

U.S. Department of Transportation Federal Railroad Administration

Record of Decision

California High-Speed Train Fresno to Bakersfield Section

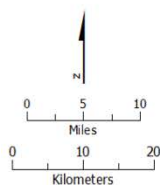
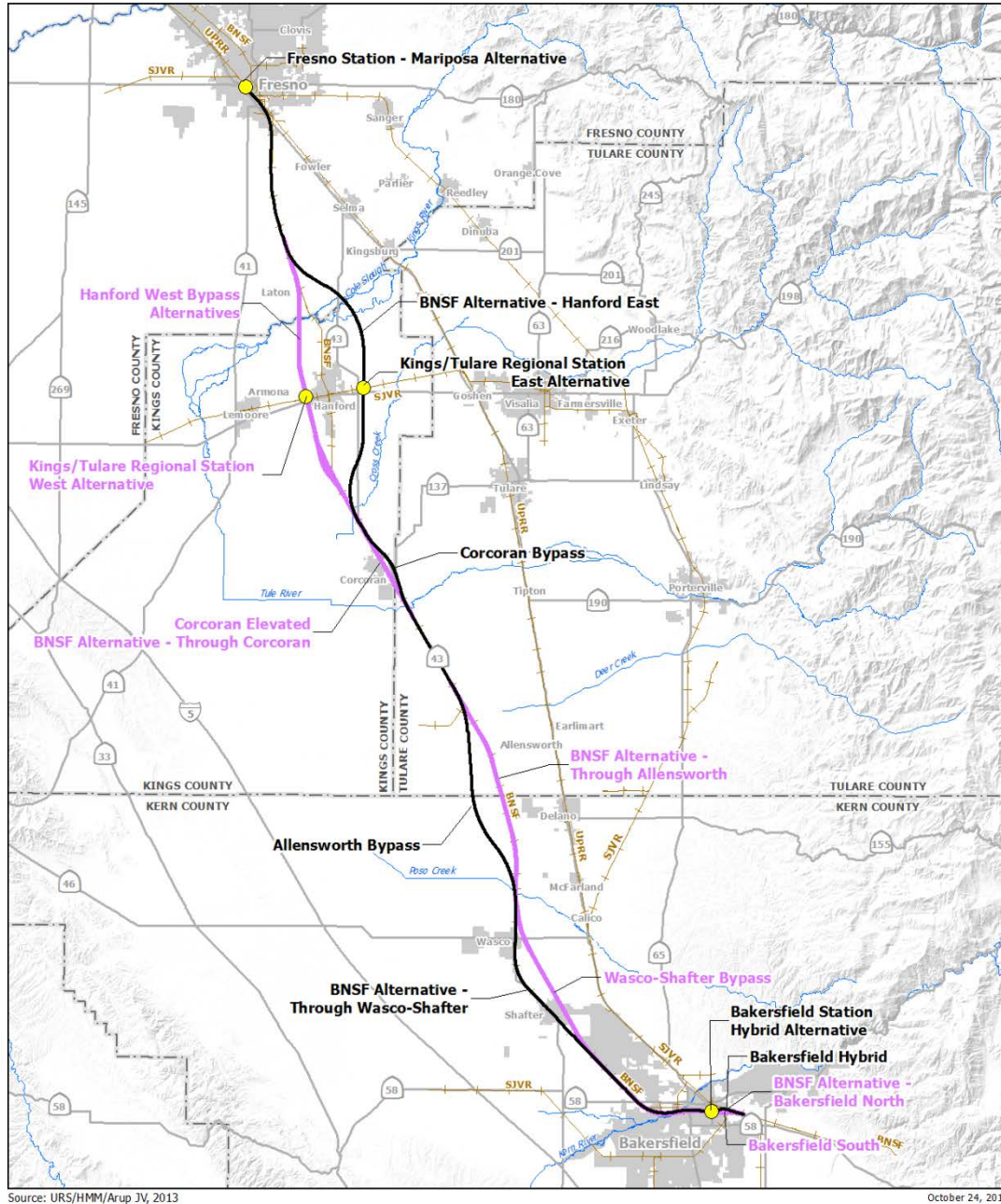
1.0 Introduction

This is the Record of Decision (ROD) of the Federal Railroad Administration (FRA), an operating administration of the U.S. Department of Transportation (DOT), and the lead Federal agency for the California High-Speed Train (HST) Fresno to Bakersfield Section (Project) (Figure 1). The Project Proponent is the California High-Speed Rail Authority (Authority), the lead agency for state environmental reviews under the California Environmental Quality Act (CEQA) and joint lead agency with FRA for Federal environmental reviews under the National Environmental Policy Act (NEPA). The Authority proposes to construct and operate the Project after receiving the required approvals from the appropriate Federal agencies. These agencies include FRA and the Federal cooperating agencies—the U.S. Army Corps of Engineers (USACE) and the Surface Transportation Board (STB). Other Federal agencies with specific review or permitting roles include the U.S. Environmental Protection Agency (EPA) and the U.S. Fish and Wildlife Service (USFWS).

To comply with NEPA and CEQA, FRA and the Authority issued a joint Draft Environmental Impact Report/Environmental Impact Statement (EIR/EIS) for the Fresno to Bakersfield Section of the California HST Project in August 2011, a joint Revised Draft EIR/Supplemental Draft EIS in July 2012, and a joint Final EIR/EIS in April 2014. The joint EIR/EIS is one document that covers both state and federal environmental requirements. However, because this ROD contains only the decision of FRA the documents are referred to as the “Draft EIS,” “Supplemental Draft EIS,” and the “Final EIS.” In making its decision, FRA considered the information and analysis contained in the 2011 Draft EIS, 2012 Supplemental Draft EIS, and 2014 Final EIS (collectively, “EIS Documents”). FRA also considered public and agency comments received during the public comment periods for the Draft EIS and Supplemental Draft EIS, and the waiting period following the publication of the Final EIS.

Based on the analysis of the Project’s potential environmental effects (both adverse and beneficial) in the EIS Documents and substantive agency and public comments, FRA selects portions of the BNSF Alternative in combination with the Corcoran Bypass, Allensworth Bypass, and Bakersfield Hybrid alternatives.

Record of Decision for California High-Speed Train Fresno to Bakersfield Section



- Proposed Preferred Alternative
- Alternative alignment
- Station
- Stream
- Existing rail line
- Community/Urban area
- County boundary

Figure 1
Preferred Alternative and Other HST Alternatives

The Project also includes the Downtown Fresno Mariposa Street Station Alternative which was selected by the FRA in the Merced to Fresno Section ROD (September 18, 2012) and the Kings/Tulare Regional Station – East Alternative and the Downtown Bakersfield Hybrid Station Alternative. The alternatives are described further in Section 4.0 below. FRA is not selecting a Heavy Maintenance Facility alternative at this time.

FRA has prepared the ROD in accordance with the Council on Environmental Quality (CEQ) regulations implementing NEPA (40 C.F.R. Section 1505.2) and FRA’s Procedures for Considering Environmental Impacts (64 Federal Register [FR] 28545, May 26, 1999) (FRA Environmental Procedures). Specifically, this ROD:

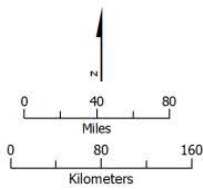
- Provides background on the NEPA process leading to the Final EIS, including a summary of public involvement and agency coordination.
- States and reaffirms the Project’s purpose and need.
- Summarizes the alternatives analysis process that lead to the identification of alternatives not carried forward for study in the Draft EIS.
- Identifies the alternatives considered in the EIS Documents.
- Identifies the selected alternative.
- Identifies the Environmentally Preferable Alternative.
- Summarizes environmental benefits and adverse effects.
- Summarizes the comments received on the Final EIS.
- Discusses the measures to avoid and minimize environmental harm and requires a monitoring and enforcement program for all mitigation measures.
- Presents the FRA Decision, determinations, and findings on the proposed Project and identifies and discusses the factors that were balanced by FRA in making its decision.

1.1 California HST System

The Authority is responsible for planning, designing, constructing, and operating the California HST System. Its state statutory mandate is to develop a high-speed rail system that coordinates with the state’s existing transportation network, which includes intercity rail and bus lines, regional commuter rail lines, urban rail and bus transit lines, highways, and airports.

The California HST System will provide intercity, high-speed service on more than 800 miles of track throughout California, connecting the major population centers of Sacramento, the San Francisco Bay Area, the Central Valley, Los Angeles, the Inland Empire, Orange County, and San Diego, as shown in Figure 2. The Authority and FRA prepared two programmatic (Tier 1) EIR/EIS documents to select preferred alignments and station locations to advance for project-level analysis in Tier 2 EIR/EISs. See Chapter 1 of the Fresno to Bakersfield Section Final EIS for a detailed description of the HST System and the history of Tier 1 documents. Figure 2 shows the corridors and station locations for the California HST System that the Tier 1 EIR/EISs and Tier 1 decisions identified for further review and analysis in Tier 2 project level analysis. The

Record of Decision for California High-Speed Train Fresno to Bakersfield Section



- Proposed station, Statewide HST system
- Proposed station, Fresno to Bakersfield
- Statewide HST system
- Fresno to Bakersfield section

Figure 2
Statewide HST System

HST System will use state-of-the-art, electrically powered, high-speed, steel-wheel-on-steel-rail technology, including contemporary safety, signaling, and automatic train-control systems that would incorporate positive train control infrastructure and be compliant with the requirements of 49 CFR Part 236 Subpart I, with trains capable of operating up to 220 miles per hour (mph) over a fully grade-separated, dedicated guideway alignment.

The California HST System as approved through Tier 1 decisions has been divided into nine individual sections for site-specific, second-tier analysis. The Authority and FRA defined HST project sections such that they would have independent utility or independent significance, i.e., be usable even if later sections of the HSR system are not completed.

Following the Tier 1 decisions, the Fresno to Bakersfield Section is one of the nine individual sections undergoing Tier 2 environmental review. As described in the October 1, 2009, Notice of Intent (NOI) for the Fresno to Bakersfield Section (74 FR 50866), FRA identified the Project termini as the station sites in downtown Fresno and Bakersfield. This is consistent with the Tier 1 decisions and permits full analysis and consideration of the potential impacts of construction and operation of the Fresno to Bakersfield Section of the California HST System.

The Authority plans two phases of California HST System development: Phase 1 (to be constructed in stages dependent on funding availability) will connect San Francisco to Los Angeles/Anaheim via Pacheco Pass and the Central Valley through a combination of dedicated high-speed rail infrastructure blended with existing urban systems, with a state statute mandated express travel time from San Francisco to Los Angeles of 2 hours and 40 minutes or less. Phase 2 will extend the system from Los Angeles to San Diego and from Merced to Sacramento. The California HST System could have more than 200 trains per day after full build-out of Phase 2. The California High-Speed Rail Program Revised 2012 Business Plan and the 2014 Business Plan describe in detail how Phase 1 of the California HST System will be implemented and recognizes current budgetary and funding realities, which will result in both Phase 1 and Phase 2 being constructed over a longer period of time than originally anticipated.

1.2 Fresno to Bakersfield Section

FRA and the Authority, as joint lead agencies for NEPA compliance, commenced the environmental review process for the Project in 2009. The Authority held scoping meetings for the Project in March 2009. The Draft EIS was issued in August 2011 and the 60-day public review period closed on October 13, 2011. The Draft EIS presented the purpose and need for the Project; the reasonable range of alternatives for rail alignment, station site, and heavy maintenance facility (HMF); the existing environmental setting; potential effects (both beneficial and adverse) from construction and operation; and project design features and mitigation measures to avoid, reduce, or eliminate potential adverse environmental effects.

The Draft EIS informed decision-makers, interested parties, and the public about the various alternatives and potential impacts. FRA and the Authority held public hearings in Fresno, Hanford, and Bakersfield to provide opportunities for all of the public to comment on the Draft EIS verbally and in writing. FRA and the Authority received 1,447 comment submittals on the Draft EIS.

Based on comments received during the public and agency review of the Draft EIS, the FRA and Authority decided to reintroduce alignment alternatives west of Hanford. In response to concerns raised by stakeholders in metropolitan Bakersfield, the FRA and Authority also decided to evaluate another alternative in Bakersfield (Bakersfield Hybrid Alternative) that would minimize impacts on residential and community facilities. The FRA and Authority determined that the introduction of these new alternatives and refinements being considered for existing Fresno to Bakersfield route alternatives required publication of a Supplemental Draft EIS in compliance with NEPA (40 C.F.R. Section 1502.9(c)) and a Revised Draft EIR in compliance with CEQA. The Supplemental Draft EIS was issued in July 2012 and the 90-day public review period closed on October 19, 2012. FRA and the Authority held public hearings in Fresno, Hanford, and Bakersfield to provide opportunities for all of the public to comment on the Supplemental Draft EIS verbally and in writing. FRA and the Authority received 824 comment submittals on the Supplemental Draft EIS.

FRA and the Authority considered the information presented in and the comments received on the Draft EIS and Supplemental Draft EIS when preparing the Final EIS. The Final EIS, published April 18, 2014, identified the BNSF Alternative in combination with the Corcoran Bypass, Allensworth Bypass, and Bakersfield Hybrid as the preferred alignment alternatives and the Downtown Fresno Mariposa Street Station, Kings/Tulare Regional Station – East Alternative, and the Downtown Bakersfield Hybrid Station as the preferred station alternatives. The Final EIS did not identify any of the proposed build alternatives for the HMF as preferred. The Final EIS also included responses to all substantive comments and minor design modifications to proposed alternatives resulting from public and agency comments on the Draft EIS and Supplemental Draft EIS.¹

Following the identification of the Preferred Alternative, the USACE and EPA concurred (on December 19, 2013²)—based upon the analyses in the Draft EIS and Supplemental

¹ The Authority proposes to use the design/build method of project delivery. When using design/build, a contractor (or team of contractors) is selected to provide design and construction services under a single contract. Project design modifications may occur as design is finalized. FRA and the Authority will consider whether project design modifications could result in new environmental impacts of a type or severity not analyzed in the EIS Documents. Where appropriate, FRA and the Authority will evaluate the modification to determine whether it would result in a substantial change that requires a supplemental Final EIS consistent with 40 C.F.R. 1502.9(c).

² Letter from Michael S. Jewell, Chief, Regulatory Division of USACE to Mark McLaughlin, Authority. Sacramento, CA. December 19, 2013. Letter from Connell Dunning, Transportation Team Supervisor, Environmental Review Office of EPA to David Valenstein, FRA and Mark McLoughlin, Authority. San Francisco, CA. December 19, 2013.

Draft EIS as well as documents submitted as part of the Clean Water Act (CWA) Section 404 and NEPA integration process,³ and the biological assessment of ecosystems impacts and cultural and community impacts—that the Preferred Alternative contains the preliminary least environmentally damaging practicable alternative (LEDPA), consistent with USACE’s permit program (33 C.F.R. Part 320–331) and EPA’s Section 404(b)(1) Guidelines (40 C.F.R. 230–233).

Table 1: Summary of Major NEPA Milestones

Milestone	Date
Notice of Intent (NOI)	February and October ⁴ 2009
Public Scoping Meetings	March 2009
Notice of Availability Published and Circulation of Draft EIS/Draft Section 4(f) Evaluation	August 2011
Public Hearings: Fresno, Hanford, and Bakersfield	September 2011
Notice of Availability Published and Circulation of Supplemental Draft EIS/Draft Section 4(f) Evaluation	July 2012
Public Hearings: Fresno, Hanford, and Bakersfield	August 2012
Notice of Availability and Publication of Final EIS / Section 4(f) Evaluation and Draft General Conformity Determination	April 25, 2014
End of 30-day waiting period for Final EIS and 30-day comment period for the Section 4(f) Evaluation and Draft General Conformity Determination	May 27, 2014

2.0 Federal Agency Roles and Responsibilities

The specific roles and responsibilities of the Federal agencies involved in the Project, including lead, cooperating, and permitting agencies, are further described below.

³ For more information about the integration of NEPA with Clean Water Act Section 404 permitting, please see Section 2.2. For more information about the identification of the LEDPA and the integration of USACE’s 404 permit into the NEPA process, please see Section 4.4.

⁴ The February 2009 NOI reflected project limits for a Merced to Bakersfield Section. FRA subsequently amended the NOI in October 2009 after determining that the environmental effects of the California HST System between Merced to Bakersfield are more appropriately analyzed in two separate EISs, the Merced to Fresno and Fresno to Bakersfield Sections.

2.1 Federal Railroad Administration

Under 49 United States Code (U.S.C.) 20103, FRA has authority over every area of railroad safety. As such, FRA may exercise certain regulatory authority over the Project. FRA also administers the High-Speed Intercity Passenger Rail grant program. Based on the evaluation of applications submitted to FRA and the two Tier 1 EIRs/EISs and subsequent RODs, FRA selected the Authority to receive grant funds for preliminary engineering and environmental reviews for Phase 1 of the California HST System, and final design and construction of the California HST System between Madera, a city located within the Merced to Fresno Section, and Bakersfield (Kern County) in the Fresno to Bakersfield Section.

Section 4(f) of the DOT Act of 1966 (49 U.S.C. 303) prohibits DOT and its operating administrations, including FRA, from undertaking a transportation project or providing Federal funding or discretionary approvals for a project that results in the use of land from publicly owned parks, recreational areas, wildlife and waterfowl refuges, or historic sites of national, state, or local significance located on public or private land, unless FRA determines that there are *de minimis* impacts or there is no feasible and prudent alternative to the use of the resource and the action includes all possible planning to minimize harm to the property resulting from use. Section 4(f) also protects historic sites of national, state, or local significance located on public or private land. FRA's Section 4(f) Determination is included as Section 9.2 of this ROD.

Section 106 of the National Historic Preservation Act of 1966 (NHPA) (16 U.S.C. 470f), requires Federal agencies to take into account the effects of their undertakings on historic properties and to afford the Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment. The historic preservation review process mandated by Section 106 is outlined in regulations issued by the ACHP that are available at 36 C.F.R. Part 800. Under the NHPA, significant cultural resources, referred to as historic properties, include any prehistoric or historic district, site, building, structure, object, or landscape included in, or eligible for inclusion in, the National Register of Historic Places (NRHP). A Programmatic Agreement (PA) among FRA, ACHP, the California State Historic Preservation Officer (SHPO), and the Authority regarding compliance with Section 106 of the NHPA for the California HST System was executed on July 22, 2011.⁵ In accordance with the PA, a Memorandum of Agreement (MOA) for the treatment of adverse effects on historic properties in the Fresno to Bakersfield Section of the California HST System was executed on May 14, 2014 (see Appendix A). The California Department of Parks and Recreation, City of Fresno, City of Corcoran, City of Shafter, City of Bakersfield, and Sociedad Juarez Mutulaista Mexicana as well as the following Federally-recognized Native American tribes: Santa Rosa Tachi Yokuts Tribe, Table Mountain Rancheria, Picayune Rancheria of the Chukchansi Indians, Tule River Indian Tribe, and Kern Valley Indian Council, have accepted FRA and Authority's invitations to

⁵ Authority and FRA. 2012. Programmatic Agreement. Appendix 3.17-A of the California HST Merced to Fresno Section Final Project EIR/EIS. Volume II: Technical Appendices. Sacramento, CA, and Washington, D.C. April 2012.

be consulting parties to the MOA and subsequent treatment plans. The MOA was sent to consulting parties for signature on May 16, 2014.

Pursuant to the Clean Air Act (CAA) Section 176(c) requirements, EPA promulgated 40 C.F.R. 51 Subpart W and 40 C.F.R. Part 93, Subpart B, “Determining Conformity of General Federal Actions to State or Federal Implementation Plans” (58 FR 63214, November 30, 1993, as amended, 75 FR 17253, April 5, 2010). These regulations, commonly referred to as the General Conformity Rule, apply to all Federal actions, including those by FRA, except for those Federal actions that are excluded from review (e.g., stationary source emissions) or related to transportation plans, programs, and projects under Title 23 or the Federal Transit Act, which are subject to the Transportation Conformity Rule.

A conformity determination under the General Conformity Rule is required if the Federal agency determines the following: the action will occur in a nonattainment or maintenance area; that one or more specific exemptions do not apply to the action; the action is not included in the Federal agency’s “presumed to conform” list; the emissions from the proposed action are not within the approved emissions budget for an applicable facility; and the total direct and indirect emissions of a pollutant (or its precursors), are at or above the *de minimis* levels established in the General Conformity regulations. The proposed Project is subject to review under the General Conformity Rule; therefore, FRA prepared a General Conformity Determination consistent with the applicable regulatory requirements. FRA is issuing the final General Conformity Determination concurrently with this ROD.

2.2 Surface Transportation Board

The STB has authority over construction and operation of new rail lines (49 U.S.C. 10901). As the STB explained in its June 13, 2013 decision authorizing construction of the 65-mile section of the California HST System between Merced and Fresno (Docket No. FD_35724_0), 49 U.S.C. 10501(a)(2)(A) gives the STB jurisdiction over transportation by rail carrier in one state, as long as that intrastate transportation is carried out “as part of the interstate rail network.” Because the California HST System would have extensive connectivity with Amtrak, which has long provided interstate passenger service, the STB determined that the California HST System would be constructed as part of the interstate rail network. The STB therefore concluded that it has jurisdiction over the California HST System and must authorize construction of each section.

2.3 U.S. Army Corps of Engineers

USACE is responsible for issuing permits under the CWA Section 404 (33 U.S.C. 1344) (Section 404) and the Rivers and Harbors Act Section 14 (33 U.S.C. 408) (Section 408).⁶

⁶ CWA Section 404 sets forth a program to regulate the discharge of dredged or fill material into waters of the United States, including wetlands. USACE may only issue a Section 404 permit for a

USACE is required to comply with NEPA and issue its own NEPA decision before it can issue a permit under Section 404 or Section 408.

As a first step in Project permitting, the Authority, FRA, USACE, and EPA executed a Memorandum of Understanding (MOU or NEPA/404/408 MOU) in November 2010. The MOU outlines a process to integrate the requirements of NEPA with the requirements of Section 404 and Section 408. The purpose of the MOU is to ensure the analysis underlying the EIS Documents for each California HST System section is sufficient to support USACE's Preliminary LEDPA determination and for USACE to issue a NEPA decision.

Consistent with the MOU, FRA and the Authority initiated the CWA Section 404 permitting process with USACE on August 3, 2011. As part of this process, FRA and the Authority prepared a Wetland Delineation Report (2011) and submitted it to USACE for issuance of a preliminary jurisdictional determination, which USACE issued on February 5, 2013. A jurisdictional determination and issuance of a permit for the discharge of fill material into waters of the United States associated with construction of the Project will be part of the CWA Section 404 permit process administered by USACE.⁷

Pursuant to NEPA, Section 404, and Section 408, USACE and EPA issued letters concurring that the Preferred Alternative contains the preliminary LEDPA on December 19, 2013. The Section 404 process continues with submittal of a permit application to USACE and development of a mitigation plan. The Section 408 process continues with USACE's evaluation of potential Project impacts on flood protection facilities. USACE will issue a NEPA decision after a preliminary review of impacts on facilities under its jurisdiction. Subsequently, the Authority will submit permit applications for facilities under Section 408 jurisdiction to USACE.

2.4 U.S. Fish and Wildlife Service

Concurrently with the NEPA process, FRA initiated the Endangered Species Act (ESA) Section 7 (16 U.S.C. 1536) consultation process, pursuant to 50 C.F.R. Part 402. Section 7 of the Federal ESA requires Federal agencies to consult with USFWS and/or NMFS, depending on the type of species or habitat affected, to ensure that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of threatened or endangered fish, wildlife, or plant species or result in the destruction or adverse modification of designated critical habitat for any such species. Impacts associated with threatened and endangered species, including critical habitat, occupied

project alternative that USACE determines is the Least Environmentally Damaging Practicable Alternative (LEDPA). Section 408 permit decisions will be made for alteration/modification of completed Federal flood risk management facilities and any associated operation and maintenance, and real estate permissions or instruments (as applicable).

⁷ USACE has concurred that the overall Project purpose allows for a reasonable range of practicable alternatives to be analyzed and is acceptable as the basis for the USACE 404(b)(1) alternatives analysis.

habitat, and suitable habitat for special-status species, is addressed through a coordination process that is outlined under Section 7 of the Federal ESA. If a project may have an impact on a threatened or endangered species, under Section 7 a study that describes the impacts, known as a Biological Assessment (BA), is required to be submitted to the appropriate agency with jurisdiction over the resource (USFWS, and/or NMFS). After the appropriate agency has accepted the BA, the agency will render a Biological Opinion (BO). A BO is the agency's opinion as to whether a project is likely to jeopardize the continued existence of an ESA-listed species or result in the destruction or adverse modification of a species' critical habitat.

Because the Project is likely to have an impact on threatened or endangered species, FRA prepared a BA for the Project and consulted with USFWS, as required. FRA's informal and formal Section 7 consultation with USFWS has been ongoing and was instrumental in scoping the biological resource analysis for the EIS Documents, as well as for the BA. FRA developed and submitted a Draft BA to USFWS in June 2012, which evaluated direct, indirect, and cumulative effects of the Project on Federally listed, threatened, endangered, or proposed listed species and their designated habitat.

Following USFWS review and additional consultation and coordination, USFWS issued a BO for the Project on February 28, 2013. In the BO, USFWS concluded that the Project, as proposed, is not likely to jeopardize the continued existence of the listed wildlife and plant species potentially occurring in the Project action area. Consistent with Section 7 requirements, the BO also stipulates several reasonable and prudent conservation measures to avoid or reduce potential impacts.

Following issuance of the BO, the Authority and FRA made modifications to Project alignment alternatives which required reopening the formal Section 7 consultation with USFWS. A supplemental BA was submitted to the USFWS in October 2013. Following USFWS review and additional consultation and coordination, USFWS issued a new BO for the Project on April 1, 2014. The April 2014 BO also includes an incidental take statement authorizing activities associated with construction of the Project from the Fresno station to the Bakersfield station and is included as Appendix B.

3.0 Purpose and Need

As established in the Final Program EIS, the purpose of the California HST System is to provide a reliable high-speed electric-powered train system that links the major metropolitan areas of California, delivering 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 in intercity travel demand in California occur, in a manner sensitive to and protective of California's unique natural resources.⁸

⁸ Authority and FRA. 2005. Final Program EIR/ EIS for the Proposed California HST System. Sacramento, CA, and Washington, DC. August 2005.

The purpose of this Project is to implement the Fresno to Bakersfield Section of the California HST System 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 systems, and the highway network in the south San Joaquin Valley and to connect the northern and southern portions of the system.

The capacity of California's intercity transportation system, including the southern part of the San Joaquin Valley region, 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 current transportation system has not kept pace with the increase in population, economic activity, and tourism within the State, including in the southern part of the San Joaquin Valley region. The interstate highway system, commercial airports, and conventional passenger rail system serving the intercity travel market 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 feasibility of expanding many major highways and key airports is uncertain; some needed expansions might be impractical or are constrained by physical, political, and other factors. The need for improvements to intercity travel in California, including intercity travel between the southern part of the San Joaquin Valley, the San Francisco Bay Area, Sacramento, and Southern California, relates to the following issues:

- Future growth in demand for intercity travel, including the growth in demand within the southern part of the San Joaquin Valley region.
- Capacity constraints that will increase congestion and travel delays, including those in the southern part of the San Joaquin Valley region.
- Unreliability of travel stemming from congestion and delays, weather conditions, accidents, and other factors that affect the quality of life and economic wellbeing of residents, businesses, and tourism in California, including the southern part of the San Joaquin Valley region.
- 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 part of the San Joaquin Valley region.
- Poor and deteriorating air quality and pressure on natural resources and agricultural lands as a result of expanded highways and airports and urban and suburban development pressures, including those within the southern part of the San Joaquin Valley region.

4.0 Alternatives

This section summarizes the alternatives analysis process, the alternatives evaluated in the EIS Documents, and describes the Selected and Environmentally Preferable alternatives.

4.1 Alternatives Analysis Process

FRA and the Authority have undertaken an extensive, public screening process to identify and refine alternatives for study in the EIS Documents. The potential alternatives considered but eliminated from detailed study were presented in the *Preliminary Alternatives Analysis Report* (June 2010) which incorporated the result of the Visalia-Tulare-Hanford Station Feasibility Study (August 2007) as well as three *Supplemental Alternatives Analysis Reports* published in September 2010, May 2011, and December 2011. The alternatives analysis process is further summarized in Chapter 2 of the EIS Documents.

After the December 2011 *Supplemental Alternatives Analysis Report*, a series of meetings and outreach activities led to further refinement of the Bakersfield alternatives. The Authority and FRA, in cooperation with the affected stakeholders, developed a hybrid alternative alignment for the Bakersfield subsection to address substantive comments received during public and agency review of the Draft EIS.

Several potential alternatives considered over the course of Project development either failed to adequately meet the project purpose, need, and objectives; failed to offer a substantial environmental advantage over one or more of the alternatives studied in the EIS Documents; or were deemed infeasible from a cost, technical, or engineering perspective, and therefore were eliminated from further analysis in the EIS Documents.

4.2 Alternatives Considered in the EIS Documents

As a result of a comprehensive alternative analysis process, the EIS Documents included 11 alignment alternatives: the BNSF, the Hanford West Bypass 1, the Hanford West Bypass 1 Modified, the Hanford West Bypass 2, the Hanford West Bypass 2 Modified, the Corcoran Elevated, the Corcoran Bypass, the Allensworth Bypass, the Wasco-Shafter Bypass, the Bakersfield South, and the Bakersfield Hybrid (Figure 3). The BNSF Alternative is a single continuous alignment that extends from the northern end of the Fresno Station tracks to the southern end of the Bakersfield station tracks. The additional 10 alternative alignments diverge from the BNSF Alternative at various locations between Fresno and Bakersfield. The No Action Alternative was also analyzed in the EIS Documents. The alternatives analyzed in the EIS Documents are the alternatives that FRA and the Authority identified as reasonable and feasible and capable of meeting the Project's Purpose and Need.

The Draft and Supplemental Draft EIS also document two station alternatives for Downtown Fresno (the Kern Street Station Alternative and Mariposa Street Station Alternative), two station alternatives for the Kings/Tulare Regional Station in the vicinity of Hanford (the Kings/Tulare Regional Station-West and Kings/Tulare Regional Station-East), three station alternatives for Downtown Bakersfield (BNSF, Bakersfield South, and Bakersfield Hybrid station alternatives), and five HMF alternatives. All of these alternatives except the Kern Street Station Alternative in Fresno are described in detail in Chapter 2 of the Final EIS. The Kern Street Station Alternative is described in detail in Chapter 2 of the Draft and Supplemental Draft EIS. This alternative was not included in

the Fresno to Bakersfield Final EIS because FRA and the Authority selected the Mariposa Street Station location in the ROD for the Merced to Fresno Section of the California HST System and there is no reason to reconsider that decision.

After publication of the Supplemental Draft EIS, several minor modifications were made to project alternatives. For example, the Final EIS reflects minor modifications to the locations of ancillary facilities, such as communication towers, power traction facilities, and access roads. In addition, as a result of continued consultation with local governments, road crossing designs were modified to meet local design standards. The Final EIS also includes minor modifications to the Hanford West Bypass alternative alignments in some locations to avoid the potential impacts that would result in a use of two Section 4(f) properties.

4.2.1 Alignment Alternatives

No Action Alternative

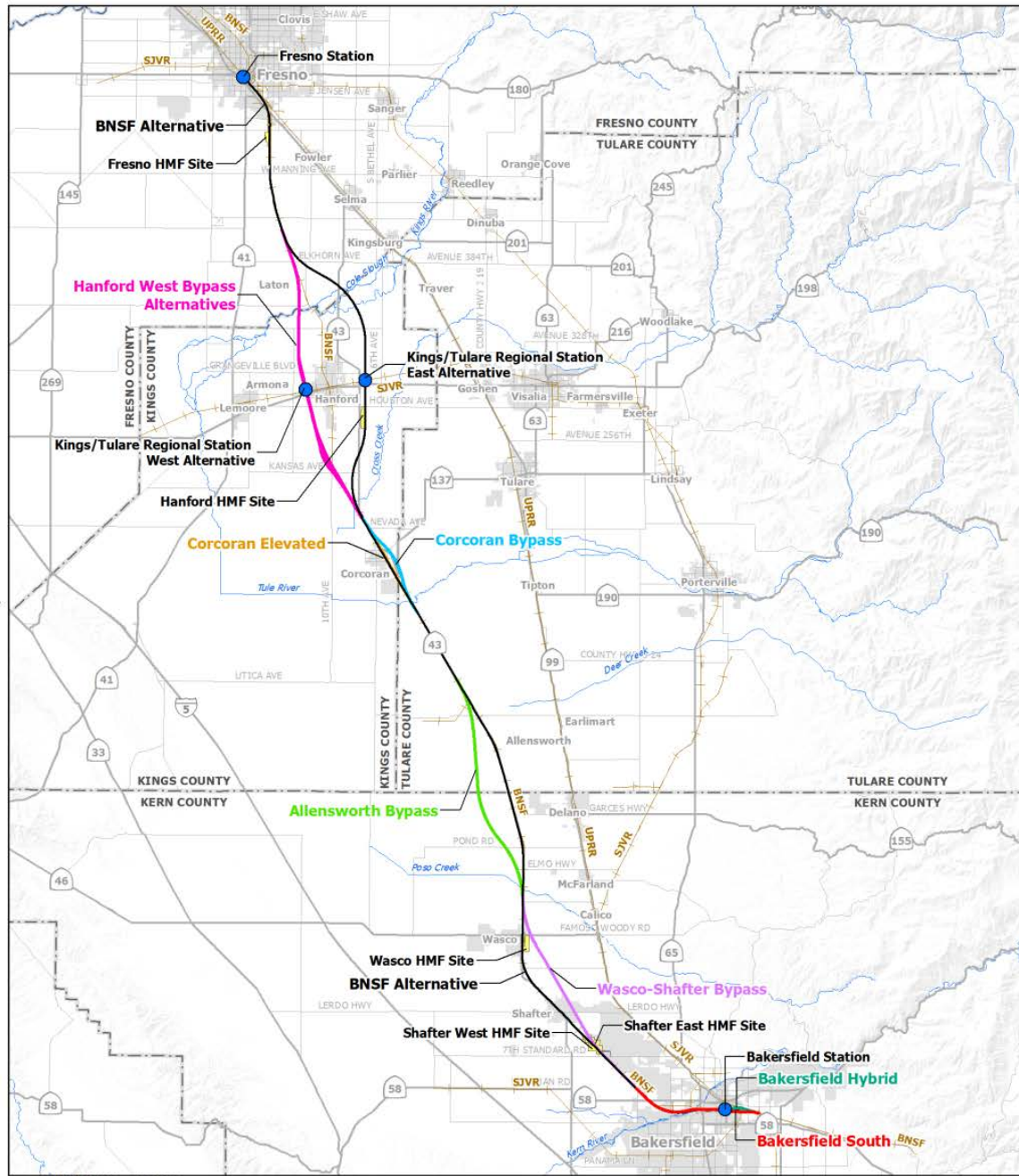
The No Action Alternative would result in no construction and no operation of the California HST System and FRA and the Authority rejected it in Tier 1 decisions. The No Action Alternative would not meet the Project's purpose, need, and objectives.

The No Action Alternative is the basis for comparison of the Project alternatives in the EIS Documents. The No Action Alternative represents the State's transportation system (highway, air, bus, conventional rail) as it is currently and as it would be after implementation of programs or projects that are currently projected in regional transportation plans, have identified funds for implementation, and are expected to be in place by 2035, as well as any major planned land use changes.

BNSF Alternative

The BNSF Alternative begins 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, and continues southeast through Fresno on the western side of the UPRR. South of East Jensen Avenue, the alignment curves to the south, joining the BNSF Railway corridor on its western side at East Malaga Avenue south of Fresno. The alignment crosses to the east side of the BNSF in the vicinity of East Conejo Avenue, and diverges from the BNSF Railway in a southeasterly direction to pass the City of Hanford to the east. The alignment rejoins the BNSF Railway right-of-way on its western side just north of Corcoran and continues south adjacent to the BNSF through Corcoran, Wasco, Shafter, and Bakersfield to the Project terminus in the vicinity of Baker Street. The alignment would cross to the east side of the BNSF south of Wasco. East of Baker Street in Bakersfield, the BNSF Alternative parallels Truxtun Avenue and Edison Highway to Oswell Street.

Record of Decision for California High-Speed Train Fresno to Bakersfield Section



Source: URS/HMM/Arup JV, 2013.

May 9, 2014

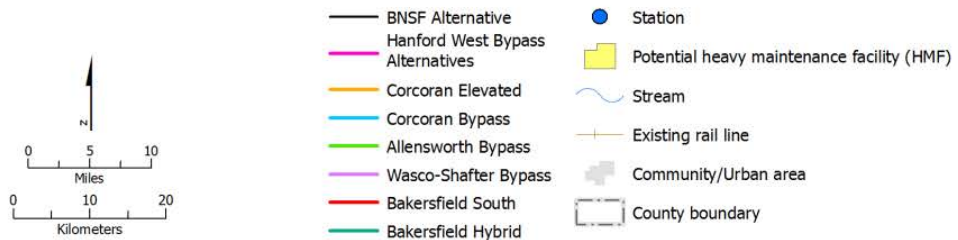


Figure 3

Alternatives Considered in the EIS Document

The BNSF Alternative is approximately 114 miles long. Approximately 33 miles of the guideway would be on elevated structure where the alignment crosses major roadways, railroads, and water courses. The alignment would also be elevated through Wasco, Shafter, and Bakersfield to minimize disruption of the road network in these cities.

To accommodate the geometrics of the BNSF Alternative, approximately 5.5 miles of BNSF tracks in Fresno County and 2.5 miles of BNSF track in Bakersfield would be realigned. Approximately 8 miles of Santa Fe Way in Kern County would also be realigned to accommodate the BNSF Alternative.

Hanford West Bypass 1 Alternative

The Hanford West Bypass 1 Alternative would parallel the BNSF Alternative from East Kamm Avenue to approximately East Elkhorn Avenue in Fresno County. At East Conejo Avenue where the BNSF Alternative crosses to the eastern side of the BNSF Railway tracks to pass the City of Hanford to the east, the Hanford West Bypass 1 Alternative continues south on the western side of the BNSF Railway tracks. The Hanford West Bypass 1 would diverge from the BNSF Railway corridor just south of East Elkhorn Avenue and ascend onto an elevated structure just south of East Harlan Avenue, crossing over the Kings River complex and Murphy Slough, and passing the community of Laton to the west. The Hanford West Bypass 1 Alternative would return to grade just north of Dover Avenue and continue southeasterly between the community of Armona to the west and the City of Hanford to the east on a southeasterly route toward the BNSF Railway corridor. In order to avoid a large dairy located at the intersection of Kent and 11th avenues, the Hanford West Bypass 1 Alternative must travel to its west and deviate from the BNSF Railway corridor in the area of Kansas Avenue. The alignment would pass to the west of a large complex of BNSF Railway serviced grain silos and loading bays before it rejoins the BNSF Railway corridor adjacent to its western side at about Lansing Avenue. The alignment would continue on the western side of the BNSF Railway corridor and ascend onto another elevated structure, traveling over Cross Creek and special aquatic features that exist north of Corcoran. The alignment would return to grade just north of Nevada Avenue and would connect to the BNSF Alternative traveling through Corcoran at-grade, maintaining an alignment on the western side of the BNSF Railway corridor. The total length of the Hanford West Bypass 1 Alternative is approximately 28 miles.

Hanford West Bypass 1 Modified Alternative

The Hanford West Bypass 1 Modified Alternative would be the same as the Hanford West Bypass 1 Alternative from East Kamm Avenue to Flint Avenue in Fresno County. From there, where the Hanford West Bypass 1 Alternative continues on a more southeasterly route, the Hanford West Bypass 1 Modified Alternative would continue south and would roughly parallel the Hanford West Bypass 1 Alternative to the west until it converges with the Hanford West Bypass 1 Alternative just north of Jackson Avenue in Kings County. This portion of the modified alignment travels to the west of properties at

13148 Grangeville Boulevard and 9860 13th Avenue in Kings County that are protected under Section 4(f).

Hanford West Bypass 1 Modified Alternative would be below-grade between Grangeville Boulevard and Houston Avenue. The alignment would travel below-grade in the vicinity of the Kings-Tulare Regional Station – West Alternative in an open cut.

Similar to Hanford West Bypass 1, the Hanford West Bypass 1 Modified Alternative would pass to the west of a large complex of BNSF Railway-serviced grain silos and loading bays before it rejoins the BNSF Railway corridor along its western side at about Lansing Avenue. The alignment would continue on the western side of the BNSF Railway corridor and ascend onto an elevated structure, traveling over Cross Creek and special aquatic features that exist north of Corcoran. This alignment would return to grade just north of Nevada Avenue and would connect to the BNSF Alternative and travel through Corcoran at-grade, maintaining an alignment on the western side of the BNSF Railway corridor. The Hanford West Bypass 1 Modified Alternative is about 28 miles long.

Hanford West Bypass 2 Alternative

The Hanford West Bypass 2 Alternative would be the same as the Hanford West Bypass 1 Alternative from East Kamm Avenue in Fresno County to just north of Jackson Avenue in Kings County. The Hanford West Bypass 2 Alternative would then curve away from the Hanford West Bypass 1 Alternative to travel to the east of the dairy located at the intersection of Kent and 11th avenues toward the BNSF Railway corridor, approximately 0.3 mile east of the Hanford West Bypass 1 route. The Hanford West Bypass 2 Alternative would ascend over Kent Avenue and then cross over the BNSF Railway right-of-way to the northeast of the large complex of grain silos and loading bays located north of Kansas Avenue. The alignment would remain elevated for approximately 1.5 miles and parallel the BNSF Railway to the east, then cross over Kansas Avenue. Similar to the Hanford West Bypass 1 Alternative, the Hanford West Bypass 2 Alternative would travel over Cross Creek and the special aquatic features located north of Corcoran and return to grade north of Nevada Avenue; however, the Hanford West Bypass 2 would be located on the eastern side of the BNSF Railway tracks in order to connect to either of the two Corcoran alternatives that would travel on the eastern side of the BNSF Railway corridor, the Corcoran Elevated Alternative or the Corcoran Bypass Alternative, described below. Like the Hanford West Bypass 1 Alternative, the total length of the Hanford West Bypass 2 Alternative is approximately 28 miles.

Hanford West Bypass 2 Modified Alternative

The Hanford West Bypass 2 Modified Alternative would be the same as the Hanford West Bypass 1 Modified Alternative from East Kamm Avenue in Fresno County to approximately Iona Avenue in Kings County. In a manner similar to the route of the Hanford West Bypass 2 Alternative, the Hanford West Bypass 2 Modified Alternative would travel on an elevated structure over Kent Avenue, the BNSF Railway tracks, and Kansas Avenue, before returning to grade north of Lansing Avenue. This alternative would also travel over Cross Creek and the special aquatic features north of Corcoran,

and return to grade north of Nevada Avenue. Like the Hanford West Bypass 2 Alternative, the Hanford West Bypass 2 Modified Alternative would connect with either the Corcoran Elevated or the Corcoran Bypass alternatives on the eastern side of the BNSF Railway railroad and SR 43. The Hanford West Bypass 2 Modified Alternative includes the same below-grade design between Grangeville Boulevard and Houston Avenue as the Hanford West Bypass 1 Modified Alternative. This alternative is also approximately 28 miles long.

Corcoran Elevated Alternative

The Corcoran Elevated Alternative would be the same as the corresponding section of the BNSF Alternative from approximately Nevada Avenue to Avenue 136, except that it would pass through Corcoran on the eastern side of the BNSF Railway right-of-way on an aerial structure. The aerial structure begins at Niles Avenue and returns to grade south of 4th Avenue. The total length of the Corcoran Elevated Alternative would be approximately 10 miles. Approximately 0.2 mile of BNSF Railway tracks would be realigned at Patterson Avenue for this alternative. The Corcoran Elevated Alternative is about 10 miles long.

Corcoran Bypass Alternative

The Corcoran Bypass Alternative would diverge from the BNSF Alternative at Nevada Avenue and swing east of Corcoran, rejoining the BNSF Railway route at Avenue 136. The total length of the Corcoran Bypass is approximately 10 miles. Similar to the corresponding section of the BNSF Alternative, the majority of the Corcoran Bypass Alternative would be at-grade. However, an elevated structure would carry the HST over SR 43, the BNSF Railway, and the Tule River.

Allensworth Bypass Alternative

The Allensworth Bypass Alternative would pass west of the BNSF Alternative beginning at Avenue 84 in Tulare County and rejoin the BNSF Alternative at Elmo Highway in Kern County, avoiding Allensworth Ecological Reserve and the Allensworth State Historic Park. The total length of the Allensworth Bypass Alternative is approximately 21 miles. The Allensworth Bypass Alternative would be constructed on an elevated structure where the alignment crosses Deer Creek and the Stoil railroad spur.

Wasco-Shafter Bypass Alternative

The Wasco-Shafter Bypass Alternative would diverge from the BNSF Alternative between Taussig Avenue and Zachary Avenue in Kern County, 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 be at-grade except where it travels over Seventh Standard Road and the BNSF Railway to rejoin the BNSF Alternative. Approximately 4 miles of Santa Fe Way would be shifted to the west of the alternative alignment to accommodate the HST right-of-way, from approximately Galpin Street to south of Renfro Road. The total length of the Wasco-Shafter Bypass Alternative is about 21 miles.

Bakersfield South Alternative

From the Rosedale Highway (SR 58) in Bakersfield, the Bakersfield South Alternative would parallel the BNSF Alternative at varying distances to the north. At Chester Avenue, the Bakersfield South Alternative curves south, and parallels California Avenue. As with the BNSF Alternative, the Bakersfield South Alternative would begin at-grade and become elevated starting at Country Breeze Place through Bakersfield to its terminus between Baker and Kings Streets just north of California Avenue. East of Kings Street, the alignment is located within the California Avenue right of way to Edison Highway, which it parallels to Oswell Street. The realignment of BNSF Railway tracks from Jomani Drive to Glenn Street in Bakersfield would be required, as it is for the BNSF Alternative. The Bakersfield South Alternative is approximately 12 miles long.

Bakersfield Hybrid Alternative

From Rosedale Highway (SR 58) in Bakersfield, the Bakersfield Hybrid Alternative would follow the Bakersfield South Alternative as it parallels the BNSF Alternative at varying distances to the north. At approximately A Street, the Bakersfield Hybrid Alternative diverges from the Bakersfield South Alternative, crosses over Chester Avenue and the BNSF right-of-way in a southeasterly direction, and then largely follows the BNSF Alternative to its terminus at Kings Street. East of Kings Street, the alignment crosses to the north side of Truxtun Avenue and runs parallel to the BNSF tracks and Edison Highway to Oswell Street. As with the BNSF and Bakersfield South alternatives, the Bakersfield Hybrid Alternative would begin at-grade and become elevated starting at Country Breeze Place through Bakersfield to Oswell Street. The realignment of BNSF Railway tracks from Jomani Drive to Glenn Street in Bakersfield would be required, as it is for both the BNSF and Bakersfield South alternatives. The Bakersfield Hybrid Alternative is approximately 12 miles long.

4.2.2 Station Alternatives

The Downtown Fresno and Bakersfield stations and the Kings/Tulare Region Station would include station plazas, drop-offs, a multimodal transit center, and parking facilities. The stations would include the platforms and associated building for passenger services and concessions, and back-of-house functions and access structures.

Fresno Mariposa Street Station

The Fresno Mariposa Street Station will be located in Downtown Fresno, less than one half mile east of SR 99. The station would be centered on Mariposa Street and bordered by Fresno Street on the north, Tulare Street on the south, H Street on the east, and G Street on the west. The station building would be approximately 75,000 square feet, with a maximum height of approximately 64 feet. The two-level station would be at-grade with passenger access provided both east and west of the HST guideway and the UPRR tracks, which would run parallel with one another adjacent to the station. The first level would contain the public concourse, passenger service areas, and station and operation offices. The second level would include the mezzanine, a pedestrian

overcrossing above the HST guideway and the UPRR railway tracks, and an additional public concourse area. Entrances would be located at both G and H Streets. The eastern entrance would be at the intersection of H Street and Mariposa Street, with platform access provided via the pedestrian overcrossing. This entrance would provide a “front door” connection with Downtown Fresno on an axis that also includes the County Courthouse and City Hall several blocks to the east. The main western entrance would be located at G Street and Mariposa Street.

The Mariposa Street Station Alternative includes the potential for up to three parking structures occupying a total of 5.5 acres. Two of the three potential parking structures would each sit on two acres, and each would have a capacity of approximately 1,500 cars. The third parking structure would have a smaller footprint (1.5 acres), with five levels and a capacity of approximately 1,100 cars. An additional two-acre surface parking lot would provide approximately 300 parking spaces. Currently, Downtown Fresno has a large amount of excess public parking within a mile of the proposed HST station. Based on discussions with the City of Fresno, the balance of spaces needed to satisfy the estimated year 2035⁹ parking demand (7,400 total spaces) would be accommodated by existing public spaces, without the need for additional parking lots or structures.

Kings/Tulare Regional Station – East Alternative

The Kings/Tulare Regional Station–East Alternative would be located east of SR 43 (Avenue 8) and north of the San Joaquin Valley Railroad on the BNSF Alternative. The station building would be approximately 40,000 square feet with a maximum height of approximately 75 feet. The entire site would be approximately 25 acres, including 8 acres designated for the station, bus bays, short-term parking, and kiss-and-ride areas. An additional approximately 17.25 acres would support a surface parking lot with approximately 2,280 spaces. The balance of parking spaces necessary to meet the 2035 parking demand (2,800 total spaces) would be accommodated in downtown Hanford, Visalia, and/or Tulare, with local transit or shuttle services connecting with the station. Reducing the number of parking spaces provided at the station would allow for more open space areas, discourage growth at the station, encourage revitalization of the downtowns of Hanford, Visalia, and/or Tulare, and contain the development footprint of the station. Location of station parking in downtown areas would be identified in consultation with local communities to avoid traffic congestion and may require additional environmental review.

Kings/Tulare Regional Station – West Alternative

The Kings/Tulare Regional Station–West Alternative would be located east of 13th Avenue and north of the San Joaquin Valley Railroad on the Hanford West Bypass 1 and 2 alternatives. The station would be located either at-grade or below-grade depending on which Hanford West Bypass alignment is chosen.

⁹ During Phase 2 of the California HST System (see Section 1.1).

The at-grade Kings/Tulare Regional Station–West Alternative would be located along either the Hanford West Bypass 1 or 2 alternatives and would include a station building of approximately 100,000 square feet with a maximum height of approximately 36 feet. The entire site would be approximately 48 acres, including 6 acres designated for the station, bus bays, short-term parking, and kiss-and-ride areas. Approximately 5 acres would support a surface parking lot with approximately 700 spaces. An additional 3.5 acres would support two parking structures with a combined parking capacity of 2,100 spaces.

The below-grade Kings/Tulare Regional Station–West Alternative would be located along either the Hanford West Bypass 1 or 2 Modified alternatives and would include a station building of approximately the same size and height as the above-grade option. The below-grade station site would include the same components as the at-grade station on the same number of acres; however, the station platform would be located below-grade instead of at ground level. Approximately 4 acres would support a surface parking lot with approximately 600 spaces and an additional 4 acres would support two parking structures with a combined parking capacity of 2,200 spaces.

Bakersfield Station – North Alternative

The Bakersfield Station–North Alternative would be located at the corner of Truxtun and Union Avenue/SR 204 on the BNSF Alternative. This station option corresponds to the BNSF alignment alternative through the City of Bakersfield. Access to the site would be from Truxtun Avenue, Union Avenue, and S Street. Two new boulevards would be built from Union Avenue and S Street to access the station and the supporting facilities. The main entrance would be located on the northern end of the site. The three-level station building would be 52,000 square feet, with a maximum height of approximately 95 feet. The first level would house station operation offices and would also accommodate other trains running along the BNSF Railway line. The second level would include the mezzanine; the platforms and guideway would pass through the third level.

The entire site would consist of 19 acres, with 11.5 acres designated for the station, bus transit center, short-term parking, and kiss-and-ride areas. An additional 7.5 acres would house two parking structures, one with a planned capacity of approximately 1,500 cars, and the other with a capacity of approximately 3,000 cars. In addition, another 175 spaces would be provided in surface lots. The balance of the supply necessary to accommodate the full 2035 parking demand (8,100 total spaces) would be provided through use of underutilized facilities around the station and in Downtown Bakersfield. Identification of these additional spaces would be coordinated with the City of Bakersfield as a part of a comprehensive parking strategy. Additional environmental review may be necessary as parking needs are identified for full system operations. Under this alternative, the station building would be located at the western end of the parcel footprint. The bus transit center and the smaller of the two parking structures (2.5 acres) would be north of the HST tracks. The BNSF Railway track runs through the station site. The HST tracks would be above the BNSF Railway tracks.

Bakersfield Station – South Alternative

The Bakersfield Station–South Alternative would be in the same area as the North Station Alternative, but would be situated along Union and California avenues on the Bakersfield South Alternative, just south of the BNSF Railway right-of-way. This station option corresponds to the BNSF-South alignment alternative through the City of Bakersfield. The two-level station building would be approximately 51,000 square feet, with a maximum height of approximately 95 feet. The first floor would house the concourse, and the platforms and guideway would be on the second floor.

The entire site would be 20 acres, with 15 acres designated for the station, bus transit center, short-term parking, and kiss-and-ride areas. Five of the 20 acres would support one six-level parking structure with a capacity of approximately 4,500 cars. In addition, another 500 spaces would be provided in surface lots. As with the Bakersfield Station–North Alternative, the balance of the supply necessary to accommodate the full 2035 parking demand (8,100 total spaces) would be identified as a part of a comprehensive parking strategy in coordination with the City of Bakersfield, and may require additional environmental review. Access to the station site would be from two new boulevards: one branching off from California Avenue, and the other from Union Avenue.

Bakersfield Station – Hybrid Alternative

The Bakersfield Station–Hybrid Alternative would be in the same area as the North and South Station alternatives, and would be located at the corner of Truxtun and Union Avenue/SR 204 on the Bakersfield Hybrid Alternative. This station option corresponds to the BNSF Hybrid alignment alternative through the City of Bakersfield. The station design includes an approximately 57,000-square-foot main station building and an approximately 5,500-square-foot entry concourse located north of the BNSF Railway right-of-way. The station building would have two levels with a maximum height of approximately 95 feet. The first floor would house the concourse, and the platforms and guideway would be on the second floor. Additionally, a pedestrian overcrossing would connect the main station building to the north entry concourse across the BNSF right-of-way.

The entire site would be approximately 24 acres, with 15 acres designated for the station, bus transit center, short-term parking, and kiss-and-ride areas. Approximately 4.5 of the 24 acres would support 3 parking structures with a total capacity of approximately 4,500 cars. Each parking structure would be 7 levels; one with a planned capacity of 1,750 cars, another with a capacity of 1,315 cars, and the third with a planned capacity of 1,435 cars. An additional 460 parking spaces would be provided in surface lots covering a total of approximately 4.5 acres of the station site. As with the Bakersfield Station–North and Bakersfield Station–South alternatives, the balance of the supply needed to accommodate the full 2035 parking demand (8,100 total spaces) would be identified as a part of a comprehensive parking strategy developed in coordination with the City of Bakersfield. Access to the station site would be from Truxtun Avenue and Union Avenue as well as Hayden Court. Under this alternative, the BNSF Railway track would run

through the station site, and the main station building and majority of the station facilities would be sited south of the BNSF Railway right-of-way.

4.2.3 Heavy Maintenance Facility

One HMF site will be required for operation of the entire HST System. The HMF, likely to be located within the Central Valley, would serve two functions: (1) to support train arrival, assembly, testing, and commissioning to operations; and (2) to become the State's system-wide heavy maintenance workshop. It is anticipated that permanent emergency standby generators would be located at the HMF. The EIS Documents evaluated five different locations for the HMF site (as shown in Figure 3):

- Fresno Works-Fresno, accessible by all HST alternatives.
- Kings County-Hanford, accessible along the BNSF Alternative.
- Kern Council of Governments-Wasco, accessible along the BNSF and Wasco-Shafter Bypass alternatives.
- Kern Council of Governments-Shafter East, accessible along the Wasco-Shafter Bypass.
- Kern Council of Governments-Shafter West, accessible along the BNSF Alternative.

The EIS Documents contain a thorough analysis of the potential impacts of the HMF alternatives in the Fresno to Bakersfield Section. As discussed in the Final EIS, the most suitable location is in one of the section of the California HST System in the Central San Joaquin Valley. However, only one HMF site will be required for full California HST System operations. It is therefore premature to select an HMF site at this time. Therefore, at this time FRA is not selecting any of the HMF alternatives identified and analyzed in the EIS Documents in this ROD.

4.3 Method of Identifying a Complete Alignment

The alternative alignments considered for the Fresno to Bakersfield Section include eight alternatives in the more rural area between Fresno and Bakersfield and three alternatives in Bakersfield. Any of 108 distinct combinations of these alternatives could comprise the complete alignment from Fresno to Bakersfield.

Except in the Hanford and Corcoran areas, the selection of an alignment in any one area where two or more alternatives are under consideration (e.g., Allensworth, Wasco-Shafter, and Bakersfield) is independent of the selection of an alignment in any of the other areas along the Fresno to Bakersfield corridor. For example, the selection of the BNSF Alternative or the Allensworth Bypass Alternative in the Allensworth area does not influence the selection of the BNSF Alternative or the Wasco-Shafter Bypass Alternative in the Wasco-Shafter area. The one exception to this is the connection of the Hanford West Bypass alternatives to the Corcoran alternatives. In that case, the Hanford West Bypass 2 alternatives connect to the Corcoran Bypass and the Corcoran Elevated alternatives, and the Hanford West Bypass 1 alternatives connect to the BNSF

Alternative through Corcoran. It was necessary to have two slightly different Hanford West Bypass alignments to connect to all of the Corcoran alternatives because of the geometric constraints of an HST alignment. Therefore, evaluation of alternative alignments in the Hanford and Corcoran areas had to be done concurrently. Similarly, the Kings/Tulare Regional Station Alternatives and the Bakersfield Station Alternatives are dependent on the associated alignment alternative and the evaluation of alignment and station had to be done concurrently. Environmental effects of a station among the alternative station sites were similar.

Because the selection of an alignment alternative in the Hanford-Corcoran, Allensworth, Wasco-Shafter, and Bakersfield areas were independent of each other, alternatives within each of these areas were evaluated and selected independently. In that way, the FRA and Authority identified the Preferred Alternative from north to south by geographic area instead of comparing 108 separate alternatives that each covered the entire Fresno to Bakersfield Section.

4.4 Selected Alternative

The selected alternative consists of portions of the BNSF Alternative with the Kings/Tulare – East Station in combination with the Corcoran Bypass, Allensworth Bypass, Bakersfield Hybrid, and the Bakersfield Hybrid Station alternatives. Chapter 7 of the Final EIS identified this alternative as the preferred north-south alignment for the Fresno to Bakersfield Section, as shown in Figure 1. In identifying a preferred north-south alignment alternative, FRA was guided by the project purpose and need, the analysis of potential impacts, consultation with resource agencies, and public input. FRA also considered the Authority’s project objectives, which are described further in the Final EIS Chapter 1. These project objectives are required pursuant to CEQA and help guide the Authority’s decision making process. Since FRA and the Authority are joint lead agencies on this EIR/EIS, the project objectives were considered throughout the development of the EIR/EIS.

FRA’s decision reflects the balancing of different considerations including environmental, technical, economic, operational, as well as community and other stakeholder input. FRA and the Authority carefully considered the potential adverse and beneficial environmental and community impacts that could result from the selection of the various alternatives. This decision also reflects the significant outreach and consultation with local stakeholders and communities conducted by the agencies. Consistent with the NEPA/404/408 MOU, FRA also considered permitting criteria in identifying the selected alternative. These permitting considerations are consistent with the criteria used in the Section 404(b)(1) implementing regulations (40 C.F.R. 230–233), including minimizing impacts on waters of the United States and other sensitive environmental resources. In addition, FRA’s decision is consistent with its obligation under Section 4(f) to protect land from publicly owned parks, recreational areas, wildlife and waterfowl refuges, or historic sites on public or private land.

The BNSF Alternative through Hanford (Hanford East Alternative) with the Kings/Tulare Regional Station – East and the Corcoran Bypass are selected because they are more compatible with the long-range development planning for the City of Hanford and the region as a whole than any other combination of alternative alignments, which would result in more options for regional development, and because they are closer to Tulare and Visalia and are likely to capture a larger regional population of travelers. In addition, the BNSF and Corcoran Bypass alternatives would result in slightly fewer potential impacts on the natural environment, and the community impacts are similar in both intensity and severity in Hanford and Corcoran when compared to the other alignment alternatives. FRA has also determined that the BNSF Alternative through Hanford (Hanford East Alternative) would result in the least overall harm to properties protected by Section 4(f).

The Allensworth Bypass is selected because it would result in fewer impacts to both the natural environment (e.g., wetlands and special-status species habitat) and communities than the BNSF Alternative does in the Allensworth area. It also avoids the use of two properties protected under Section 4(f).

Because of the similarities of the impacts to natural resources between the BNSF Alternative and the Wasco-Shafter Bypass Alternative in the Wasco/Shafter area and the possibility to address community impacts through mitigation, the FRA selected the BNSF Alternative through Wasco and Shafter. FRA and the Authority also considered the strong regional interests, consistency with the long-term development plans in Shafter, and the cost uncertainties associated with constructing the Project in an existing and rapidly expanding oil field.

The Bakersfield Hybrid Alternative with the Bakersfield Station-Hybrid station alternative is selected because they would impact the fewest acres of waters of the U.S. when compared with the BNSF Alternative (Bakersfield North) and because it would result in fewer community impacts including fewer overall displacements and fewer impacts to religious facilities when compared with both the BNSF Alternative (Bakersfield North) and Bakersfield South Alternative. The FRA and Authority developed the Bakersfield Hybrid Alternative in response to community concerns received after publication of the Draft EIS and after proactive engagement with the communities to solicit input and to combine the best of the BNSF Alternative and the Bakersfield South Alternative.

Consistent with the purpose and need to construct, operate, and maintain an electric-powered high-speed train system, the selected alternative's performance is comparable to if not better than other alternatives. To meet the legislated travel time requirement for express trains between San Francisco and Los Angeles, system modeling indicates that travel time between Fresno and Bakersfield should be no more than 37 minutes. The selected alternative would take 34 minutes and 5 seconds to travel between Fresno and Bakersfield. This travel time is 2 minutes and 55 seconds faster than the maximum modeled travel time of alternatives considered between Fresno Station and Bakersfield Station. In comparison, this would be 1 minute and 1 second more than the travel time

for the BNSF Alternative. The selected alternative would add an additional minute to the Bakersfield to Palmdale Section because of the geometric curves in the Bakersfield Hybrid portion of the alignment. The HST would operate at high speeds (up to 220 miles per hour) throughout the Fresno to Bakersfield Section except in Bakersfield. The selected alternative (Bakersfield Hybrid) would operate at a speed of 120 miles per hour through Bakersfield. While the selected alternative would require reduced speeds through Bakersfield, it provides the advantage of avoiding the Bakersfield High School campus, and reduces the number of religious facilities and homes impacted in central and east Bakersfield by the BNSF and Bakersfield South alternatives. It also avoids a 4(f) resource along the Bakersfield South alternative.

As a result of the analyses in the EIS Documents as well as NEPA/404/408 MOU documentation, USACE and EPA concurred (on December 19, 2013,¹⁰) that the selected alternative contains the preliminary LEDPA, consistent with USACE's permit program (33 C.F.R. Parts 320–331) and EPA's Section 404(b)(1) Guidelines (40 C.F.R. Part 230).

Overall, the selected alternative best meets the Project's purpose and need and, after the implementation of Project design features and mitigation, appropriately balances the potential impacts on the environment, farmland, communities and community facilities. A summary of the environmental effects associated with the selected alternative is provided in Section 5.0, below. The selected alternative also best meets the regulatory and permitting criteria under Sections 404 and 408.

4.5 Environmentally Preferable Alternative

CEQ regulations implementing NEPA require that an agency identify the alternative or alternatives considered to be environmentally preferable, which is defined as “the alternative that will promote the national environmental policy as expressed in the NEPA, Section 101” (40 C.F.R. 1505.2). This means the alternative that causes the least damage to the physical environment; it also means the alternative that best protects, preserves, and enhances historic, cultural, and natural resources.

Considering these factors, FRA identifies the BNSF Alternative in combination with the Corcoran Bypass, Allensworth Bypass, and Bakersfield Hybrid alternatives, with the corresponding Kings/Tulare Regional Station – East and Bakersfield Hybrid Station (the selected alternative) as environmentally preferable. FRA considered all action alternatives, as well as the No Action Alternative, and weighed and balanced the physical environmental effects associated with the action alternatives as well as those associated with the No Action Alternative. Based on the analysis in the EIS, FRA determined that the adverse environmental effects associated with the selected alternative are less substantial than the consequences associated with the No Action Alternative in terms of air quality, energy, and traffic.

The selected alternative has relatively low community, farmland, and biological effects, including lower impacts on jurisdictional wetlands when compared to the other potential

¹⁰USACE, 2013 and EPA, 2013.

action alternatives. The selected alternative would result in fewer effects on wetlands and riparian habitat than other action alternatives. It would also affect fewer key community facilities and religious facilities, and would displace fewer residential units and commercial and industrial businesses than other action alternatives. The selected alternative would have similar effects to aspects of the physical environment such as noise and air quality, as other action alternatives and the effects of alternative station sites would be similar. Overall, in balancing the effects on natural and community resources, the selected alternative will result in the fewest impacts to the human and natural environment and is environmentally preferable. In addition, consistent with the CWA Section 404 and NEPA integration process, of the 108 alignment alternatives, the selected alternative contains the preliminary LEDPA as indicated by the USACE in their letter dated December 19, 2013.

5.0 Summary of Potential Effects

Construction and operation of the selected alternative has the potential to affect a variety of natural and social resources. Some impacts will be beneficial, others will be adverse. Those impacts that are adverse can be further categorized as impacts that are significant and those that are not significant. Under NEPA, determining the significance of an impact requires consideration of both context and intensity.¹¹

To fully understand the potential range of impacts of the selected alternative, the Final EIS analyzed all potential impacts resulting from construction and operation of the HST. A full discussion of the potential impacts of the selected alternative, organized by resource area, can be found in Chapter 3 of the Final EIS. Some potential adverse impacts would be significant were it not for implementation of mitigation measures that effectively avoid or minimize the impact. Other impacts would be significant even after mitigation measures are implemented. Finally, some impacts of the selected alternative would be beneficial. The selected alternative is not anticipated to have significant impacts in the following resource areas: electromagnetic fields and electromagnetic interference; public utilities and energy; hydrology and water resources; geology, soils, and seismicity; hazardous materials and waste; and station planning, land use, and development. In determining that the selected alternative will not result in significant impacts on these resources, implementation of project design features and best management practices (BMP) are presumed and will be required as part of Project implementation as described further in Section 6.0. FRA considered the above resource area effects in reaching its decision.

The following sections summarize the significant adverse impacts, the adverse impacts that would be significant if not for the implementation of mitigation, and the beneficial impacts that may occur with construction and operation of the selected alternative.

¹¹ The context of an impact is the setting of the affected environment in which the impact occurs. Intensity refers to the severity of the impact, which includes consideration of the type, quality, and sensitivity of the resource involved, as well as the location, extent, and duration of the effect (40 C.F.R. 1508.27).

5.1 Transportation

The selected alternative will benefit the regional transportation system by diverting intercity trips from the regional roadway system and commercial air trips to high-speed rail. Diverting trips to high-speed rail will reduce the overall number of vehicle trips on the regional roadway system, improve future levels of service, and reduce overall vehicle miles traveled.

However, the selected alternative will cause adverse traffic impacts in congested urban areas due to increased traffic around HST stations and road closures. HST stations in Fresno, Bakersfield, and the Hanford area and related road closures in Fresno will increase traffic at local roadways and intersections nearby, reducing acceptable levels of service in those locations. Traffic mitigation measures to improve operations at key intersection and roadway segments will include widening lanes, modifying signals, adding lanes, and restriping. Although all of these impacts will be reduced with the implementation of such measures, the selected alternative may result in extending the duration of peak periods of congestion in already-congested urban areas, and these impacts are considered significant.

5.2 Air Quality and Climate Change

Operation of the HST will benefit statewide and regional air quality. The HST will result in a permanent net benefit to air quality because it will lower emissions of mobile source air toxics, greenhouse gases, volatile organic compounds (VOCs), nitrogen oxides (NO_x), sulfur dioxide, carbon monoxide, and particulate matter smaller than or equal to 10 microns and 25 microns in diameter (PM₁₀ and PM_{2.5}) by diverting trips from modes with higher emissions (e.g. commercial air flights and automobile trips) to high-speed rail, which has lower emissions.

Construction of the HST will result in temporary air quality impacts. Construction emissions of VOCs and NO_x are expected to cause or contribute substantially to violations of air quality standards in the San Joaquin Valley Air Basin (SJVAB). The Final EIS has identified a mitigation measure to offset these construction related air impacts. Specifically, the Authority will mitigate construction emissions in the SJVAB by providing funds for the San Joaquin Valley Air Pollution Control District (SJVAPCD) Emission Reduction Incentive Program¹² to fund grants for projects that achieve emission reductions, thus offsetting impacts on air quality related to the selected alternative. Purchase of offset emissions through a Voluntary Emission Reduction Agreement (VERA) with the SJVAPCD for these pollutants will reduce construction emission impacts in the SJVAB to less than significant.

FRA also issued a Draft General Conformity Determination with the Final EIS for public review and comment. The Final General Conformity Determination is included with this ROD as Attachment E.

¹² SJVAPCD. 2011. Emission Reduction Incentive Program. Available at www.valleyair.org/Grant_Programs/GrantPrograms.htm.

5.3 Noise

The selected alternative, without mitigation, will cause severe noise impacts for up to 3,346 sensitive receivers, such as residences. Sound barriers will eliminate 70% of these significant noise effects. However, 1,096 receivers are located outside of areas where barriers can be effective, or a sound barrier will not fully eliminate the severe noise impact.

With full implementation of the *Proposed California HST Project Noise and Vibration Mitigation Guidelines*,¹³ most significant noise impacts will be eliminated. However, where sound barriers are used, even with the implementation of such mitigation, significant noise effects will remain for some receivers because they are located outside of the area where the barrier will be fully effective or the sound barrier will not fully mitigate the effect (i.e., noise is reduced by five decibels but would still be significant). Furthermore, significant noise effects will remain for receivers mitigated only with indoor sound insulation or with implementation of noise easements.

5.4 Public Utilities and Energy

The statewide and regional impact on energy use from operation of the HST will be beneficial. While the HST System will require electricity to operate, it will result in a permanent net reduction in energy use because it will divert trips from transportation modes with higher energy use (e.g. commercial air flights and automobiles) to high-speed rail, which has lower energy use. The selected alternative will not cause any significant adverse impacts on public utilities or energy.

5.5 Biological Resources and Wetlands

The selected alternative will not cause significant impacts on biological resources or wetlands after mitigation measures are implemented. The selected alternative will have no impacts on critical habitat. Other resource impacts that would be significant prior to mitigation, and the mitigation measures identified to reduce impacts to less than significant, are described below.

Riparian habitat will be temporarily and permanently affected during construction of the selected alternative. Restoration of riparian habitat shortly after construction disturbance will mitigate construction period impacts to less than significant. The Authority will compensate for permanent impacts on riparian habitat, determined in consultation with the appropriate agencies (e.g., California Department of Fish and Wildlife [CDFW]), by restoring nearby riparian areas through permittee-responsible compensatory mitigation. With this mitigation permanent impacts on riparian habitat will be less than significant.

¹³ Authority and FRA. 2012. Proposed California HST Project Noise and Vibration Mitigation Guidelines. Appendix 3.4-A of the California HST Merced to Fresno Section Final Project EIR/EIS. Volume II: Technical Appendices. Sacramento, CA, and Washington, D.C. April 2012.

The selected alternative may result in an incremental regional effect and measurable adverse loss of **special-status plant species** populations. Measures to mitigate impacts on special-status plant species include developing and implementing a plan to address monitoring, salvage, relocation, and propagation of special-status plant species during and after construction; the purchase of credits from an existing mitigation bank; and/or conducting a special-status plant re-establishment program within the same watershed or in proximity to the impact area. Mitigation measures and compliance with the Section 7 BO and the CDFW Incidental Take Permit will mitigate temporary and permanent impacts on special-status plant species to less than significant.

The selected alternative may result in an incremental regional effect and measurable adverse loss of **jurisdictional waters and wetlands**. Measures to mitigate impacts on jurisdictional waters and wetlands include monitoring of construction impacts, restoration of disturbed areas after construction, compensation for permanent impacts, and implementation of a Habitat Mitigation and Monitoring Plan. Mitigation measures and compliance with the CWA, regulatory agency permit conditions, and the CDFW Streambed Alteration Agreement (pursuant to Section 1600 of the California Fish and Game Code) will mitigate impacts on jurisdictional waters and wetlands to less than significant both temporarily during the construction period and permanently.

The selected alternative will result in an incremental regional effect and measurable adverse loss of **special-status wildlife species** populations. Measures to mitigate impacts on special-status wildlife populations include implementation of a Habitat Mitigation and Monitoring Plan, submittal of post-construction compliance reports to regulatory agencies, and compensation through habitat replacement or monetary contributions, among others. Mitigation measures and compliance with the Section 7 BO and the CDFW Incidental Take Permit will mitigate impacts on special-status wildlife species to less than significant temporarily during the construction period and permanently.

The selected alternative will result in an incremental regional effect and measurable adverse effect on **wildlife movement corridors**. Project design elements would reduce effects of the Project on wildlife movement corridors, and the implementation of wildlife crossings of the selected alignment would further lessen Project effects. Because potential compensatory mitigation sites are located in close proximity to the Project, known wildlife corridors and linkages are located in areas identified in USFWS Recovery Plans (Upland Species of the San Joaquin Valley, and Vernal Pool), and are located in designated critical habitat for California tiger salamander and vernal pool branchiopod species; the preservation of these sites in perpetuity (or other sites located in close proximity to the Project and within movement corridors), along with appropriate long-term management, will reduce the permanent effect on regional wildlife movement to less than significant.

5.6 Hydrology and Water Resources

Currently, groundwater supports many existing water uses along the selected alternative. However, the selected alternative will convert water-using properties (e.g., agricultural production properties) to a transportation use and as a result will reduce the overall regional groundwater drawdown in the Central Valley. This overall reduction will result in a beneficial effect to groundwater supplies in the region. The selected alternative will not cause any significant adverse impacts on hydrology or water resources.

5.7 Safety and Security

Operating on a fully grade-separated, dedicated track alignment, using contemporary safety, signaling, and automatic train control systems, the HST System, including the selected alternative, would provide a safe and reliable means of intercity travel. Design of the system also would avoid conflicts with other vehicles, existing rail systems, pedestrians, and bicyclists and would allow the trains to operate year-round under different weather conditions. The selected alternative will also improve safety where existing at-grade railroad crossings are replaced with grade-separated crossings, resulting in a beneficial effect on safety at railroad crossings in local communities.

The demand for local emergency services may increase in the Downtown Fresno Station, Kings/Tulare Regional Station, and Downtown Bakersfield Station areas due to the number of additional people present at the stations. The Authority will monitor service levels in the vicinity of the stations to establish baseline service demands and will fund the Authority's fair share of services above the average baseline service demand level, based on projected passenger use. The resulting impact on emergency providers will be less than significant.

5.8 Socioeconomics, Communities, and Environmental Justice

Project construction will temporarily benefit regional economic conditions through increased sales tax revenues and job creation due to Project spending. Jobs will be created through construction of the selected alternative and through other sectors that provide materials, equipment, and services. Construction will also benefit employment for low-income and minority communities (also called communities of concern) with the implementation of mitigation measures such as special recruitment, training, and other employment programs.

Permanent benefits include improved mobility within the region, improved traffic conditions on freeways, improvements in regional air quality, new employment opportunities, and increased tax revenues in the region. Benefits of the selected alternative will likely accrue to a greater degree in minority and low-income communities because they comprise a large percentage of the population in the Project area. The Final EIS also contained an analysis of the potential impacts to low-income

and minority populations. Further detail on the results of that analysis is included in Section 9.7 - Environmental Justice Findings.

5.9 Station Planning, Land Use, and Development

The selected alternative will result in beneficial effects on regional land use and development. Increased density around the HST stations will minimize sprawl, promote transit-oriented development, and revitalize the downtown areas of Fresno and Bakersfield. Concentrated and infill development in these urban areas may also assist in preserving agricultural lands and natural resources in the region. The selected alternative will fulfill local and regional plans that promote infill and redevelopment opportunities and encourage reduced automobile dependency and the use of alternative transportation modes. The selected alternative will not cause significant adverse impacts on land use or development.

5.10 Agricultural Lands

The selected alternative will convert 3,474 acres of important farmland to a transportation use, causing significant loss of farmland in the Project area. Mitigation measures will preserve land for agriculture and consolidate remnant parcels so that they remain in agricultural production. To support farmland preservation, the Authority will enter into a contract with the California Department of Conservation (DOC) to provide agricultural land mitigation services. On behalf of the Authority, DOC's California Farmland Conservancy Program will establish permanent agricultural conservation easements on land of similar to that affected by the selected alternative. The new conservation easements will prevent the future loss of currently unprotected farmland to development. However, these mitigation measures will not create new farmland nor will they replace the converted farmland in an area of high production agricultural soils that are threatened by development encroachment. Therefore, the farmland loss is considered a significant impact.

5.11 Parks, Recreation, and Open Space

The selected alternative will cause noise and visual effects to Kern River Parkway, Mill Creek Linear Park, McMurtrey Aquatic Center, and the Amtrak Station playground in Bakersfield. The intensity of these effects would remain substantial even with mitigation. However, these park resources are located in the local urbanized area of Downtown Bakersfield, along the existing BNSF/Amtrak rail corridors. Therefore, the parks are already subject to noise and visual impacts consistent with the urbanized area and the existing freight and passenger rail service. Considering both the intensity and context of the impacts on these recreational resources, the overall impact would not be significant. As described in the Final EIS, as part of Project implementation the Authority will implement a number of mitigation measures and Project Design Features to reduce potential impacts to Park resources. For example, during final design of the elevated guideways, the Authority will continue its consultation with local jurisdictions to fit the elevated guideways appropriately with the visual context of the adjacent areas.

The selected alternative may result in an increased use of the Amtrak Station playground. If this increased use results in deterioration of the playground, the Authority will mitigate such impacts by providing the appropriate share of funding for additional maintenance, labor, and repairs for the playground.

5.12 Aesthetics and Visual Resources

The HST stations will improve visual quality in the Fresno and Bakersfield downtown urban centers. The architecture of the HST stations and landscape improvements proximate to the stations will enhance visual quality. Indirect impacts of the HST stations could reach beyond the immediate station area and increase the overall visual quality of the larger downtown areas, which are areas of high viewer sensitivity in which the visual changes will be long in duration. These impacts will create beneficial visual effects in downtown Fresno and Bakersfield.

The selected alternative will create significant adverse visual effects in Wasco, Shafter, Bakersfield, and certain rural areas where elevated HST structures and road overcrossings of the HST will remove orchards and fields, block views, and degrade the visual quality in the area. Mitigation measures such as planting trees and other vegetation to screen the structures will reduce the visual effect, but the change will remain significant.

5.13 Cultural and Paleontological Resources

The selected alternative is not anticipated to have significant adverse impacts on archeological resources; however, it may affect archaeological sites that are presently unknown or undiscovered. Mitigation measures, such as halting construction if a previously undiscovered archaeological site is revealed, conducting archaeological monitoring near identified or sensitive sites, and planning intentional site burial and preservation in place if avoidance is not feasible, will reduce impacts to less than significant.

The selected alternative will physically affect built environment cultural resources, resulting in significant impacts on historic properties. Even with treatment measures such as relocating historic structures, documenting historic resources, preparing structural reports, creating interpretive exhibits, and planning to prepare for inadvertent damage, the impacts will remain significant.

Destruction of unidentified fossil deposits during construction could result in significant impacts on paleontological resources without mitigation. Mitigation measures such as monitoring, implementing a paleontological plan, and halting construction when paleontological resources are found will reduce impacts to less than significant.

6.0 Commitments

Consistent with 40 C.F.R. 1505.2(c), all practicable means to avoid or minimize environmental harm caused by the selected alternative have been identified and included

as mitigation measures in the Mitigation Monitoring and Enforcement Plan (MMEP), included as Appendix C.¹⁴ The MMEP describes mitigation measures that will avoid, minimize, or compensate for potential adverse environmental impacts that result from constructing and operating the Fresno to Bakersfield Section of the California HST System. These measures were developed by FRA and the Authority in consultation with appropriate agencies, as well as with input received from the public. The Authority is required to comply with all mitigation measures adopted with the ROD.

The selected alternative also incorporates many design features and BMPs that are identified in the Final EIS and included in detail in the technical reports. The Authority and FRA identified these Project design features to avoid and minimize potential Project impacts. The Authority will apply these design features and BMPs, to avoid significant impacts in several resource areas. In addition, the regulatory requirements for many activities provide additional assurance that significant impacts on the environment will not occur. The applicable regulatory requirements and Project design features that are part of the selected alternative are described in more detail in the MMEP. The Project design features are a condition of Project approval and must be implemented by the Authority during design, construction, and operation of the selected alternative.

The MMEP, as incorporated into this ROD, is a formal commitment by the Authority to carry out all of the measures identified therein as a condition of Project approval. Therefore, in designing, constructing, and operating the selected alternative, the Authority is required to adhere to and provide appropriate funding for all mitigation measures in the MMEP. The Authority will implement an Environmental Management System consisting of strategic planning, policies and procedures, organizational structure, staffing and responsibilities, milestones, schedule, and resources devoted to achieving the Authority's environmental commitments. The Environmental Management System will also track the implementation of environmental requirements and compliance reports. This system will rely on data from the design/build contractor, regional consultants, permitting activities, monitoring, inspections, and other compliance activities. This database will be managed by the Authority, and agency partners, including FRA, will receive regular updates from meetings and reports that will demonstrate compliance activities and progress relevant to their regulatory requirements.

7.0 Summary of Comments on the Final EIS

During the 30-day waiting period following publication of the Final EIS, FRA received 30 comment letters. In addition to the comment letters received by the FRA during the waiting period, the Authority received a combination of 66 comment letters and emails as well as testimony from speakers at the Authority Board hearing held on May 6, 2014, focusing primarily on CEQA-related issues. Staff responses were prepared on May 6, 2014 for the comments received by the Authority. These staff responses are available for

¹⁴ FRA will monitor the implementation of environmental commitments in the MMEP consistent with CEQ regulations and guidance.

the public on the Authority's website: <http://www.hsr.ca.gov/>. All substantive comments received by the FRA and the Authority during the waiting period referenced issues that were previously addressed in detail in Volumes IV through VI of the Final EIS or by the Authority staff responses.

The range and types of comments received by the Authority and/or FRA during the waiting period pertaining to either CEQA or NEPA included, in general, concerns and questions on the following topics:

- Risk of valley fever as a result of fugitive dust created by ground disturbing activities due to construction
- Quantities of fill needed for construction
- Tiering of the environmental documents
- Safety and security/terrorism concerns
- Requirement to supplement the EIS
- Reasonableness of methods and analysis
- Mitigation
- Level of design (15%)
- Potential conflicts with existing railroads
- Property appraisal process
- Project impacts to cultural resources in Fresno's Chinatown
- Project impacts to specific properties along the selected alternative
- Project impacts to properties in Bakersfield protected under Section 4(f) of the Department of Transportation Act and Section 6(f) of the Land and Water Conservation Fund Act
- Use of U.S. Census data for the socioeconomic and environmental justice evaluations of project alternatives
- Project impacts to Kit Carson School in Kings County
- Lack of coordination with Kings County government representatives

In response to comments concerning the risk of increased exposure to the *Coccidioides* spores that cause Valley Fever via inhalation of fugitive dust and soil during construction, FRA and the Authority, in coordination with the Environmental Protection Agency and the California Department of Public Health, revised the avoidance and minimization measures in the MMEP to incorporate additional best practices to minimize exposure to those at risk from construction activities disturbing these naturally occurring *Coccidioides* spores.

In issuing this ROD, FRA has considered all comments received on the Final EIS, as well as the comments previously received on the Draft EIS and Supplemental Draft EIS.

8.0 Corrections to the Final EIS

FRA and the Authority prepared an errata sheet to identify minor corrections to the Final EIS and issued it on May 2, 2014. The errata sheet identifies the location of the correction in the Final EIS, the incorrect text, the corrected text, and the reason for the correction. These corrections are noted in an errata sheet contained in Volume VI of the Final EIS and pertain to the following chapters of the Final EIS: Summary;

Transportation; Air Quality and Global Climate Change; Public Utilities and Energy; Socioeconomics, Communities, and Environmental Justice; Station Planning, Land Use, and Development; Parks, Recreation, and Open Space; Aesthetics and Visual Resources; Cultural and Paleontological Resources; Appendices 1-A and 2-D; and General Response-02 of Volumes IV and V. Changes made to mitigation measures in the errata have been incorporated into the MMEP, included as Appendix C. In addition to the errata sheet, approximately 30 comment letters submitted by the public on the Draft and Supplemental Draft EIS with accompanying FRA and Authority responses inadvertently omitted from publication with the Final EIS were also issued in Volume VI with the errata. Additional corrections, some in response to comments on the Final EIS, have been identified since the publication of Volume VI and an additional Errata Sheet is included in Appendix D.

9.0 Decision

FRA finds that the selected alternative consisting of portions of the BNSF Alternative with Kings/Tulare Regional Station – East Alternative in combination with the Corcoran Bypass, Allensworth Bypass, Bakersfield Hybrid, and Bakersfield Hybrid Station alternatives best fulfills the purpose and need and objectives for the Project while balancing impacts on the natural and human environment. In reaching this decision, FRA considered the physical and operational characteristics and potential environmental consequences associated with the HST alternatives. FRA, as lead agency, consulted with the joint lead agency and cooperating agencies and considered the EIS Documents, including the analysis of the No Action Alternative, all action alternatives, and all public and agency comments received during the review periods in identifying the selected alternative. The cooperating agencies may issue their own decision documents, as appropriate, consistent with their statutory and regulatory responsibilities.

9.1 Section 106

Section 106 of the NHPA (16 U.S.C. 470f) requires that any Federal agency having direct or indirect jurisdiction over a proposed Federal or Federally assisted undertaking take into account the effect of the undertaking on any district, site, building, structure, or other object that is listed or eligible for listing on the NRHP.

The FRA, SHPO, the Authority, and the ACHP executed a PA on July 22, 2011. The PA sets forth numerous requirements intended to ensure appropriate treatment of historic resources during ground-disturbing activities associated with Project construction. The PA also provides protocols for how and when formal eligibility determinations will be made. Eligibility determinations will be made by the appropriate agency based on information presented in the appropriate, completed State site records forms. Moreover, the PA sets forth requirements for tribal monitoring of construction activities to help ensure protection of cultural resources that may be encountered. Adherence to the terms of the PA will fulfill all obligations under Section 106.

In accordance with the PA, an MOA for the treatment of adverse effects on historic properties in the Fresno to Bakersfield Section of the California HST System was executed by the FRA, SHPO, the Authority, STB, USACE, and ACHP on May 14, 2014 (see Appendix A). The California Department of Parks and Recreation, City of Fresno, City of Corcoran, City of Shafter, City of Bakersfield, and Sociedad Juarez Mutulaista Mexicana as well as the following Federally-recognized Native American tribes: Santa Rosa Tachi Yokuts Tribe, Table Mountain Rancheria, Picayune Rancheria of the Chukchansi Indians, Tule River Indian Tribe, and Kern Valley Indian Council, have accepted the FRA and Authority invitations to be concurring parties to the MOA and subsequent treatment plans.

The MOA summarizes the results of the Section 106 process and the treatment measures agreed to among the Project's consulting and concurring parties. The primary elements in the MOA include a process for revising the Area of Potential Effect (APE); a process for completing the historic properties identification effort; treatment measures for historic properties that will be affected by the Project; and administrative stipulations. The MOA includes treatments proposed for both above- and below-ground cultural resources, including archaeological and historic architectural resources as well as traditional cultural properties. These include general measures to avoid adverse operational noise effects and construction vibration effects and to mitigate impacts through planning for inadvertent damage and preparing detailed documentation of impacted historic properties, as well as property-specific measures for treatment of historic properties that will be adversely affected by the Project.

9.2 Section 4(f) of the DOT Act

Projects that are undertaken by an operating administration of the DOT or that may receive federal funding and/or discretionary approvals from such an operating administration must demonstrate compliance with Section 4(f) of the DOT Act of 1966. Section 4(f) protects publicly owned lands that are parks, recreational areas, and wildlife refuges. Section 4(f) also protects historic sites of national, state, or local significance that are on public or private land. FRA issued its Section 4(f) Evaluation with each of the EIS Documents. The analysis and information in the Section 4(f) Evaluation included with the Final EIS is incorporated herein by reference.

Chapter 4 of the Final EIS contains FRA's evaluation of whether the Project would result in any of the following "uses" of properties projected under Section 4(f): permanent use (which encompasses permanent easements or temporary easements that exceed limits for temporary occupancy), temporary occupancy, and constructive use. Impacts were then evaluated to see if the criteria for a *de minimis* impact determination were met and appropriate coordination with officials having jurisdiction over each resource was conducted.

The alternatives evaluation process conducted as part of the Fresno to Bakersfield Section NEPA process concluded that in accordance with 49 U.S.C. 303(c), there was no feasible and prudent alternative within the study area that did not result in a use of

Section 4(f) resources. Further, the least harm analysis determined that the selected alternative is the alternative with the least overall harm to Section 4(f) resources. FRA also identified measures to minimize harm to Section 4(f) properties as part of the EIS process and coordinated with appropriate stakeholders. These measures have been incorporated into the MMEP (Appendix C), and the Authority will implement them as a condition of Project approval.

Alternatives

As described in Final EIS, Chapter 4, FRA has considered Section 4(f) properties throughout the planning and alternative development and analysis process through analysis conducted for the Program EIR/EIS, and the Fresno to Bakersfield Section EIS. The goals of the alternatives analysis process included avoiding and minimizing impacts to environmental resources, including resources protected by Section 4(f). During this process options were developed to address concerns specific to Section 4(f) resources such as the Pixley National Wildlife Refuge, Allensworth State Historic Park, and Allensworth Ecological Reserve, and an additional segment alternative was developed that would avoid Section 4(f) resources in Fresno, including the historic Southern Pacific station and Roeding Park. For additional information regarding the alternatives evaluation process, refer to Chapter 2, Alternatives, of the Final EIS for the Fresno to Bakersfield Section.

Measures to Minimize Harm

Measures to minimize harm include measures that were taken during project planning to avoid or minimize impacts as well as mitigation and enhancement measures to compensate for unavoidable project impacts. FRA and the Authority identified measures to minimize harm, which will be incorporated into the project to address the impacts of the alternative alignments. The measures are described in Chapter 4 of the Final EIR/EIS, Section 4(f)/6(f) Evaluation. FRA and the Authority are continuing ongoing coordination, as appropriate, with applicable officials; during final design, additional measures may be identified. 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).

Section 4(f) Determination

Based on the analysis contained in Chapter 4 of the Final EIS, FRA finds that there is no feasible and prudent alternative to the use of two historic resources, the Washington Irrigated Colony Historic Rural Landscape and People's Ditch. These sites will be permanently incorporated into the selected alternative.

- The Washington Irrigated Colony Historic Rural Landscape (NRHP-eligible) is comprised of multiple contributing and individually NRHP-eligible properties. Two properties (i.e., the Washington Colony Canal and the North Branch of the Oleander Canal) that contribute to the Washington Irrigated Colony Historic Rural Landscape in rural Fresno County are in the direct footprint of the selected alternative. The construction of the selected alternative would result in the

placement of culvert crossings within the physical boundary of the historic properties, permanently converting land into a transportation feature and resulting in a direct Section 4(f) use. However, impacts would be limited to the portions of the canals crossed by the selected alternative and would not extend to other historic portions of the canals.

- People's Ditch (NRHP-eligible) in rural Kings Country is in the direct footprint of the selected alternative, the construction of which will result in permanent incorporation of portions of this linear historic property resulting in a direct Section 4(f) use. However, the selected alternative would not require a complete demolition of Peoples Ditch as a whole.

Based on the analysis in Chapter 4 of the Final EIS, FRA also finds that there is no feasible and prudent alternative to the use of two park/recreational resources, the Kern River Parkway multi-use trails and Mill Creek Linear Park. These sites will be permanently incorporated into the selected alternative.

- The Kern River Parkway in Bakersfield is in the direct footprint of the selected alternative, the construction of which will result in permanent incorporation (through easement) of portions of the Parkway associated with the placement of footings for the columns that would support the guideway. The impacts on the Kern River Parkway's multi-use trails that would result from the installation of the footings and the maintenance easement (e.g., drain cleaning, litter removal, and inspection) would be minor in nature and would not adversely affect the activities, features, or attributes that qualify the resource for protection under Section 4(f). This is similar to effects from adjacent crossings of the Parkway such as Westside Parkway and Centennial Corridor that were recently constructed or planned for construction; where the impacts were not considered a "use" of the resource by the City of Bakersfield and Caltrans (acting under its assumption of authority from FHWA). Informed by the analysis in the EIS, recent studies, and discussions with the City, FRA determined the selected alternative could result in a *de minimis* impact, as defined at 49 U.S.C. 303(d). However, the City, as the official with jurisdiction over this resource, has not agreed on the effects characterization; therefore, FRA's Section 4(f) determination is that the Project would result in a Section 4(f) use of the Kern River Parkway.
- Mill Creek Linear Park in Bakersfield is in the direct footprint of the selected alternative, the construction of which will result in permanent incorporation (through an easement) of portions of this linear recreational resource and the ADA access path associated with the placement of footings for the columns that would support the guideway. The impacts on Mill Creek Linear Park that would result from the installation of the footings and the maintenance easement (e.g., drain cleaning, litter removal, and inspection) would be minor in nature and would not adversely affect the activities, features, or attributes that qualify the resource for protection under Section 4(f). The City conveyed to FRA the

importance of the area surrounding Mill Creek Linear Park as part of their downtown revitalization plans, formerly guided by the city redevelopment authority, and that impacts to the linear park would affect the broader redevelopment effort. Mill Creek Linear Park and the nearby Central Park are part of the City's efforts to beautify the canal system and create park and recreation opportunities along its length in Bakersfield. Mill Creek Linear Park is located along a canal that is part of the Kern Delta Water District. According to the City, this canal is one of the first outputs from the Kern River, and as such, water levels are maintained throughout the year. Mill Creek Linear Park is connected by sidewalk and path to Central Park, which is also along the canal and a recreational resource for the City of Bakersfield. The viaduct could provide shade opportunities for users, and effects to the recreational resource could be mitigated by the "in kind" replacement of the ADA access and by allowing for use of the park under the HST viaduct. However, the City of Bakersfield, as the official with jurisdiction over the recreational resource, conveyed that project impacts would degrade the activities and features that make the park eligible for protection under Section 4(f). Therefore, FRA's Section 4(f) determination is that the Project would result in a Section 4(f) use of Mill Creek Linear Park.

9.3 General Conformity Determination

As part of the environmental review of the proposed Project, FRA conducted a general conformity evaluation pursuant to 40 C.F.R. Part 51, Subpart W and 40 C.F.R. Part 93 Subpart B. FRA conducted the general conformity evaluation following all regulatory criteria and procedures and in coordination with EPA, SJVAB, and the California Air Resources Board. As a result of this review, FRA finds that Project-generated emissions will either be fully offset (for construction phase) or less than zero (for operational phase) considering the following commitments:

- Prior to commencement of construction in the Fresno-Bakersfield Section, the Authority will enter into a Voluntary Emission Reduction Agreement (VERA) with the San Joaquin Valley Air Pollution Control District (SJVAPCD).
- The Authority has committed to fully offset all construction emissions (to net zero) for every year of construction.

Therefore, FRA concludes that the proposed Project, as designed, conforms to the purpose of the approved State Implementation Plan (SIP) and is consistent with all applicable general conformity requirements. The Final General Conformity Determination is included with this ROD as Attachment E.

9.4 Section 7 Endangered Species Finding

Because the Project is likely to have an impact on threatened or endangered species, FRA prepared a BA for the Project and consulted with USFWS, as required under Section 7 of ESA. FRA's informal and formal Section 7 consultation with USFWS has been ongoing and was instrumental in scoping the biological resource analysis for the EIS Documents,

as well as for the BA. FRA developed and submitted a Draft BA to USFWS in June 2012, which evaluated direct, indirect, and cumulative effects of the Project on Federally listed, threatened, endangered, or proposed listed species and their designated habitat.

Following USFWS review and additional consultation and coordination, USFWS issued a BO for the Project on February 28, 2013. In the BO, USFWS concluded that the Project, as proposed, is not likely to jeopardize the continued existence of the listed wildlife and plant species potentially occurring in the Project action area. Consistent with Section 7 requirements, the BO also stipulates several reasonable and prudent conservation measures to avoid or reduce potential impacts.

Following issuance of the BO, the Authority and FRA made modifications to Project alignment alternatives which required reopening the formal Section 7 consultation with USFWS. A supplemental BA was submitted to the USFWS in October 2013. Following USFWS review and additional consultation and coordination, USFWS issued an addendum to the BO for the Project on April 1, 2014. This BO also includes an incidental take statement authorizing activities associated with construction of the Project from the Fresno station to the Bakersfield station.

9.5 Wetlands Finding

In addition to NEPA and other environmental laws, FRA is also required to make findings pursuant to Executive Order 11990, Protection of Wetlands, and the U.S. Department of Transportation Wetlands Order, DOT Order 5660.1A.

It is anticipated that impacts to waters of the United States may occur as a result of the selected alternative. However, as noted in Section 2.2 above, in December 2013 the USACE concurred that the selected alternative likely contains the LEDPA. Design requirements and permit conditions will require contractors to avoid impacts on jurisdictional waters wherever feasible.

In addition to the Section 404 permit, the Authority will submit water quality certification applications, prepared pursuant to Section 401 to the State Water Resources Control Board (SWRCB) for the selected alternative. To the maximum extent practicable, the Authority will implement pre- and post-construction BMPs for sediment and erosion control. If avoidance of impacts to jurisdictional waters is not feasible, mitigation will be determined by USACE and SWRCB and reflected in permits and other authorizations issued for the Project.

Based upon these findings, FRA determines that the Project is consistent with Executive Order 11990 and DOT Order 5660.1A.

9.6 Floodplains Finding

DOT Order 5620.2 implements Executive Order 11988, Floodplain Management. These orders state that FRA may not approve an alternative involving a significant encroachment unless FRA can make a finding that the proposed encroachment is the only practicable alternative. The major purposes of Executive Order 11988 are to avoid

Federal support for floodplain development; to prevent uneconomic, hazardous, or incompatible use of floodplains; to restore and preserve the natural and beneficial floodplain values; and to be consistent with the standards and criteria of the National Floodplain Insurance Program.

FRA concludes that the selected alternative will not result in any substantial adverse impact on natural and beneficial values of the floodplains, will not result in a substantial change in flood risks or damage, and will not have a substantial potential for interruption or termination of emergency service and evacuation routes. Based upon these findings, FRA determines that the Project is consistent with requirements of Executive Order 11988.

9.7 Environmental Justice Finding

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, requires that each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations. DOT Order 5610.2(a), "Department of Transportation Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," 77 FR 27534 (May 10, 2012), imposes similar obligations on DOT operating administrations to promote the principles of Executive Order 12898 and incorporate such principles in all programs, policies, and activities, including the NEPA process.

The selected alternative will result in disproportionately high and adverse effects on minority and low-income populations in Fresno, Wasco, Shafter, Bakersfield, and the rural areas of Newark Avenue, 5th Avenue, and Waukena Avenue in Corcoran, and the community of Crome south of Shafter. These impacts would include an increase in both ambient noise levels and vibration impacts; disruption of existing communities, residential and business displacements, and the displacement of important community facilities; impacts to park resources; decreases in visual quality. Minority and low-income populations may also experience adverse cumulative noise and vibration, community cohesion, and aesthetics and visual impacts.

The Project includes the application of noise and vibration mitigation measures to reduce noise and vibration impacts resulting from HST operations by construction sound barriers, acquiring property easements, installing insulation, and providing a smooth running surface for the HST, as appropriate. However, these measures would not completely eliminate the adverse impacts, which would likely be more severe in urban areas where minority and low-income populations reside. Additional outreach to impacted minority and low income populations within communities and residential areas that would be divided, such as facilitated community workshops, would mitigate but not eliminate the impacts that would result from displacements. Similarly, the incorporation of context sensitive design criteria for Project features and plantings and other landscape features to screen views of Project structures and sound walls would

mitigate the light, glare, and blocked views that result from the Project. Nevertheless, some decreases in visual quality would remain even with mitigation, and would disproportionately impact minority and low-income populations.

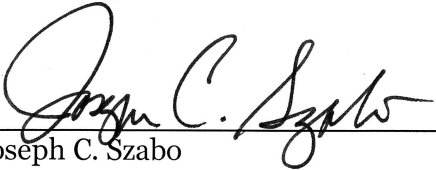
FRA also considered the potential offsetting benefits associated with the selected alternative. For example, construction and operation of the selected alternative will result in employment growth in the region, and will specifically benefit low income and minority populations through special recruitment, training, and job set-aside programs.

The California HST System, of which Fresno to Bakersfield is just one section, will improve transportation options throughout the State, improve long-term air quality and reduce traffic congestion. These Project benefits will accrue not only to low income and minority populations, but also to the broader community as a whole.

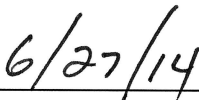
As part of the Environmental Justice analysis and as discussed above, FRA identified appropriate mitigation measures for the selected alternative to address potentially adverse impacts to low income and minority populations. One of the elements of the Project mitigation is continued outreach with affected communities to ensure their concerns are considered during final design and Project implementation.

10.0 Conclusion

FRA has reached a decision that most closely aligns with FRA's statutory mission and responsibilities, giving consideration to economic, environmental, technical and other factors and based on the information contained in the EIS Documents. FRA approves the Project and selects the BNSF Alternative with Kings/Tulare Regional Station – East Alternative in combination with the Corcoran Bypass, Allensworth Bypass, Bakersfield Hybrid, and Bakersfield Hybrid Station alternatives. FRA has selected these alternatives because they: 1) best satisfy the Purpose, Need, and Objectives for the proposed action; and 2) minimize impacts on the natural and human environment by utilizing an existing transportation corridor where practicable and incorporating mitigation measures. Accordingly, the BNSF Alternative with the Kings/Tulare Regional Station – East Alternative in combination with the Corcoran Bypass, Allensworth Bypass, Bakersfield Hybrid, and Bakersfield Hybrid Station alternatives has been selected for Project implementation.



Joseph C. Szabo
Administrator
Federal Railroad Administration



Date