connections to highways and utilities on a parcel zoned for heavy industrial activities.

Five sites are under consideration for the HMF in the Fresno to Bakersfield Section. The Fresno Works–Fresno HMF site (see Figure 4-1) encompasses approximately 590 acres at the southern limits of the City of Fresno and County of Fresno next to the BNSF right-of-way. The Kings County–Hanford HMF site (see Figure 4-1) covers approximately 510 acres and would be southeast of the city of Hanford, adjacent to the BNSF Alternative Alignment. The Kern Council of Governments–Wasco HMF site covers 420 acres and is directly east of Wasco between SR 46 and Filburn Street. The Kern Council of Governments–Shafter East HMF site covers approximately 490 acres in the city of Shafter and could be accessed by either the BNSF Alternative or the Wasco-Shafter Bypass. The Kern Council of Governments–Shafter West HMF site is also in the city of Shafter and could be accessed by either the BNSF Alternative or the Wasco-Shafter Bypass. The HMF site alternatives are the same under all alternative alignments.

4.6 Section 4(f)/Section 6(f) Properties (Park, Recreation, Open Space, Wildlife Refuge, and Historic Sites)

Table 4-2 lists the park, recreation, open space, and wildlife refuge properties evaluated as Section 4(f) and Section 6(f) resources and the alternatives and project components that potentially use these properties. Table 4-3 lists the historic properties evaluated for Section 4(f) and Section 6(f) use and the alternatives and project components that use these properties. These tables also indicate the project's impact on these properties, and the preliminary Section 4(f) use determination for each property that was made based on these impacts.

For properties not directly incorporated into the project and for which the project's proximity impacts such as noise, visual change, or minor access changes do not substantially impair the features and attributes that qualify them for protection under Section 4(f) during construction or operation, the project will have no Section 4(f) use. Section 3.7, Biological Resources and Wetlands, Section 3.15, Parks, Recreation, and Open Space, or Section 3.17, Cultural and Paleontological Resources provide more information regarding project effects on these properties. Figures 4-2 through 4-6 show the park properties, archaeological resources, and historic resources in the project study area. Colonel Allensworth State Historic Park is the only Section 6(f) resource in the study area that has the potential to be directly used by the project; this property is discussed in Section 4.11, Section 6(f).

4.6.1 Project Section 4(f) Properties

A. PARKS, RECREATION, OPEN SPACE, AND WILDLIFE

Table 4-2
Park, Recreation, Open Space, and Wildlife Properties Evaluated for Section 4(f) Use

Property Name	Description	Alternative Alignment	Distance from Project (feet)	Impact	Preliminary Section 4(f) Use Determination
Fresno County Plaza	Location: Fresno Size: 1 acre Features: Benches, open space	BNSF	975	None	No use
Fulton Mall Playground	Location: Fresno Size: 25 acres Features: Public open space area with benches and pedestrian walkway	BNSF	450	None	No use
Father Wyatt Park	Location: Corcoran Size: 1 acre Features: Playground area, covered arbor, picnic tables, and benches.	BNSF, Corcoran Elevated	0 to 230	BNSF and Corcoran Elevated: Construction: Temporary construction noise impacts in areas of the park located within 200 feet of construction activities. Construction activities would result in temporary visual impacts. Project: None. The HST would be shielded from view by tall trees that grow along the park border. Property Acquisition Footprint: None	No Use
Christmas Tree Park	Location: Corcoran Size: 0.5 acre Features: Playground area, covered arbor, picnic tables, and benches.	BNSF, Corcoran Bypass	700	None	No use

Table 4-2
Park, Recreation, Open Space, and Wildlife Properties Evaluated for Section 4(f) Use

Property Name	Description	Alternative Alignment	Distance from Project (feet)	Impact	Preliminary Section 4(f) Use Determination
Pixley National Wildlife Refuge	Location: Tulare County Size: 10,320 acres Features: Wildlife habitat, hiking trails.	BNSF	195	None	No Use
Colonel Allensworth State Historic Park	Location: Tulare County Size: 924 acres Features: Visitor's center, exhibits and programs, guided tours, picnic areas, and tent and RV campsites	BNSF, Allensworth Bypass	0 to 1,500 (from visitors area)	BNSF: Construction: Construction activities would be visible from publicly visited areas of the park. Visual impact would not interfere with visitor use or enjoyment of park Project: Alignment, traction power station and access road would be constructed within the park. Property acquisition footprint 1.7 acres.	BNSF: Use
				Allensworth Bypass: None	Allensworth Bypass: No Use
Allensworth Ecological Reserve	Location: Tulare County Size: 5,224 acres Features: Trails and wildlife-viewing areas.	BNSF, Allensworth Bypass	0	BNSF: Construction: Temporary occupation of land during construction to the west of SR 43, and construction on lands that would be permanently acquired. Project: Alignment would be constructed within portions of the reserve. Property Acquisition Footprint: 7.3 acres	BNSF: Use
				Allensworth Bypass: None	Allensworth Bypass: No Use

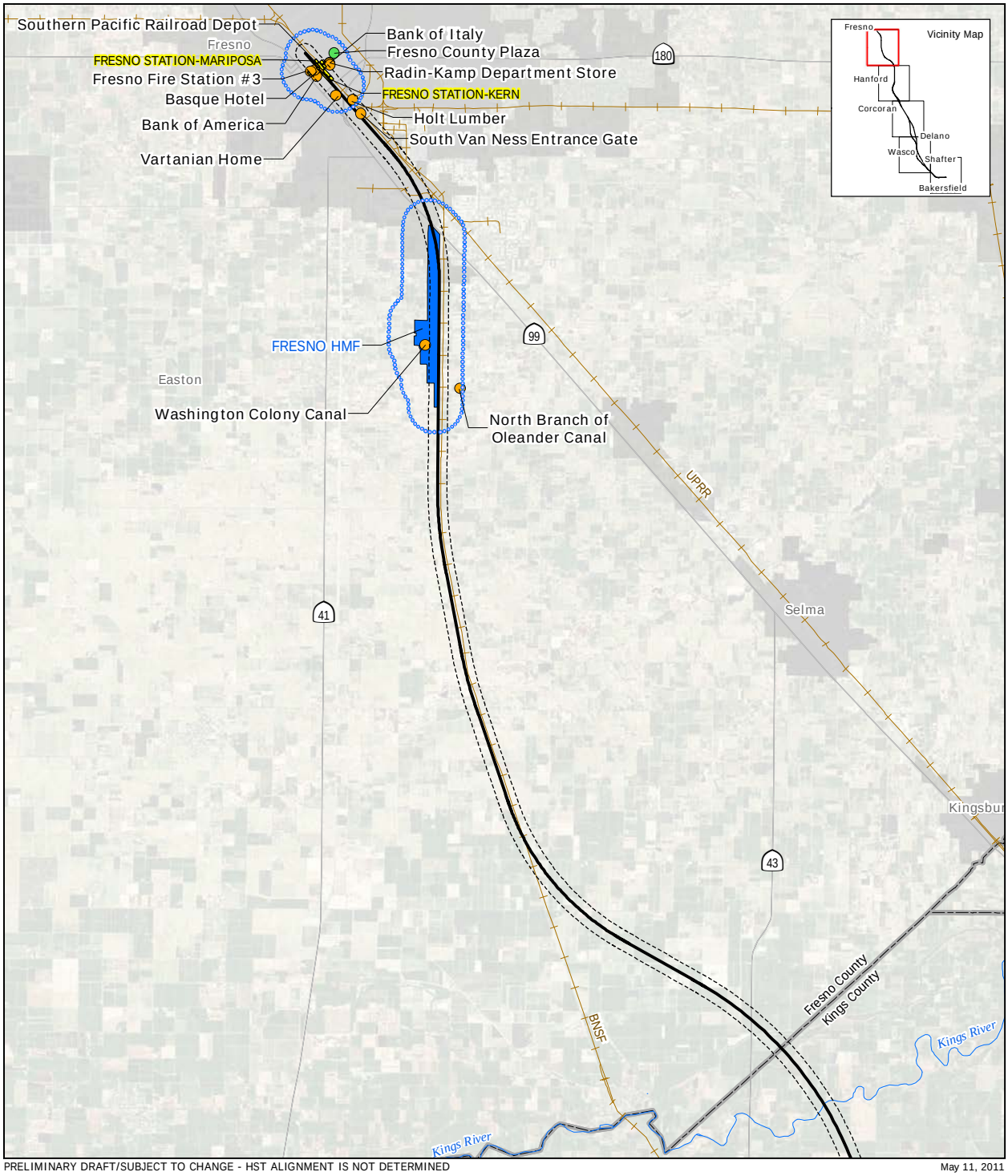
Table 4-2
Park, Recreation, Open Space, and Wildlife Properties Evaluated for Section 4(f) Use

Property Name	Description	Alternative Alignment	Distance from Project (feet)	Impact	Preliminary Section 4(f) Use Determination
Jastro Park	Location: Bakersfield Size: 9 acres Features: Barbeque pits, picnic tables and shelter, amphitheater, tennis courts, horseshoe pits, playgrounds	BNSF, Bakersfield South	560	None	No Use
Kern River Parkway	Location: Bakersfield Size: 21.6 acres Features: small community parks adjacent to the Kern River connected by a bike path.	BNSF, Bakersfield South	0	BNSF and Bakersfield South: Construction: Construction activities would be visible from the park. Temporary increases in noise and dust. Temporary closure of a bike path during construction activities. Project: Although the alternatives would cross over the parkway, other urbanized features, such as SR 99/58 exist, and with implementation of measures to minimize harm (see Section 4.9), no changes would occur in the character from the park that would differ from existing conditions. Property Acquisition Footprint: None	No Use
Central Park at Mill Creek	Location: Bakersfield Size: 9 acres Features: Covered pedestrian bridge; stamped concrete walkways, and restrooms.	BNSF, Bakersfield South	1,240 from Bakersfield Station	None	No Use

Table 4-2
Park, Recreation, Open Space, and Wildlife Properties Evaluated for Section 4(f) Use

Property Name	Description	Alternative Alignment	Distance from Project (feet)	Impact	Preliminary Section 4(f) Use Determination
Amtrak Station Playground	Location: Bakersfield Size: 0.5 acre Features: Tot lot with playground equipment	BNSF, Bakersfield South	80	None	No Use
Bakersfield High School	Location: Bakersfield Size: 26 acres Features: Football field, youth football and soccer fields, gym, tennis courts, outdoor basketball courts, and auditorium.	BNSF, Bakersfield South	100	None	No Use
Mayflower Park/Dr. Martin Luther King Jr. Community Center	Location: Bakersfield Size: 16 acres Features: Community center building with kitchen, picnic areas, serving shelters, swimming pool, spray park, baseball diamond, basketball and tennis courts, gym with exercise equipment and basketball courts	BNSF, Bakersfield South	435	None	No Use

Acronyms:
HST high-speed train
SR state route



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

May 11, 2011

Data source: USGS Geographic Names Information System, 2009

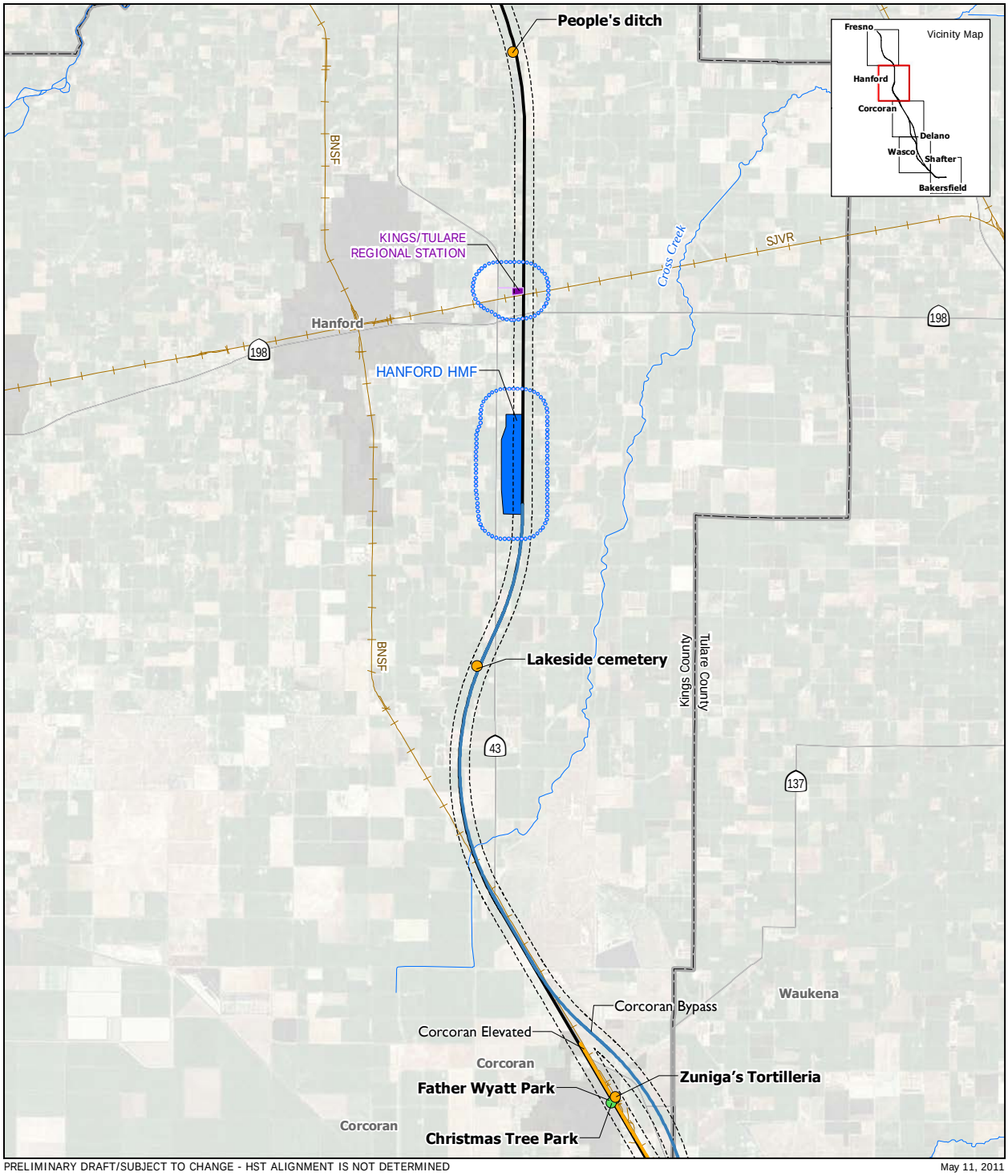
N

0 1 2
Miles

0 2 4
Kilometers

- BNSF Alternative (Bypasses labeled)
- Existing rail line
- Stream/River
- Highway
- 1/2-mile buffer of heavy maintenance facility and station
- 1,000-foot buffer of alignments
- Community/Urban area
- Potential heavy maintenance facility
- Proposed station
- Potential Kings/Tulare Regional Station
- Historic property
- Park
- School

Figure 4-2
Fresno area:
4(f) and 6(f) properties
within the project study area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

May 11, 2011

Data source: USGS Geographic Names Information System, 2009

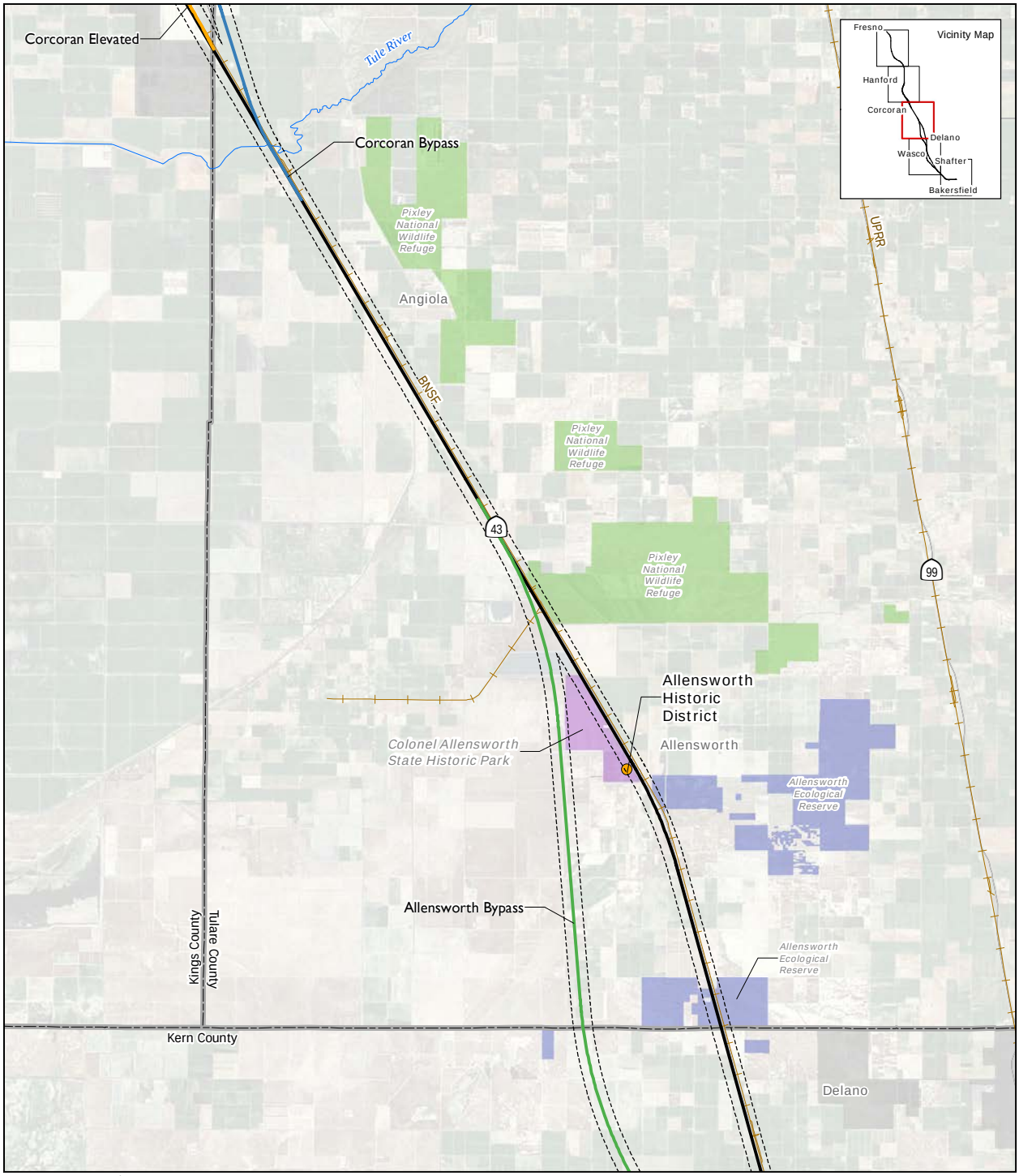
- BNSF Alternative (Bypasses labeled)
- Existing rail line
- Stream/River
- Highway
- 1/2-mile buffer of heavy maintenance facility and station
- 1,000-foot buffer of alignments
- Community/Urban area
- Potential heavy maintenance facility
- Proposed station
- Potential Kings/Tulare Regional Station
- Historic property
- Park
- School

N

0 1 2 Miles

0 2 4 Kilometers

Figure 4-3
Hanford area:
4(f) and 6(f) properties
within the project study area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

May 11, 2011

Data source: USGS Geographic Names Information System, 2009

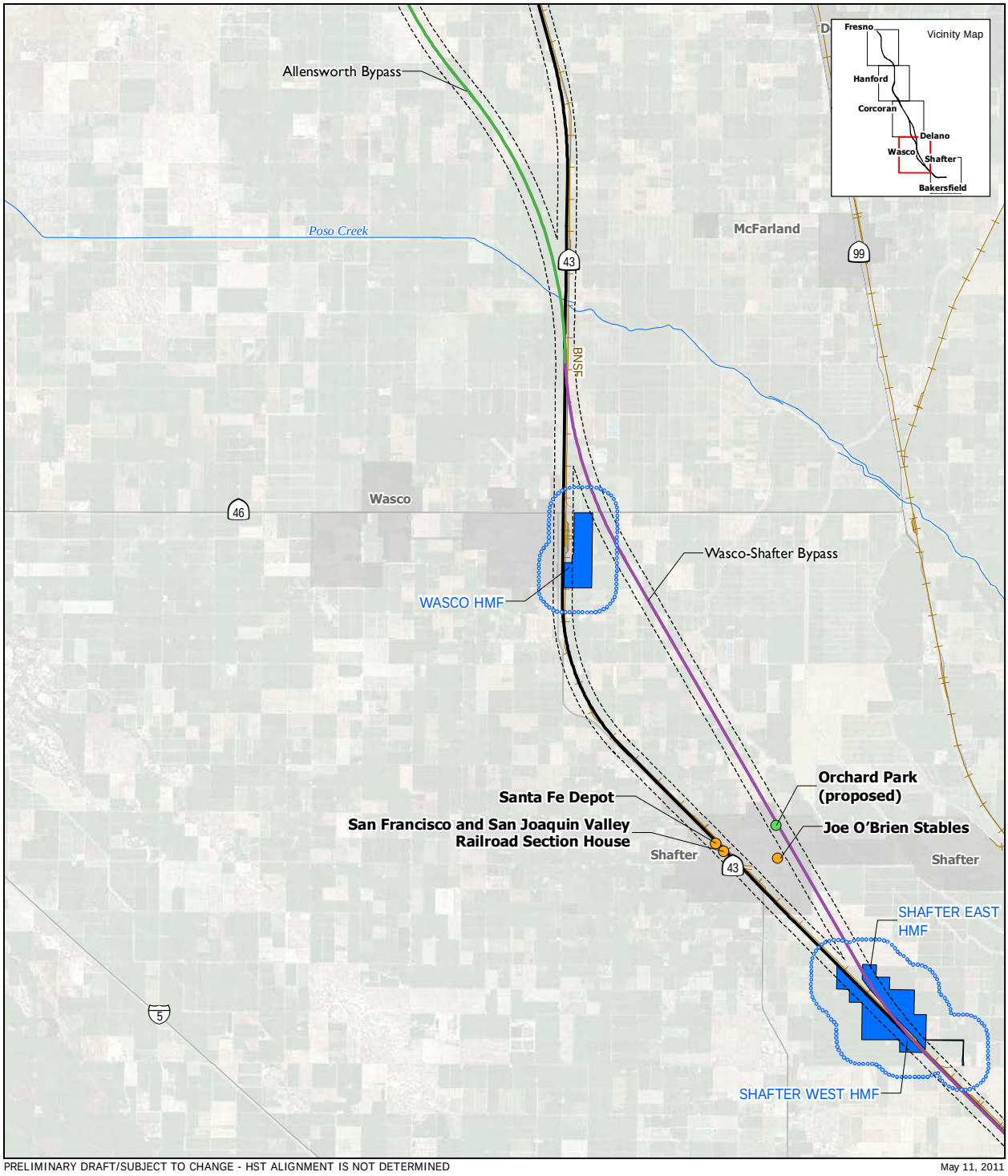
N

0 1 2 Miles

0 2 4 Kilometers

- BNSF Alternative (Bypasses labeled)
- Existing rail line
- Stream/River
- Highway
- 1/2-mile buffer of heavy maintenance facility and station
- 1,000-foot buffer of alignments
- Community/Urban area
- Potential heavy maintenance facility
- Proposed station
- Potential Kings/Tulare Regional Station
- Historic property
- Park
- School

Figure 4-4
Corcoran area:
4(f) and 6(f) properties
within the project study area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

May 11, 2011

Data source: USGS Geographic Names Information System, 2009

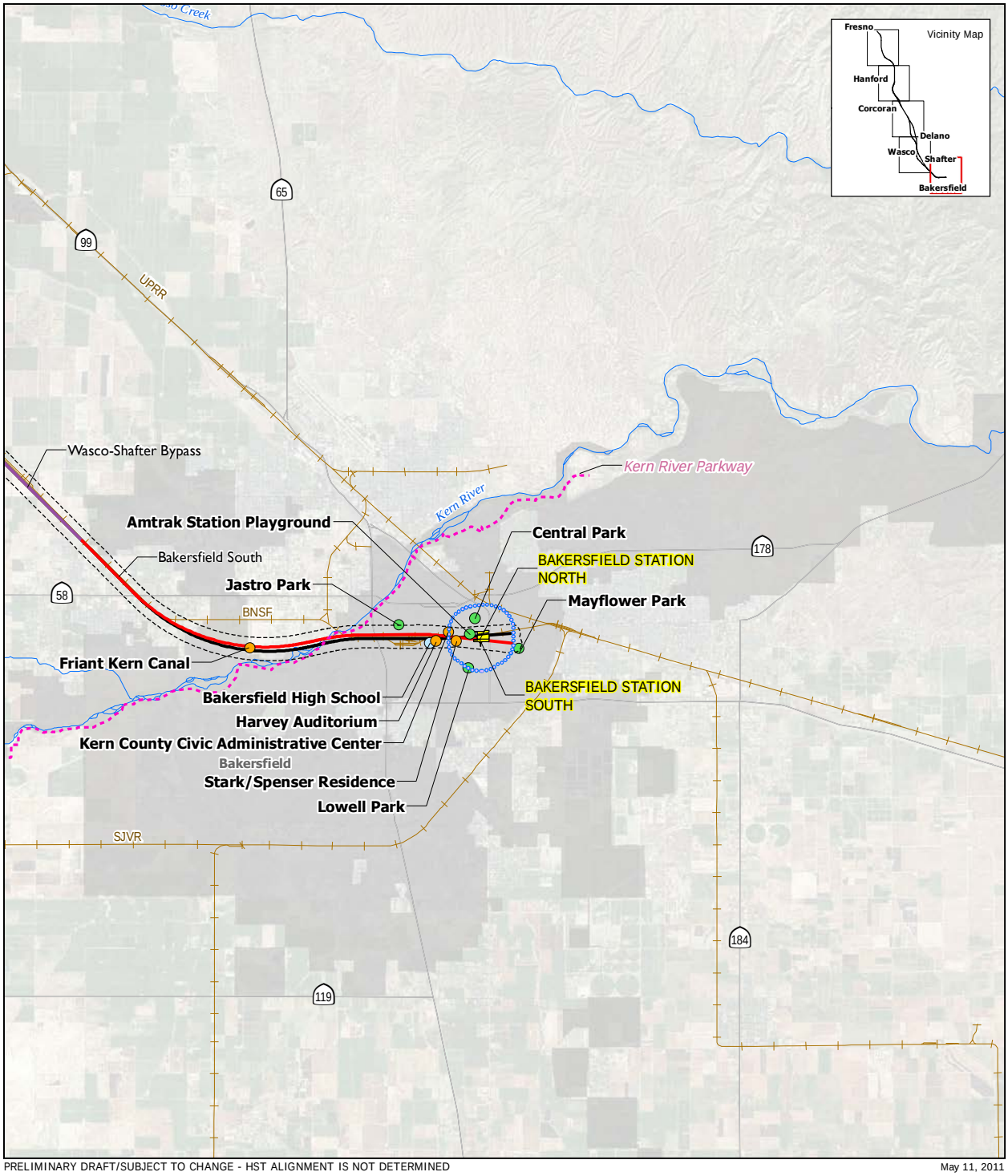
N

0 1 2 Miles

0 2 4 Kilometers

- BNSF Alternative (Bypasses labeled)
- Existing rail line
- Stream/River
- Highway
- 1/2-mile buffer of heavy maintenance facility and station
- 1,000-foot buffer of alignments
- Community/Urban area
- Potential heavy maintenance facility
- Proposed station
- Potential Kings/Tulare Regional Station
- Historic property
- Park
- School

Figure 4-5
Wasco-Shafter area:
4(f) and 6(f) properties
within the project study area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

May 11, 2011

Data source: USGS Geographic Names Information System, 2009

N

0 1 2 Miles

0 2 4 Kilometers

- BNSF Alternative (Bypasses labeled)
- Existing rail line
- Stream/River
- Highway
- 1/2-mile buffer of heavy maintenance facility and station
- 1,000-foot buffer of alignments
- Community/Urban area
- Potential heavy maintenance facility
- Proposed station
- Potential Kings/Tulare Regional Station
- Historic property
- Park
- School

FIgure 4-6
Bakersfield area:
4(f) and 6(f) properties
within the project study area

B. CULTURAL RESOURCES

Within the current APE, background research and the field survey revealed 25 historic properties listed or eligible for listing in the NRHP that would qualify as Section 4(f) resources. There are no archaeological resources in the study area that would qualify as Section 4(f) resources. Table 4-3 describes these properties, the alternatives that could potentially affect them, and the preliminary Section 4(f) use determination.

Table 4-3
Historic Properties Evaluated for Section 4(f) Use

Property Name/Location	HST Alternative	Preliminary Section 4(f) Use Determination
Hotel Fresno (1257 Broadway, Fresno)	BNSF	No Use
Crest Theater (1160 Broadway, Fresno)	Fresno Station–Mariposa	No Use
Southern Pacific Railroad Depot (1033 H St, Fresno)	Fresno Station–Mariposa, Fresno Station–Kern	No Use
Bank of Italy (1015 Fulton Mall, Fresno)	BNSF	No Use
Radin-Kamp Department Store (959 Fulton Mall, Fresno)	BNSF	No Use
Basque Hotel/EA Walrond Building (1102 F St., Fresno)	BNSF	No Use
Fresno Fire Department Station No. 3 (1406-1430 Fresno St, Fresno)	Fresno Station–Mariposa, Fresno Station–Kern	No Use
First Mexican Baptist Church (1061 E St, Fresno	Fresno Station–Mariposa, Fresno Station–Kern	No Use
Bank of America (947-951 F St, Fresno)	BNSF	No Use
Vartanian Home (362 F St, Fresno)	BNSF	No Use
Holt Lumber (1916 S. Cherry Ave, Fresno)	BNSF	No Use
South Van Ness Entrance Gate (2208 S. Van Ness Ave., Fresno)	BNSF	No Use
Washington Colony Canal (rural Fresno County	BNSF	Use
North Branch of Oleander Canal (rural Fresno County)	BNSF	Use
Peoples Ditch (rural Kings County)	BNSF	Use
Lakeside Cemetery (Kent Ave, rural Kings County)	BNSF, Corcoran Bypass	No Use

Table 4-3
Historic Properties Evaluated for Section 4(f) Use

Property Name/Location	HST Alternative	Preliminary Section 4(f) Use Determination
Zuniga's Tortilleria (901 Flory Ave, Corcoran)	BNSF, Corcoran Elevated	No Use
Allensworth Historic District (4129 Grant Dr, Tulare County)	BNSF, Allensworth Bypass	No Use
Santa Fe Depot (150-200 Central Valley Hwy, Shafter)	BNSF, Wasco-Shafter Bypass	No Use
San Francisco and San Joaquin Valley Railroad Section House (434 Central Valley Hwy, Shafter)	BNSF, Wasco-Shafter Bypass	No Use
Joe O'Brien Stables (1320 E. Lerdo Hwy, Shafter)	BNSF, Wasco-Shafter Bypass	No Use
Friant-Kern Canal	BNSF, Bakersfield South	Use
Harvey Auditorium (1241 G St, Bakersfield)	BNSF, Bakersfield South	No Use
Kern County Civic Administration Center (1315-1415 Truxtun Ave, Bakersfield)	BNSF, Bakersfield South	No Use
Stark/Spenser Residence (1321 N St, Bakersfield)	BNSF, Bakersfield South	No Use

Abbreviations and Acronyms:
Ave avenue
Dr drive
E. east
HST high-speed train
Hwy highway
S. south
St street

Below are brief descriptions of the properties that are listed in or determined eligible for listing in the National Register:

- Hotel Fresno – APN 466-21-401 (1257 Broadway). The Hotel Fresno is a seven-story, steel-frame and concrete-block building constructed in 1912. The building is eligible for listing in the NRHP under Criterion C as the first high-rise building in Fresno and as an early and representative example of the Central Valley work of prominent California architect Edward T. Foulkes.

- Crest Theater – APN 466-21-212 (1160 Broadway Plaza). The Crest Theater is a tall, two-story, reinforced-concrete building constructed in 1948. The building is eligible for listing in the NRHP under Criterion C, at the local level, for its Moderne style and neon marquee.

- Southern Pacific Railroad Depot – APN 467-03-031-ST (1033 H Street). Fresno's Southern Pacific Railroad Depot is a 1½-story, brick Queen-Anne-style building constructed in 1899. The depot, which includes the Pullman Shed, is listed in the NRHP (NRHP Reference No.

78000665, certified on March 21, 1978). It is significant under Criterion A for its association with the development of Fresno, and under Criterion C as an important example of the Queen Anne architectural style.

- Bank of Italy – APN 466-21-307 (1015 Fulton Mall). The Bank of Italy building is an eight-story, Italian Renaissance Revival building with an ornate terracotta and brick exterior. The building was listed in the NRHP under Criterion C as "one of the two most significant commercial buildings in the downtown area," and is an example of the Italian Renaissance revival and early skyscraper development.

- Radin-Kamp Department Store – APN 468-28-101 (959 Fulton Mall). This four-story, reinforced-concrete building has brick exterior facing and terracotta Beaux Arts details at the frieze and cornice. The property is eligible for listing in the NRHP under Criterion C, as a good local example of early twentieth century commercial architecture.

- Basque Hotel/EA Walrond Building – APN 467-06-208 (1102 F Street). The Basque Hotel is a two-story, L-shaped brick building constructed in 1922. The building is eligible for the NRHR under Criterion A, for its significant role in the Basque community as a place for Basque immigrants to congregate and maintain their cultural tradition.

- Fresno Fire Department Station No. 3 – APN 467-06-508T (1406-1430 Fresno Street). This four-story, reinforced-concrete building has brick exterior facing and terra-cotta Beaux Arts details at the frieze and cornice. The property is eligible for listing in the NRHP under Criteria A and C as a good local example of a Works Progress Administration project, and for its Streamline Moderne architectural style.

- First Mexican Baptist Church – APN 467-10-301 (1061 E Street). This two-story brick building was built between 1924 and 1929, and later reinforced in the 1960s. It has a restrained Mission Revival design that features a stepped parapet and three-story bell tower. It The property is eligible for listing in the NRHP under Criteria A and C for its association with the local Mexican-American community, and as a good local example of this architectural style.

- Bank of America – APN 467-07-401 (947-951 F Street). This two-story, two-part commercial building has a stucco exterior and was built in around 1908. The property is eligible for listing in the NRHP under Criteria A and C for its association with the local Mexican American community, and as a good local example of this architectural style.

- Vartanian Home – APN 467-09-234 (362 F Street). This farm complex consists of a Queen Anne-style residence, barn, tank house, and outhouse constructed in 1891. A local survey identified this property as eligible for listing in the NRHP under Criterion B for its association with a local Armenian settler, and under Criterion C as an important example of Queen Anne architecture and presumably as an example of an intact nineteenth-century farm complex.

- Holt Lumber – APN 467-02-013 (1916 S. Cherry Avenue). This one-story brick Italian Renaissance Revival office building was constructed circa 1920. It is eligible for listing in the NRHP under Criterion C as a distinctive example of early twentieth-century Italian Renaissance commercial architecture.

- South Van Ness Entrance Gate – No APN (2208 S. Van Ness Avenue). Constructed in the 1920s, the South Van Ness Entrance Gate is an arched truss with a sheet metal sign. A local survey identified the structure as eligible for listing in the NRHP under Criterion A within the context of early twentieth-century transportation, and under Criterion C, as an early roadside sign.

- Washington Colony Canal – No APN (rural Fresno County). The Washington Colony Canal is a dirt-lined irrigation canal constructed circa 1878 to 1880. A previous survey identified the canal as eligible for the NRHP as a contributor to the Washington Irrigated Colony Historic District, which is eligible under Criterion A for its association with the settlement and agricultural development of the Washington Colony.

- North Branch of Oleander Canal – No APN (rural Fresno County). The North Branch of the Oleander Canal is a dirt-lined irrigation canal constructed in the 1880s. A previous survey identified the canal as eligible for the NRHP as a contributor to the Washington Irrigated Colony Historic District, which is eligible under Criterion A for its association with the settlement and agricultural development of the Washington Colony

- People's Ditch – No APN (rural Kings County). This property is an earth-lined canal constructed between 1873 and 1878, specifically a 1.4-mile segment of the main ditch and a 4-mile section of its east branch. This historic property is eligible for NRHP at the local level of significance under Criterion A for its association with the settlement pattern in the Mussel Slough region in the 1870s, and for association with the events that led to the Mussel Slough Tragedy.

- Lakeside Cemetery – APN 028-20-200-4000 (Kent Avenue, rural Kings County). This historic property is a 1.5-acre rural cemetery located approximately 7 miles south of Hanford, and features masonry and concrete grave markers, lawn, and shade trees. Established in the 1870s, the cemetery is eligible for the NRHP under Criterion A, for its association with the early settlement of the area south of Hanford that would become the Lakeside District.

- Zuniga's Tortilleria – APN 030-184-01-0000 (901 Flory Avenue). Zuniga's Tortilleria is a one-story concrete-block building constructed circa 1950. The building is eligible for the NRHP under Criterion A for its association with a pattern of cultural practices directly linked with the customs of Corcoran's Mexican-American residents. It is also a significant reflection of traditional cultural values held by the Mexican-American community of Corcoran and as an example of a woman-owned business.

- Allensworth Historic District – APNs 331-100-030, 331-130-003, 331-141-004, 331-151-011, 331-161-020, 333-350-041 (4129 Grant Drive). The Allensworth Historic District, also known as Colonel Allensworth State Historic Park, encompasses about 60 acres, which include approximately 20 historic-era, reconstructed buildings, and contemporary park administration buildings. As the only town in California that was founded, financed, and governed by African-Americans, the historic district is listed in the NRHP (NRHP Reference No. 72000263, certified on February 23, 1972) and is significant under Criterion A within the context of agriculture, education, politics, religion, social history, military, literature, and social history. The district is also significant under Criterion B for its association with the town's founder Lieutenant Colonel Allen Allensworth. Contributing elements of the historic district include the elementary school, Lieutenant Colonel Allensworth's residence, Grosse's Drugstore, railroad ticket office, and Singleton's General Store and Post Office.

- Santa Fe Depot – APN 027-03-008 (150-200 Central Valley Highway). The Santa Fe freight depot in Shafter is a two-story, wood-frame railroad depot constructed in 1917. The building is listed in the NRHP (NRHP Reference No. 82002187, certified on January 19, 1982) and is significant under Criterion C as an example of a standard combination frame depot.

- San Francisco and San Joaquin Valley Railroad Section House – APN 027-07-028 (434 Central Valley Highway). This building is a small, wood-frame, folk-style residence with Craftsman details. The building is eligible for the NRHP under Criterion A for its association with the

founding of Shafter, and under Criterion C as an example of a section house built by the San Francisco and San Joaquin Valley Railway Company.

- Joe O'Brien Stables – APN 089-09-029 (1320 E. Lerdo Highway). This property consists of a horse track, a stables area with five buildings, and a residential area with two houses, two detached garages, and a storage building, all of which were constructed circa 1956. The stables complex is eligible for the NRHP under Criterion B for its association with a significant person.

- Friant-Kern Canal –No APN (Kern County). The Friant Kern Canal is a 152-mile, gravity-fed earth- and concrete-lined canal that terminates at the Kern River northwest of Bakersfield. As a key component of California's Central Valley Project (CVP), the canal has been determined eligible for the listing in the NRHP. It is historically significant at the state level under NRHP Criterion A, within the context of development, construction, and operation of the CVP. The period of significance is 1945 to 1951, its period of construction.

- Harvey Auditorium – APN 004-05-201 (1241 G Street). Bakersfield High School's Harvey Auditorium is a Streamline Moderne-style, concrete theater completed in 1948. The building is eligible for the NRHP under Criterion C as a significant example of local master architect Charles Biggar.

- Kern County Civic Administration Center – APN 006-29-001 (1315-1415 Truxtun Avenue). This property consists of a large U-shaped governmental complex with four buildings built between 1956 and 1959 in the International style. The complex is eligible for listing in the NRHP under Criterion A as one of the key projects in the redevelopment of Bakersfield and Kern County following the devastating earthquakes that rattled the area in the summer of 1952. It also is eligible under Criterion C for its use of unifying architectural elements and materials to provide a cohesive design, as well as for its use of seismic safety features.

- Stark/Spenser Residence – APNs 006-43-002, 006-43-003 (1321 N Street). This two-story wood-frame residence was constructed in 1898 in the Queen Anne and Eastlake styles. A local survey identified the building as eligible for listing in the NRHP under Criterion C as a distinguished example of this style of architecture.

4.7 Preliminary Section 4(f) Use Assessment

4.7.1 Park, Recreation, Open Space, and Wildlife Refuge Resources

Preliminary use assessment for the park, recreation, open space, and wildlife refuge resources relative to HST alternatives are discussed in this section.

A. BNSF ALTERNATIVE ALIGNMENT

The BNSF Alternative Alignment would use Colonel Allensworth State Historic Park, and one wildlife refuge: the Allensworth Ecological Reserve. The BNSF Alternative would also result in a temporary use of Father Wyatt Park.

Father Wyatt Park

Father Wyatt Park is a 1-acre City of Corcoran park that features a playground area, a covered arbor, picnic tables, and benches. Construction of the HST would require placement of a roadway crossing outside of, but on the northern border of the park.

Use Assessment

The BNSF Alternative would not permanently acquire land from Father Wyatt Park. Construction of the HST would require placement of a roadway crossing outside of, but on the northern border of the park. Noise and visual impacts during construction could be considered a temporary nuisance to some park users; however, park functions would not be impaired. Preliminary analysis suggests that the BNSF Alternative would not result in a Section 4(f) use of Father Wyatt Park.

Colonel Allensworth State Historic Park

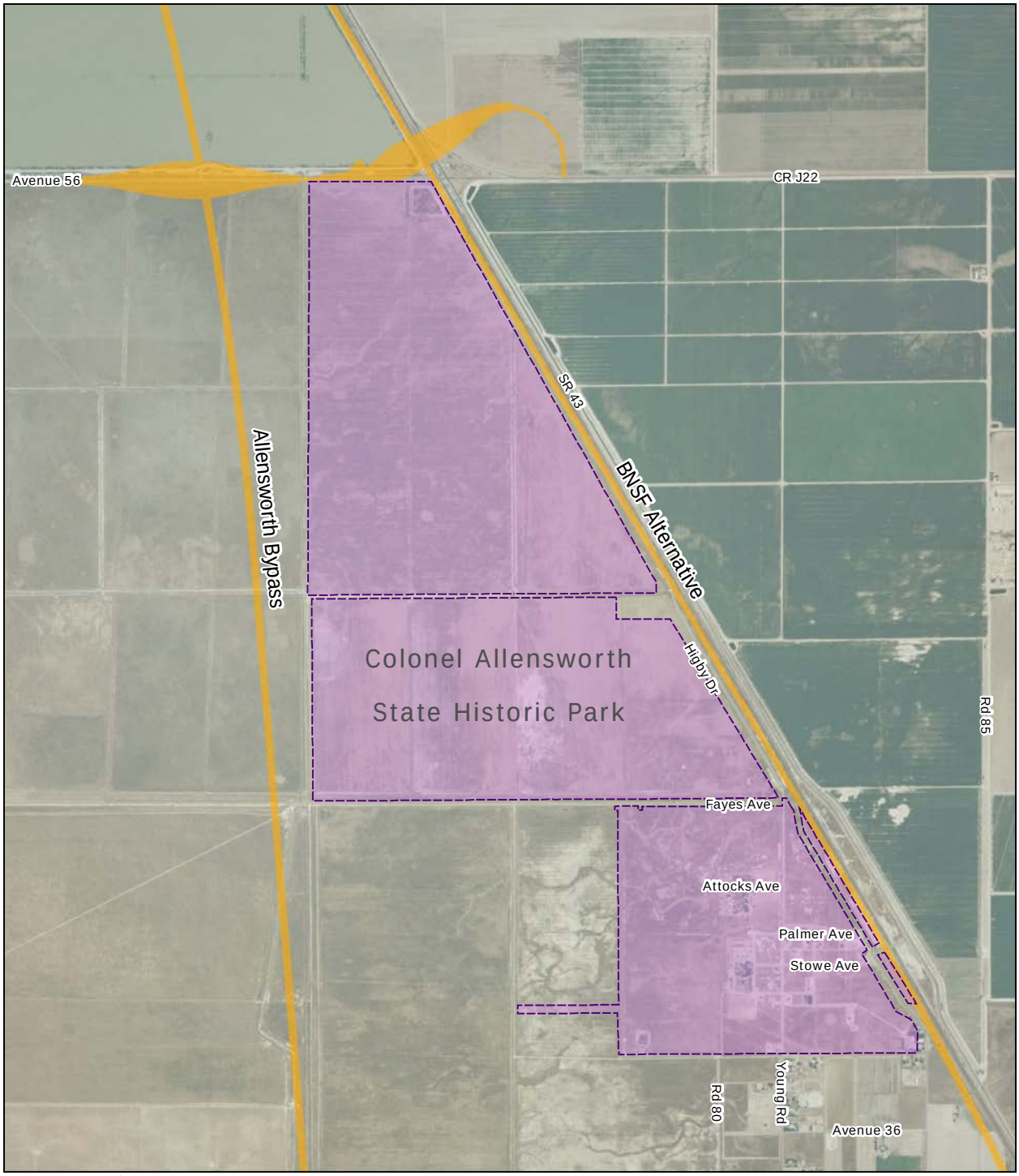
Colonel Allensworth State Historic Park is a 240-acre park with a number of vernacular residential and commercial buildings, a schoolhouse, a library, and a church. The park also offers public recreational use with a visitor center, exhibits and programs, guided tours, picnic areas, and 15 tent and RV campsites. The property is a historically representative assemblage of buildings highlighting the county's agricultural history. Colonel Allen Allensworth, along with other African-American investors, organized the California Colony and Home Promoting Association in 1908 and acquired the Allensworth town site.

Use Assessment

The BNSF Alternative would use 1.7 acres of undeveloped areas of the park for the alignment right-of-way (Figure 4-7). The HST would be at-grade along the eastern side of the park. Construction and operation of the HST would introduce a modern transportation element within 250 feet of park areas frequented by the public. The HST would be incompatible with the existing visual character and early-twentieth-century context of the park. Noise would also be increased. Thus, preliminary analysis is that the BNSF Alternative would have a direct Section 4(f) use of the property.

The centerline of the BNSF Alternative Alignment is just over 100 feet from the eastern boundary of the park. The HST would be a visually dominant feature, noticeably contrasting with the existing visual character of the early-twentieth-century buildings in the park. The 24-foot-high OCS system components and wires, right-of-way fencing, and HSTs would introduce distinctly modern industrial elements into the visual foreground that would alter the character of the site and lower visual quality (see Section 3.16, Aesthetics and Visual Resources). Section 3.16, Aesthetics and Visual Resources, contains mitigation measures that serve as measures to minimize harm against visual impacts.

Noise associated with HST operations would be severe up to 900 feet from the centerline of the BNSF Alternative and moderate as far away as 1,500 feet (see Section 3.4, Noise and Vibration). Although the portions of the park that are used for recreation are subjected to freight train noise on a daily basis, the HST would create a substantial increase in noise. Section 3.4, Noise and Vibration contains mitigation measures that serve as measures to minimize harm against noise and vibration.



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED
Source: URS, 2011

July 7, 2011

N

0 500 1,000
Feet

0 250 500
Meters

Allensworth State Historic Park boundary

Property acquisition footprint

Figure 4-7
Colonel Allensworth State Historic Park

Allensworth Ecological Reserve

Allensworth Ecological Reserve consists of 5,226 acres of land owned by the State of California. The reserve comprises numerous parcels and covers land in both Tulare and Kern counties. The reserve was established to provide protection for rare, threatened, and endangered native plants, wildlife, and aquatic species, and important terrestrial and aquatic habitat. Some examples of special-status species known to be at this location are the San Joaquin kit fox, Tipton kangaroo rat, blunt-nosed leopard lizard, and golden eagle.

Use Assessment

The BNSF Alignment would be adjacent to parcels of Allensworth Ecological Reserve and would use approximately 7.3 acres of land within the reserve (Figure 4-8). Allensworth Ecological Reserve lands to the east of the alignment would be separated from construction activities by SR 43, and there would be no use in this area. To the west of the alignment, approximately 5.4 acres of land would be permanently incorporated into the transportation facility, resulting in a reduction of habitat for special-status species in the reserve. This would be considered a Section 4(f) direct use of the property.

An additional 3.7 acres of Allensworth Ecological Reserve lands to the west of the alignment would be used temporarily during project construction and would be restored to its previous condition following construction.

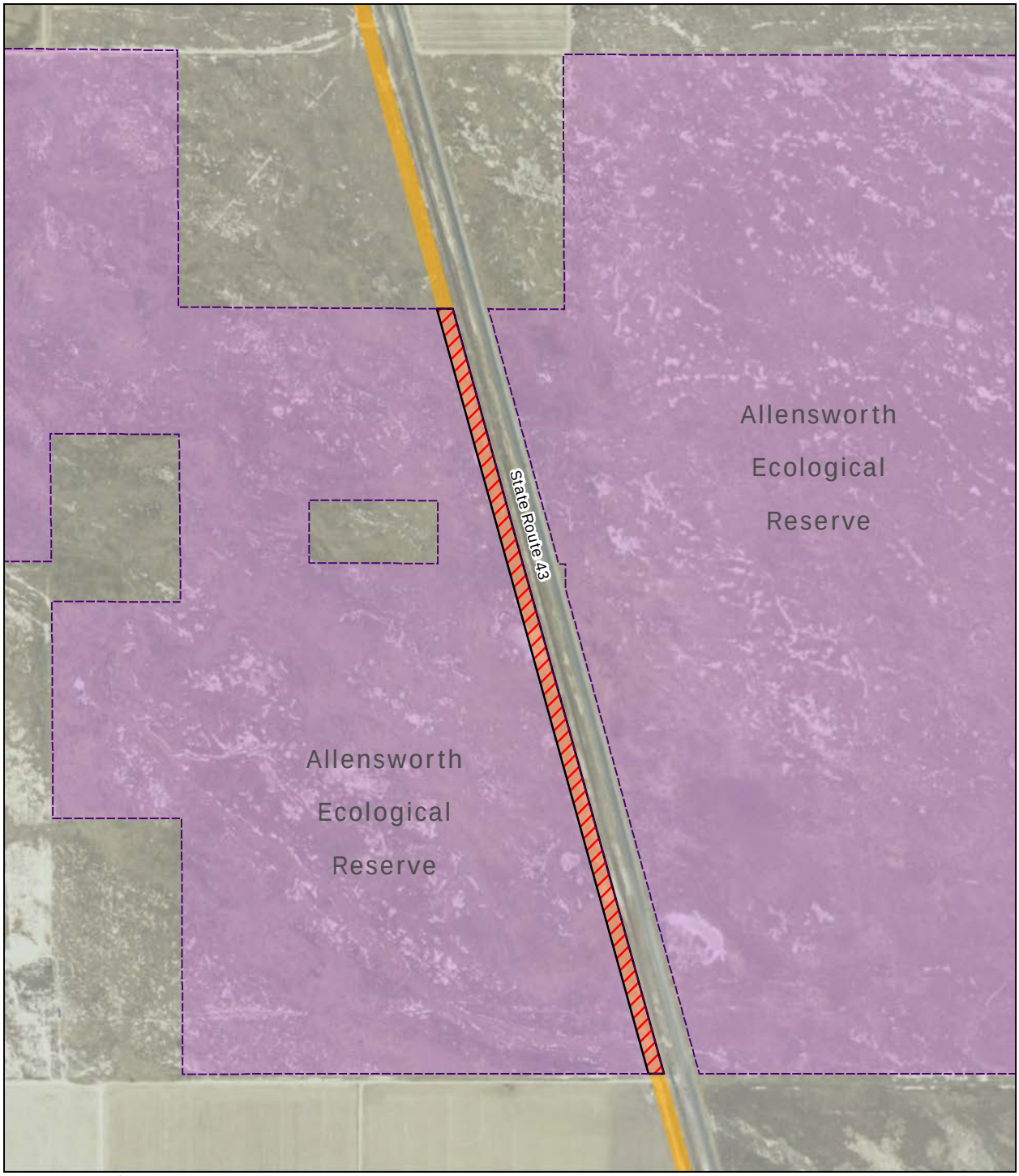
Areas of Allensworth Ecological Reserve that are separated from the BNSF Alternative by SR 43 would not experience any change in character. Areas west of the BNSF do not offer access to Allensworth Ecological Reserve. Therefore, visitors are not anticipated in this area of the park. There would be no proximity impacts due to operation of the HST under the BNSF Alternative.

Conclusion

Preliminary analysis suggests that the BNSF Alternative would result in a permanent use of Allensworth Ecological Reserve.

Kern River Parkway

The Kern River Parkway begins at the mouth of Kern Canyon and extends west to Interstate 5. The parkway consists of small developed parks containing amenities such as picnic areas, horseshoe pits, and play fields, separated by undeveloped land owned both by the City of Bakersfield and private parties. A bike path runs the length of the parkway.



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED
Source: URS, 2011

July 7, 2011

N

0 200 400
Feet

0 100 200
Meters

Allensworth Ecological Reserve

Property acquisition footprint

Property acquired

Figure 4-8
Allensworth Ecological Reserve

Use Assessment

The BNSF Alignment would cross above the Kern River Parkway at a height of 65 feet. At this location, the HST would be on an elevated structure spanning an undeveloped portion of the parkway. None of the project facilities would encroach on Section 4(f) resources within the parkway. Construction activities would create noise and visual changes. These effects would not hinder current uses of the parkway, such as bicycling, picnicking, and playing field sports.

Construction of the guideway would require temporary closure of the bike path for safety purposes when construction takes place over the path. After construction of this section of the guideway, the bike path would be reopened for use. The FRA would coordinate with City of Bakersfield prior to project construction to develop an alternate route for bike path users.

Introduction of the HST guideway above the parkway would create an intrusive visual element that did not previously exist. Previous views of open sky and distant mountains would be obscured by a dominant transportation element. Addition of the HST to the landscape would result in impairment to users of the parkway in the immediate vicinity of the alignment. Measures to minimize harm, as described in Table 4-4, would be employed to reduce these impacts, and FRA and the Authority would coordinate with the City of Bakersfield for a documented agreement on no Section 4(f) use of the property.

Conclusion

With the implementation of measures to minimize harm, preliminary analysis suggests that the BNSF Alternative would result in no use of Kern River Parkway.

B. CORCORAN ELEVATED ALTERNATIVE ALIGNMENT

Father Wyatt Park is in the vicinity of the Corcoran Elevated Alternative Alignment. Preliminary analysis suggests that this park would not incur a Section 4(f) use, as stated in Table 4-2..

C. CORCORAN BYPASS ALTERNATIVE ALIGNMENT

Christmas Tree Park in is in the vicinity of the Corcoran Bypass Alternative Alignment. Preliminary analysis suggests that this park would not incur a Section 4(f) use, as stated in Table 4-2.

D. ALLENSWORTH BYPASS ALTERNATIVE ALIGNMENT

Preliminary analysis suggests, the Allensworth Bypass Alternative Alignment would not use Section 4(f) parks, recreation areas, open space, or wildlife refuges.

E. WASCO-SHAFTER BYPASS ALTERNATIVE ALIGNMENT

There are no Section 4(f) parks, recreation areas, open spaces, or wildlife refuges in the vicinity of the Wasco-Shafter Bypass Alternative Alignment.

F. BAKERSFIELD SOUTH ALTERNATIVE ALIGNMENT

Kern River Parkway

Potential impacts on the Kern River Parkway under the Bakersfield South Alternative Alignment, and measures to minimize harm are expected to be identical to those described under the BNSF Alternative.

4.7.2 Cultural Resources

Section 106 of the National Historic Preservation Act of 1966 (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 generally the method by which a cultural resource's significance is determined under Section 4(f).

The results of the Section 106 process determine whether Section 4(f) applies to historic properties. The results of the Section 106 analysis are critical in determining the applicability and outcome of the Section 4(f) evaluation. The most important difference between the two statutes is the way each of them measures impacts on cultural resources. Whereas Section 106 is concerned with "adverse effects," Section 4(f) is concerned with "use" of protected properties.

A. HISTORIC RESOURCES

An analysis conducted for the project (see Chapter 3.17, Cultural and Paleontological Resources) determined that the following historic sites would be affected by one or more HST alternatives. These sites have been evaluated to reach a preliminary Section 4(f) use determination. Properties listed in Table 4-3 that lack impacts that could be potential 4(f) uses are not discussed further.

The following preliminary assessment for use of Section 4(f) properties for the BNSF Alternative are listed in detail below.

- Bank of America (1102 F Street, Fresno). Roadway overcrossings for the HST would be constructed in the vicinity of the Bank of America building where features of this scale do not currently exist. While these new transportation features would be visible within the viewshed of the property, they would not result in a substantial impairment of this historic property and would not constitute a Section 4(f) use.

- North Branch of the Oleander Canal (rural Fresno County). This property is an 1880s unlined irrigation canal, eligible for the NRHP under Criterion A for its association with the settlement and agricultural development of Washington Colony. The HST alignment would cross this canal at-grade. This would result in the placement of project components within the physical boundary of the historic property, resulting in a Section 4(f) direct use.

- Washington Colony Canal (rural Fresno County). This property is a circa 1878-1880 dirt-lined irrigation canal, eligible for the NRHP under Criterion A for its association with the settlement and agricultural development of Washington Colony. The HST alignment would cross this canal at-grade. This would result in the placement of project components within the physical boundary of the historic property, resulting in a Section 4(f) direct use.

- Peoples Ditch (rural Kings County). This property is an earth-lined canal constructed between 1873 and 1878, specifically a 1.4-mile segment of the main ditch and a 4-mile section of its east branch. This historic property is potentially eligible for the NRHP under Criterion A, for its association with the settlement pattern in the Mussel Slough region in the 1870s, and for association with the events that led to the Mussel Slough Tragedy. The HST alignment would cross this canal at-grade. This would result in the placement of project components within the physical boundary of the historic property, resulting in a Section 4(f) direct use.

- Santa Fe Depot (150–200 Central Valley Highway, Shafter). The BNSF Alternative would introduce visual elements in the vicinity of the Santa Fe Depot where features of this scale do not currently exist. The proposed guideway would be 40 and 60 feet high and located adjacent to an existing at-grade railroad. This historic property would be located within 45 feet of proposed construction activity for this alignment, and within 65 feet of the elevated

tracks. While these new transportation features would be visible within the viewshed of the property, they would not result in a substantial impairment of this historic property and would not constitute a Section 4(f) use.

- San Francisco and San Joaquin Valley Railroad Section House (434 Central Valley Highway, Shafter). The proposed HST guideway would be 40 and 60 feet high and located adjacent to an existing at-grade railroad. This historic property would be within 45 feet of proposed construction activity for the guideway and within 75 feet of the elevated tracks. While these new transportation features would be visible within the viewshed of the property, they would not result in a substantial impairment of this historic property and would not constitute a Section 4(f) use.

- Harvey Auditorium, Bakersfield High School (1241 G Street, Bakersfield). The proposed HST guideway would be 50 and 70 high and located adjacent to an existing at-grade railroad. Harvey Auditorium, the only building located on the Bakersfield High School campus that is eligible for the NRHP, would be located about 85 feet south (across the street) of the construction area for the project and within 130 feet of the guideway. While these new transportation features would be visible within the viewshed of the property, they would not result in a substantial impairment of this historic property and would not constitute a Section 4(f) use.

The preliminary assessment for the following resource applies to both BNSF Alternative and the Corcoran Bypass Alternative:

- Lakeside Cemetery (Kent Avenue, rural Kings County). Both the BNSF and Corcoran Bypass alternatives would require construction of a roadway overcrossing along the boundary of the cemetery. While these new transportation features would be visible within the viewshed of the property, they would not result in a substantial impairment of this historic property and would not constitute a Section 4(f) use.

The preliminary assessment for both the BNSF Alternative and the Bakersfield South Alternative regarding the following resources are:

- Friant Kern Canal. The Friant Kern Canal is a 152-mile gravity-fed earth and concrete lined canal that terminates at the Kern River northwest of Bakersfield. As a key component of California's Central Valley Project (CVP), the canal is eligible for the NRHP under Criterion A, within the context of development, construction, and operation of the CVP. The HST alignment would cross this canal at-grade under both the BNSF and Bakersfield South Alternative alignments. This would result in the placement of project components within the physical boundary of the historic property, resulting in a Section 4(f) direct use.

- Stark/Spenser Residence (1321 N Street, Bakersfield). The elevated guideway for either of these alternative alignments would be visible from the Stark Residence approximately 270 feet away. While these new transportation features would be visible within the viewshed of the property, they would not result in a substantial impairment of this historic property and would not constitute a Section 4(f) use.

The preliminary assessment for the Bakersfield South Alternative regarding the following historic property is:

- Kern County Civic Administration Center (1315–1415 Truxtun Avenue, Bakersfield). The HST would result in the introduction of an elevated structure that is equivalent to a five- to seven-story building within the viewshed of the property. While these new transportation features

would be visible within the viewshed of the property, they would not result in a substantial impairment of this historic property and would not constitute a Section 4(f) use.

The preliminary assessment for both the Fresno Station–Mariposa Alternative and the Fresno Station–Kern Alternative about the following resources are:

- Fresno Fire Department Station No. 3 (1406–1430 Fresno Street, Fresno). Both station alternatives would have visual effects on this historic property. The Fresno Station–Mariposa Alternative would have an elevated pedestrian walkway, a three-story station facility, and a five-story parking structure where features of this scale do not currently exist. While these new transportation features would be visible within the viewshed of the property, they would not result in a substantial impairment of this historic property and would not constitute a Section 4(f) use.

- First Mexican Baptist Church (1061 E Street, Fresno). Both of the station alternatives would create the same visual intrusion on this historic church as on the fire station. While these new transportation features would be visible within the viewshed of the property, they would not result in a substantial impairment of this historic property and would not constitute a Section 4(f) use.

The preliminary assessment for the Fresno Station–Mariposa Alternative regarding the following historic property:

- Southern Pacific Railroad Depot (1033 H Street, Fresno). The Fresno Station–Mariposa Alternative would result in visual proximity impacts to the historic depot from an elevated pedestrian walkway that would cross between the depot and the adjacent Pullman shed that is part of the historic property, as well as a three-story station facility, and a five-story parking structure. While these new transportation features would be visible within the viewshed of the property, they would not result in a substantial impairment of this historic property and would not constitute a Section 4(f) use.

4.8 Avoidance Alternatives

Section 4(f) requires the selection of an alternative that avoids the use of Section 4(f) property if that alternative is deemed feasible and prudent. The purpose and need statement of the HST Fresno to Bakersfield Section Draft Project EIR/EIS, and the EIR/EIS itself, tiers off two previously prepared and approved program EIR/EIS documents: the 2005 *Final Program EIR/EIS for the Proposed California High-Speed Train System EIR/EIS* (Statewide Program EIR/EIS) (Authority and FRA 2005) and the 2008 *Bay Area to Central Valley HST Final Program EIR/EIS* (Bay Area to Central Valley Program EIR/EIS) (Authority and FRA [2008] 2010).

Preliminary 4(f) analysis suggests this project would have a 4(f) use of one park, one wildlife refuge, and four historic properties, depending on the alternative and design alignment. All HST alternative alignments follow existing railroad corridors to the extent allowed by design speeds. Locating the project along these corridors is an objective of the project intended to minimize impacts. New or revised alignments that do not follow these or other transportation corridors could substantially increase displacement and community disruption and increase impacts to biological resources and wetlands.

To estimate the effects of relocating alternatives to avoid impacts on resources, an area approximately 1 mile on each side of the resource was considered, to allow for the gradual transition needed to maintain design speeds. This section identifies potential avoidance alternatives and the corresponding potential impacts of such alternatives applying the factors described in Section 4.1.2.A, above.

A. COLONEL ALLENSWORTH STATE HISTORIC PARK

Colonel Allensworth State Historic Park could be avoided by selecting the Allensworth Bypass Alternative Alignment. This alignment would avoid the park boundary by 450 feet on the southeastern boundary. The rail line would be constructed at-grade, as previously described, and would be located approximately 1 mile from any publicly used facilities. There would be a temporary use of park land during construction of an overcrossing on Avenue 56. This construction would be located away from publicly visited areas and would have negligible impacts on park uses. Following construction, the HST would be located at sufficient distance from the park that it would not create any visual intrusion (see Section 3.16, Aesthetics and Visual Resources). Noise levels and vibration would be reduced by attenuation due to the distance of the Allensworth Bypass from the park (see Section 3.4, Noise and Vibration) to the extent that operation or construction would not result in any noticeable change to existing noise levels nor introduce vibration. By selecting the Allensworth Bypass Alternative Alignment, there would be no Section 4(f) use to the park.

B. ALLENSWORTH ECOLOGICAL RESERVE

Allensworth Ecological Reserve could be avoided by selecting the Allensworth Bypass Alternative. The reserve would not be temporarily occupied during construction. The HST would be located at a sufficient distance from the park that it would not create a visual intrusion (see Section 3.16, Aesthetics and Visual Resources). Noise levels and vibration would be reduced by attenuation due to the distance of the bypass from the park (see Section 3.4, Noise and Vibration) to the extent that operation or construction would not result in any noticeable change to existing noise levels nor introduce vibration. By selecting the Allensworth Bypass Alternative, there would be no Section 4(f) use of the reserve.

C. WASHINGTON COLONY CANAL, NORTH BRANCH OF OLEANDER CANAL, AND PEOPLE'S DITCH

The Washington Colony Canal, the North Branch of the Oleander Canal, and the Peoples Ditch are oriented roughly east-west across the project area between SR 41 on the west and SR 99 on the east. The Fresno to Bakersfield Section travels north-south. To avoid these canals, it would be necessary to reroute the alignment at least 2 miles away from the BNSF Railway tracks to the east or west.

Because the curve radius for the proposed HST varies from approximately 4 to 6.5 miles, it would be necessary to reroute at least 6 miles of the alignment, resulting in higher construction and right-of-way costs, and increased travel times. This rerouting would take place across an area of intensive farming, resulting in severe disruption of existing farm operations. While the HST alignment would be placed within the boundaries of these historic properties, it would not require a complete demolition of the properties themselves, and the properties would continue to exist following construction, with the HST within their boundaries.

D. FRIANT-KERN CANAL

The Friant-Kern Canal is a linear feature that would be crossed by the HST and have components of the proposed HST placed within the historic property under both the BNSF and Bakersfield South Alternative alignments. To avoid this use, it would be necessary to reroute the alternative alignments outside of Bakersfield, which would not meet the purpose of providing a transportation link in the City. As outlined in Chapter 1 of this EIR/EIS, the purpose of the HST System is to provide a reliable high-speed train system that links the major metropolitan areas of the state. Therefore, rerouting alternatives outside of Bakersfield would not meet the purpose and need of the project.

4.9 Measures to Minimize Harm

Table 4-4 lists the preliminary measures identified by FRA and the Authority to minimize harm, as required by 49 U.S.C. Section 303(c)(2), that will be incorporated into the project to address the impacts of the alternative alignments. Adverse effects to cultural resources are preliminary findings and would be subject to review by parties to the Section 106 Programmatic Agreement; including the Authority, FRA, SHPO, and the Advisory Council on Historic Preservation. The forthcoming Section 106 Memorandum of Agreement (MOA) for the Fresno to Bakersfield Section will establish mitigation measures to implement before, during, and after construction to ensure that construction activities would avoid and minimize causing these adverse effects or changes, to the extent possible (see Section 3.17, Cultural and Paleontological Resources). Nevertheless, some of the HST alternatives would cause these common types of adverse effects or changes. Measures to minimize harm for all historic properties are similar and are listed together in Table 4-4. As described, the project includes all possible planning to minimize harm to Section 4(f) properties resulting from use as required by 49 U.S.C. Section 303(c)(2).

General measures that would minimize harm to all potentially affected properties as a result of noise or visual intrusion are listed in Section 3.4, Noise and Vibration, and Section 3.16, Aesthetics and Visual Resources. While these measures would apply to all discussed Section 4(f) resources, they are not repeated in the table below.

Table 4-4
Measures to Minimize Harm

Impact	Measures to Minimize Harm
Kern River Parkway	
Visual intrusion from overhead HST Temporary construction activities in the park	• To reduce potential incompatibility between the industrial character of generic guideways and columns and nearby downtown streetscapes, guideways and columns will incorporate graceful curved, thin, or tapered sculptural forms and decorative surface texturing. Parapets and other portions of elevated guideways will also include decorative texture treatments to reduce the utilitarian appearance of the large concrete surfaces, through variety of texture, creation of shadow lines, and other articulation of surfaces to add visual and thematic interest. • Off-site landscape screening in the Kern River Parkway will be planted to provide new, intermittent screening of project structures. Occasional groupings of new trees in the parkway should be placed to break up views of long expanses of the guideway. Extensive tall tree planting would be made at or near the edge of the project right-of-way in the parkway. • To minimize high potential glare and contrast from specular reflection off of metallic OCS poles and other components will have non-reflective surfaces to minimize reflective glare. • The FRA would coordinate with the City of Bakersfield on alternative routes due to closure of a bike path during construction of the HST guideway above the park.

Table 4-4
Measures to Minimize Harm

Impact	Measures to Minimize Harm
Allensworth State Historic Park	
Acquisition of land from park (BNSF Alternative Alignment only) Temporary construction activities in the park (BNSF Alternative Alignment only)	• Final design would continue to minimize right-of-way impacts in Allensworth State Historic Park. Acquisition of Allensworth State Historic Park land and necessary exceptions would be pursuant to California Code of Civil Procedure Section 1240 for the permanent use of 3 acres of Allensworth State Historic Park. • Mitigation may include providing financial compensation for purchase and development of replacement park property of at least equivalent value with the property acquired; or, where appropriate, enhancement of the existing facility. Where applicable, this process will be consistent with Section 6(f) requirements, and provide park enhancement as appropriate.
Allensworth Ecological Reserve	
Acquisition of land from reserve (BNSF Alternative Alignment only)	• Passages have been designed through the trackway embankment in the vicinity of the Allensworth Ecological Reserve to allow for wildlife movement across the HST right-of-way. Wildlife crossing would be provided in the railroad embankment at intervals of approximately 0.3 mile over the segment of the alignment from approximately Avenue 84 in Tulare County to the Elmo Highway in Kern County. • Mitigation may include providing financial compensation for purchase and development of replacement park property of at least equivalent value with the property acquired; or, where appropriate, enhancement of the existing facility.
Historic Properties	
Potential vibration impacts Avoidance of historic properties near Fresno HMF Visual intrusion resulting in an adverse effect Property acquisition	• The HST project will develop construction methods to avoid indirect adverse effects or indirect substantial adverse change to any historic properties (Section 106) or historical resources (CEQA) from noise or vibration caused by construction activities. Vibration from impact pile-driving during construction is anticipated to reach up to 90 VdB at 135 feet from the edge of construction, a level that would potentially cause the physical destruction, damage, or alteration of historic properties or historical resources. Because this impact pile-driving could cause indirect adverse effects or significant adverse changes, alternative construction methods causing less than 90 VdB will be developed near historic properties or historical resources located within 135 feet from the edge of construction. • To avoid potential direct and indirect adverse effects, and direct and indirect substantial adverse changes that could be caused by construction of the HMF at the Fresno Works–Fresno HMF site, the facility will be sited and constructed north of BNSF milepost 991.6. Construction north of BNSF milepost 991.6 will avoid potential direct adverse effects and direct substantial adverse changes that could be caused by construction of the facility on the two historic canals located south of that point. It is anticipated that the site selection for the Fresno facility north of BNSF milepost 991.6 will also avoid potential indirect adverse vibration effects and substantial adverse changes because the construction will be more than 135 feet (less than 90 VdB) from the historic canals. • Historic properties/historical resources that will require protection and/or

Table 4-4
Measures to Minimize Harm

Impact	Measures to Minimize Harm
	stabilization will be identified before the start of construction of the project. Properties subject to this mitigation activity will include any properties physically affected, and/or relocated, and/or in close enough proximity to require protection. This mitigation will ensure that adverse effects on historic properties/historical resources will be either avoided entirely, or minimized to the extent possible. This mitigation will be developed in consultation with the landowner or land-owning agencies. Such measures will include, but are not limited to the following: vibration monitoring of construction in the vicinity of historic properties; stabilization of buildings and structures before, during, and after relocation; and protection of buildings and structures during storage at a new site and during subsequent rehabilitation. • Historic properties/historical resources to be relocated will be identified to help avoid destruction, and to minimize the direct adverse effect of their physical damage, or alteration. The plan for relocation and its implementation will take place before construction. The relocation of the historic properties/historical resources will take into account the historic site and layout (i.e., the orientation of the buildings to the cardinal directions), as well as their potential re-use. All structures will be thoroughly recorded in a HSR, and the relocation plan will provide for stabilization of the structures before, during, and after the move. • Specific historic properties/historical resources will be identified for nomination to the NRHP Program of the NPS. Current photographs of the property used in the nomination(s) will be made before the start of project construction. The nomination document may also use other current and/or historic images prepared as part of other mitigation activities. • Historic properties/historical resources that will be physically altered, damaged, relocated, or destroyed by the project for documentation by the HABS/HAER programs. • Before the start of construction, large-format (4-inch by 5-inch or larger negative-size) black-and-white photographs will be taken of these historic properties/historical resources showing them in context, as well as details of character-defining features. The photographs will be processed for archival permanence in accordance with HABS/HAER photographic specifications. Each view will be fully captioned, and if necessary, perspective corrected. Oblique aerial photography will be considered as a photographic recordation option in these coordination efforts. The recordation will follow the National Park Service HABS/HAER Guidelines; the report format, views, and other documentation details will be coordinated with the Western Regional Office of the NPS, Oakland, California. • It is anticipated that the recordation of historic properties will be completed to Level II HABS written data standards, and will include archival and digital reproduction of historic images, plans, and drawings, if available. Copies of the documentation will be offered to the appropriate local governments, historical societies and agencies, and libraries. The documentation will also be offered in printed and electronic form to any repository or organization upon which SHPO, the Authority, and local agency with jurisdiction over the property, through consultation, may agree. The electronic copy of the report may also be placed on an agency or organization's web site.

Table 4-4
Measures to Minimize Harm

Impact	Measures to Minimize Harm
	• Historic properties/historical resources that will be physically altered, damaged, or relocated will be subject to a HSR. The HSR will be prepared before the start of construction. The HSR will follow the general guidelines for such reports as described in the OHP publication, "Historic Structure Report Format," http://ohp.parks.ca.gov/?page_id=1069. The scope of each HSR will be developed in consultation with the land-owning agencies, and copies of the reports will be provided to the same. The HSR will include, if appropriate, documentation of existing landscaping. The HSRs may be used in the ongoing planning process and re-use of the properties, and may be coordinated with the other mitigation documentation activities, such as HABS/HAER records.

Acronyms:

CEQA	California Environmental Quality Act
FRA	Federal Rail Authority
HABS	Historic American Building Survey
HAER	Historic American Engineering Record
HMF	heavy maintenance facility
HSR	historic structure report
HST	high-speed train
NPS	National Park Service
NRHP	National Register of Historic Places
OCS	overhead catenary system
OHP	(California) Office of Historic Preservation
SHPO	State Historic Preservation Office(r)
VdB	vibration velocity level

4.10 Preliminary Section 4(f) Determination

Considering the foregoing discussion of the project's use of Section 4(f) properties, there may be no prudent avoidance alternative to the use of land from the following four properties regardless of which alternative is selected:

- North Branch of Oleander Canal.
- Washington Colony Canal.
- Peoples Ditch.
- Friant-Kern Canal.

The project includes all possible planning to minimize harm to Section 4(f) properties resulting from use as required by 49 U.S.C. Section 303(c)(2). As described in Section 4.8, Avoidance Alternatives, preliminary analysis indicates that implementation of the Allensworth Bypass alternative alignments avoids any additional Section 4(f) uses in locations where these alternatives parallel the BNSF Alternative Alignment, and thus result in the least overall harm to Section 4(f) resources. Implementation of the BNSF Alternative Alignment in locations where it parallels these avoidance alternatives would result in additional uses of Section 4(f) properties. Neither the Corcoran Elevated, Corcoran Bypass, or Wasco-Shafter Bypass would result in the use of any Section 4(f) properties, nor would their implementation avoid any Section 4(f) uses by the BNSF Alternative.

The North Branch of Oleander Canal, Washington Colony Canal, and Peoples Ditch all exist in areas where the BNSF Alternative is the only alternative being evaluated. Due to their linear

nature, there are no feasible and prudent avoidance alternatives for these properties, as described in Section 4.8.

Implementation of either the BNSF Alternative or the Bakersfield South Alternative Alignment would result in the use of the Friant-Kern Canal. When there is no feasible and prudent avoidance alternative (which avoids all Section 4(f) resources), the federal agency may approve only the alternative that causes the least overall harm based on an assessment of the following factors:

- Ability to mitigate adverse impacts on each Section 4(f) property (including any measures that result in benefits to the property).
- Relative severity of the remaining harm, after mitigation, to the protected activities, attributes, or features that qualify each Section 4(f) property for protection.
- Relative significance of each Section 4(f) property.
- Views of the official(s) with jurisdiction over each Section 4(f) property.
- 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.

Table 4-5 provides a comparative assessment of the BNSF Alternative Alignment versus the Bakersfield South Alternative Alignment with regard to the least-harm analysis factors.

Table 4-5
Preliminary Least-Harm Analysis

Factor 1: "The ability to mitigate adverse impacts to each Section 4(f) property (including any measures that result in benefits to the property)"; and Factor 2: "The relative severity of the remaining harm, after mitigation, to the protected activities, attributes, or features that qualify each Section 4(f) property for protection."
There is no difference between the two alternatives with regard to Factors 1 and 2 for Section 4(f) resource. The same impact would be incurred to one property under each alternative.
Factor 3: "The relative significance of each Section 4(f) property"; and Factor 4: "The views of the official(s) with jurisdiction over each Section 4(f) property."
There is no difference between the two alternatives with regard to Factors 3 and 4. Both Alternatives would result in a direct use of the same Section 4(f) property, the Friant-Kern Canal.
Factor 5: "The degree to which each alternative meets the purpose and need for the project."
Both alternatives meet the purpose and need for the project.
Factor 6: "After reasonable mitigation, the magnitude of any adverse impacts to resources not protected by Section 4(f)."
There is no difference between the two alternatives with regard to Factor 6. There is only one impacted property and it would be subject to the same mitigation measures.
Factor 7: "Substantial differences in costs among the alternatives."
The respective HST alternative capital cost estimates (in millions) are as follows:[a] • BNSF Alternative Alignment: $6,269,000. • Bakersfield South Alternative Alignment: $6,204,000 .
[a] Cost ranges are provided where construction costs would differ according to design options selected.

The FRA will make a final Section 4(f) determination in the Final Project EIR/EIS with regard to the above factors and based on further design and coordination with the agencies of jurisdiction as well as a review of public comments.

4.11 Section 6(f)

Section 6(f)(3) of the LWCF Act requires that no property acquired or developed with LWCF assistance will be converted to other than public outdoor recreation uses without the approval of the Secretary of the Department of the Interior, and only if the Secretary finds it to be in accord with the then existing Statewide Comprehensive Outdoor Recreation Plan (SCORP), and only upon such conditions as the Secretary deems necessary to ensure the substitution of other recreation properties of at least equal fair market value and of reasonably equivalent usefulness and location (36 C.F.R. 59).

Prerequisites for conversion approval as provided in 36 C.F.R. Part 59.3 are as follows:

- All practical alternatives to the proposed conversion have been evaluated.
- The fair market value of the property to be converted has been established, and the property proposed for substitution is of at least equal fair market value as established by an approved appraisal.
- The property proposed for replacement is of reasonably equivalent usefulness and location as that being converted.
- The property proposed for substitution meets the eligibility requirements for LWCF-assisted acquisition.
- In the case of assisted sites that are partially rather than wholly converted, the impact of the converted portion on the remainder will be considered. If such a conversion is approved, the unconverted area must remain recreationally viable or must also be replaced.
- All necessary coordination with other federal agencies has been satisfactorily accomplished.
- The guidelines for environmental evaluation have been satisfactorily completed and considered by the NPS during its review of the proposed Section 6(f)(3) action. In cases where the proposed conversion arises from another federal action, final review of the proposal will not occur until the NPS regional office is assured that all environmental review requirements related to the other action have been met.
- State intergovernmental clearinghouse review procedures have been adhered to if the proposed conversion and substitution constitute significant changes to the original LWCF project.
- The proposed conversion and substitution are in accord with the SCORP and/or equivalent recreation plans.

4.11.1 Section 6(f) Conversion

The Colonel Allensworth State Historic Park/Allensworth Historic District was established by the California Department of Parks and Recreation in 1974 for the preservation, development, and interpretation of resources of the historical community of Allensworth. Because funds from a 1994 LWCF development grant to the California Department of Parks and Recreation were used for new recreational facilities at the site, the park is considered a 6(f) property (National Park Service 2010).

A. CONVERTED AREA: DESCRIPTION

No Project Alternative

Although this alternative would have no impact on Colonel Allensworth State Historic Park, it would not address the state's need for an intercity transportation system, including the southern San Joaquin Valley. This alternative is insufficient in meet existing and future travel demand; current and projected future congestion of the transportation system will continue to result in deteriorating air quality, reduced reliability, and increased travel times. Because it is does not meet the project purpose and need, the No Project Alternative is not feasible.

BNSF Alternative

As previously described and shown on Figure 4-7, the BNSF Alternative Alignment would require conversion of approximately 15.1 acres of Colonel Allensworth State Historic Park. This area represents approximately 6.2% of the 240-acre park. In addition to these direct impacts on the converted areas of the park, indirect impacts on the unconverted area of the park could also result from the BNSF Alternative Alignment, where such areas would not remain recreationally viable. As described below, both lands that are directly impacted and those that are indirectly impacted would be required to be replaced.

Construction and operation of the BNSF Alternative Alignment would require conversion of approximately 15.1 acres of land from Allensworth State Historic Park. Approximately 13 acres north of Fayes Avenue would be converted from agricultural uses to roadway uses to replace the existing access from Palmer Avenue, creating a new overpass for Avenue 56, and an access road to Higby Drive. Approximately 0.2 acre east of Young Road along the eastern park boundary (currently vacant public use land) would be converted to a traction power station. Approximately 1.7 acres east of Road 84 that are currently vacant public lands would be converted to alignment right-of-way uses.

The remaining park area includes a visitor center, picnic area, tent and RV camping areas, several homes (including the Allensworth home), stores, a bakery, a blacksmith area, a drugstore, barber shop, post office, library, hotel, schoolhouse, Baptist Church, restaurant, various farm buildings, and several other buildings that have been reconstructed to reflect the 1908–1918 historical period.

As described in Section 3.4, Noise and Vibration, the BNSF Alternative Alignment would be located as close as 150 feet from existing park facilities, and would result in increases in noise and vibration in the park. With implementation of mitigation measures, potential operational noise and vibration impacts would be reduced to less-than-significant levels.

Although construction vibration impacts on the park would remain significant and unavoidable, even with mitigation, these impacts would be short-term and would not affect the recreational viability of the park. As described in Section 3.16, Aesthetics and Visual Resources, the visual setting of the park would be altered by the BNSF Alternative Alignment because construction and operation of the HST would introduce an industrial transportation element to the park's agricultural valley landscape. The HST would intrude on the existing park experience, undermine the integrity of the visual setting, and thereby reduce the recreational viability of the park until the HST landscape screening has grown to maturity.

If the BNSF Alternative is implemented, a replacement property would be provided that would meet the requirements for a reasonably equivalent usefulness and location. In addition, the replacement property would be of at least equivalent fair market value. At this time, a replacement property has not been identified, nor has the converted property been appraised to

determine fair market value. The NPS prerequisites for conversion approval state that all necessary coordination with other federal agencies must be satisfactorily accomplished. In addition, in cases where the proposed conversion arises from another federal action, final review of the proposal will not occur until the NPS regional office is assured that all environmental review requirements related to that other action have been met. This process is under way, in conjunction with FRA, through the EIR/EIS process.

Allensworth Bypass Alternative

The Allensworth Bypass Alternative Alignment would be located outside of the park boundaries and would not result in conversion of parkland. The temporary occupancy of the 0.2 acre of parkland during construction activities would not result in any Section 6(f) impacts, and the land would be restored to its original condition following construction.

B. SECTION 6(F) DETERMINATION

Due to the impacts related to Section 4(f) and Section 6(f), and the fact that a feasible and prudent avoidance alternative exists for Colonel Allensworth State Historic Park, implementation of the BNSF Alternative Alignment is not anticipated at this location. However, if the BNSF Alternative Alignment is selected, because of the timing of the project, environmental evaluation, and the need to demonstrate completion of environmental review requirements, the Authority and FRA will provide additional environmental evaluation for the Section 6(f) conversion consistent with NPS NEPA requirements, including a 30-day public comment period after publishing the Draft EIR/EIS. The FRA could issue its NEPA determination and Record of Decision before the NPS determination. The NPS evaluation will be coordinated with the NPS, and meet the remaining prerequisites for conversion approval, including establishing the fair market value of the property to be converted and the property proposed for substitution, which will be of at least equal fair market value as established by an approved appraisal. In addition, subsequent environmental evaluation of the conversion will include analysis of the impacts of conversion for the replacement property, once the property has been identified.

This page intentionally left blank