

Preface

What Is this Document?

The California High-Speed Rail Authority (Authority) proposes to construct, operate, and maintain an electric-powered high-speed train (HST) system in California. When completed, the nearly 800-mile high-speed train system will provide new passenger rail service to California's major metropolitan areas and through the counties that are home to more than 90% of the state's population. The Fresno to Bakersfield HST Section is a critical link connecting the Bay Area HST sections north and south to the rest of the system.

This Project Environmental Impact Report / Environmental Impact Statement (EIR/EIS) is the next step in the environmental process after the development and certification of the 2005 *Final Program Environmental Impact Report / Environmental Impact Statement for the Proposed California High-Speed Train System* (referred to hereafter as the Statewide Program EIR/EIS), the 2008 *Bay Area to Central Valley High-Speed Train Final Program Environmental Impact Report / Environmental Impact Statement* (referred to hereafter as the Bay Area to Central Valley Program EIR/EIS), and the 2012 *Bay Area to Central Valley High-Speed Train Partially Revised Draft Program Environmental Impact Report* (together referred to as Program EIR/EIS documents). The Authority and the Federal Railroad Administration (FRA) have prepared this Project EIR/EIS for the Fresno to Bakersfield Section of the California HST System in compliance with the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). Because of the highly technical and complex nature of the proposed Fresno to Bakersfield Section of the HST System, this EIR/EIS contains more information than is mandated by either the federal or state statutory and regulatory requirements.

This Project EIR/EIS does the following:

- Describes the HST alternatives and their potential impacts.
- Provides environmental information to assist decision makers in selecting the project to be built.
- Identifies measures to avoid and minimize impacts and, when necessary, compensate for adverse impacts.
- Considers cumulative impacts as part of the environmental review process.

The Authority and FRA widely circulated the Draft EIR/EIS to affected local jurisdictions, state and federal agencies, tribes, community organizations, other interest groups, and interested individuals. The document was also available at Authority offices, public libraries, and community centers. The 60-day public comment period closed on October 13, 2011. During this period, public hearings were held to receive oral testimony on the HST project and the Draft EIR/EIS. After reviewing the substantive comments received during the public and agency review of the Draft EIR/EIS, the Authority decided to reintroduce alignment alternatives west of Hanford that would be consistent with the Preferred Alternative identified in the Statewide Program EIR/EIS and another alternative in Bakersfield (the Bakersfield Hybrid Alternative) that would minimize impacts to residential and community facilities in the Bakersfield metropolitan area. Therefore, a Revised Draft EIR/Supplemental Draft EIS (Revised DEIR/Supplemental DEIS) was determined to be necessary. The Authority and FRA widely circulated the Revised DEIR/Supplemental DEIS to affected local jurisdictions, state and federal agencies, tribes, community organizations, other interest groups, and interested individuals. The document was also made available at Authority offices, public libraries, and community centers. The 90-day public comment period closed on October 19, 2012. During this period, public hearings were held to receive oral testimony on the

HST project and the Revised DEIR/Supplemental DEIS. The Final EIR/EIS addresses the comments received during the public comment periods for the two draft environmental documents. The shaded areas in the Final EIR/EIS are intended to provide the reader with a simplified way to identify much of the revised language changes and refinements that differ from the text in the Revised Draft EIR/Supplemental Draft EIS. However, it is not a word-for-word representation and not all changes are shaded. The shading is a guide to help the reader to navigate the revisions.

How Do I Use this Document?

The purpose of environmental documents prepared under NEPA and CEQA is to disclose information to decision makers and the public. Although the science and analysis that supports this Final EIR/EIS is complex, this document is intended for the general public. Every attempt has been made to limit technical terms and the use of acronyms. Where this cannot be avoided, the terms and acronyms are defined the first time they are used, and a list of acronyms and abbreviations is provided (Chapter 14).

Volume I of the Final EIR/EIS is organized into 14 chapters and a Summary. Volume II contains the technical appendices. Volume III, available on DVD, shows the alignments and other project design plans. Volumes IV and V provide the comments received on the Draft EIR/EIS and the Revised DEIR/Supplemental DEIS, respectively. Volumes IV and V also provide the respective responses to the comments.

For a reader with only a short time to devote to this document, the **Summary** is the place to start. It provides an overview of all of the substantive chapters in this document and includes a table listing the potential environmental impacts at the project level for each environmental resource topic. If more information is desired, the Summary directs the reader to the place in the document where more details are available.

Chapter 1.0, Project Purpose, Need, and Objectives, explains why the project is proposed and provides a history of the planning process.

Chapter 2.0, Alternatives, describes the proposed Fresno to Bakersfield Section route alternatives and design options, HST station options, and heavy maintenance facility options, as well as the No Project Alternative used for purposes of comparison. It contains illustrations and maps and provides a review of construction activities. The first two chapters help the reader understand what is being analyzed in the remainder of the document.

Chapter 3.0, Affected Environment, Environmental Consequences, and Mitigation Measures, is where the reader can find information about the existing transportation, environmental, and social conditions in the area of the proposed project. This chapter provides the findings of the analysis of potential environmental impacts, along with methods to reduce these impacts (called mitigation strategies). Chapter 3 is divided into subsections discussing various environmental resource topics:

- Transportation
- Air Quality and Global Climate Change
- Noise and Vibration
- Electromagnetic Fields and Electromagnetic Interference
- Public Utilities and Energy
- Biological Resources and Wetlands
- Hydrology and Water Resources
- Geology, Soils, and Seismicity
- Hazardous Materials and Waste

- Safety and Security
- Socioeconomics, Communities, and Environmental Justice
- Station Planning, Land Use, and Development
- Agricultural Lands
- Parks, Recreation, and Open Space
- Aesthetics and Visual Resources
- Cultural and Paleontological Resources
- Regional Growth
- Cumulative Impacts

Chapter 4.0, Section 4(f)/Section 6(f) Evaluation, summarizes parks, wildlife refuges, and historic properties in accordance with Section 4(f) of the Department of Transportation Act of 1966 and Section 6(f) of the Land and Water Conservation Fund Act. It describes avoidance alternatives and measures to minimize harm to these resources.

Chapter 5.0, Project Costs and Operations, summarizes the estimated capital and operations and maintenance costs for each Fresno to Bakersfield Section alternative evaluated in the Project EIR/EIS, including funding and financial risk.

Chapter 6.0, Other CEQA/NEPA Considerations, summarizes the project's significant adverse environmental effects, the significant adverse environmental effects that cannot be avoided if the project is implemented, and the significant irreversible environmental changes that would occur as a result of the project or irretrievable commitments of resources or foreclosure of future options.

Chapter 7.0, Preferred Alternative and Stations, describes the Preferred Alternative and stations and basis for identifying the Preferred Alternative and stations.

Chapter 8.0, Public and Agency Involvement, contains summaries of coordination and outreach activities with agencies and the general public and a summary of the comments received during the Draft EIR/EIS and Revised DEIR/Supplemental DEIS public review periods. All comments are individually addressed in Volumes IV and V.

Chapter 9.0, EIR/EIS Distribution, identifies the individuals and organizations informed about the availability of the Project EIR/EIS.

Chapter 10.0, List of Preparers, provides the names and responsibilities of the authors of the Project EIR/EIS.

Chapter 11.0, References/Sources Used in Document Preparation, cites the references and contacts used in writing this document.

Chapter 12.0, Glossary of Terms, provides a definition of certain terms used in the EIR/EIS.

Chapter 13.0, Index, provides a tool to cross-reference major topics used in the EIR/EIS.

Chapter 14.0, Acronyms and Abbreviations, defines the acronyms and abbreviations used in this document.

Appendices and Technical Reports provide additional details on the project and EIR/EIS process. The technical appendices, included in Volume II, are related to the affected environment and environmental consequences analyses. These appendices are numbered to match their corresponding environmental elements in Chapter 3, as well as in Chapters 1, 2, and 5 of the Project EIR/EIS. Detailed technical reports prepared for transportation; air quality and global climate change; noise and vibration; biological resources and wetlands; hydrology and water

resources; geology, soils, and seismicity; hazardous materials and waste; acquisitions and relocations; socioeconomics; aesthetics and visual quality; cultural resources; paleontological resources, and other sections identified in the Project EIR/EIS are available on DVD. Volume III, Alignment and Other Plans, also available on DVD, presents the project design drawings, including trackway design and road crossing design. These documents are also available at the Authority's website (www.hsr.ca.gov) and at locations identified in Chapter 9, EIR/EIS Distribution. Volumes IV and V includes all comments submitted during the Draft EIR/EIS and Revised DEIR/Supplemental DEIS comment period.

What Has Changed?

Since the close of the public comment period on the Revised Draft EIR/Supplemental Draft EIS in October 2012, the Authority and FRA have reviewed the extensive public comments received. The Authority has continued to consult with local jurisdictions and property owners along the alignment alternatives. The Authority and FRA have also continued to work closely with regulatory agencies with jurisdiction over some components of the project. These consultations have resulted in project refinements, minor changes to the impacts analysis, and refinement of mitigation measures. The following is a summary of these changes.

Summary of Changes

Designs for Road Overcrossings and Undercrossings for All Alternatives Revised to be Consistent with Local Government Requirements: The Authority received extensive input from cities and counties along the alignment alternatives recommending that the Authority's design for the road overcrossings and undercrossings conform to local government design speed requirements. All alignment alternatives have been refined to conform to local requirements where practicable, or exceptions to the local design criteria have been identified as design exceptions that will be mutually agreed among the parties for the preferred alternative as the design advances.

Design for BNSF Alternative Kings River Crossing Revised to Accommodate Levee Maintenance Access for Kings River Conservation District: The Authority received input from the Kings River Conservation District expressing concerns over maintaining appropriate access for levee maintenance along the Kings River. The Final EIR/EIS increases the vertical profile of the alignment to 18 feet above the levee, but narrows its horizontal footprint. The revised design reduces the impacts on wildlife and habitat, and eliminates the previously proposed depression of State Route 43, and the related flood evacuation concerns raised in comments. The profile of State Route 43 no longer will be altered, as the higher HST structure would provide the required clearance over SR 43 at its current grade.

Design in the vicinity of SR 43 Revised to Avoid Caltrans Right of Way: In response to input from Caltrans, the design of both the BNSF, Corcoran Elevated, and Corcoran Bypass alternatives in the vicinity of SR 43 was moved from the west side of SR 43 to the east side to maintain the Caltrans-owned right of way and better accommodate future widening of the state highway.

Design Revised to Accommodate Minor Adjustments in the Location of Traction Power Facilities: The design of the BNSF Alternative east of Hanford was revised to incorporate an improved relocation of a 115 kV line to reduce the number and skew of transmission line crossings of the HST alignment, fully comply with CPUC General Order 95 with respect to "topple" clearance for the transmission line towers relative to the HST overhead contact system. The design also adjusted to route the section of the 115-kV line that crosses the proposed KTR-East Station site underground to reduce aerial conflicts and improve aesthetics at the station.

Design Revised to Include Potential for Sewer Line along East Lacey Boulevard to Serve the Kings/Tulare Regional Station East Alternative: The Revised Draft EIR/Supplemental Draft EIS

identified that the Kings/Tulare Regional Station East alternative could be served by City of Hanford sewer being extended to the site, or by an onsite sewage treatment approach. At the time of the RDEIR/SDEIS, the City of Hanford had indicated that they did not plan to extend a sewer line to the east. The City has revised its plans, however, and the Draft EIR for the Highway 43/198 Commercial Center indicates the City is now planning to extend a sewer line along East Lacey Boulevard closer to the Kings/Tulare Regional Station – East site. The proposed route for wastewater utility lines would extend from the Kings/Tulare Regional-East station south along the proposed HST right-of-way to East Lacey Boulevard and then west on East Lacey Boulevard.

Design Revised to Reduce Impacts on Businesses: The Authority has refined the design of multiple alignment alternatives to reduce impacts on businesses. These include an adjustment to reduce impacts of the BNSF Alternative on SunnyGem in Wasco and a redesigned approach relocation approach for the Lone Star Rail Spur in Shafter. An adjustment to the viaduct structure on the Bakersfield Hybrid Alternative was made to avoid direct impact on the Salon Juarez Mutual Aid Society.

Design Revised to Reduce Environmental Impacts: Refinements of the design were made to avoid sensitive environmental resources, such as narrowing the HST right of way to avoid the Salon Juarez Mutual Aid Society and adjusting footing placements for the HST viaduct spanning the historic Friant-Kern Canal in Bakersfield, and tailoring berm relocations along State Route 43 north of Corcoran to minimize impacts on lacustrine habitat. Additional modifications were made in a number of places that further avoid and/or minimize impacts on aquatic resources. For example the design over the King River Complex on the BNSF Alternative was modified from several bridge structures to an elevated section that spans the levees by approximately 18 feet, thus minimizing the amount of disturbance on aquatic resources and allowing for wildlife movement.

Both the Hanford West Bypass 1 and 2 below grade alternative were modified to reduce impacts on Section 106 resources and Section 4(f) use. The intended purpose of these modifications is to avoid and minimize Section 4(f) impacts to the properties at 13148 Grangeville Blvd., Kings County, and 9860 13th Avenue, in rural Kings County. During the design process, engineers worked with cultural and natural resource specialists to review the proposed footprints and identify key resources where impacts should be avoided or minimized.

Design Revised to Add Minor Project Features and Geometric Refinements: In responses to updated Authority technical design requirements, the project footprint in the Final EIR/EIS has added a small amount of area to cover emergency access roads and maintenance turnarounds along the alignment. Additional design refinements were made to increase segment lengths between horizontal and vertical curves in the alignment.

Design Revised for Hanford West Bypass Alternatives: The Hanford West Bypass 1 and 2 alternatives were modified to avoid use of the properties protected under Section 4(f) at 13148 Grangeville Boulevard and 9860 13th Avenue. From approximately Flint Avenue south to Idaho Avenue (approximately 9 miles), the Hanford West Bypass 1 and 2 Modified alternatives diverge to the west of the Hanford West Bypass 1 and 2 alternatives by a maximum of about 570 feet. South of Idaho Avenue, the modified alternatives diverge primarily to the east of the Hanford West Bypass 1 and 2 alternatives. For the Hanford West Bypass 1 and 2 alternatives, an at-grade station was carried into the Final EIR/EIS. For the Hanford West Bypass 1 and 2 Modified alternatives, a below-grade station was evaluated in the Final EIR/EIS.

Design Revised for Foundations: The foundations of the viaducts were revised throughout the Fresno to Bakersfield section to eliminate the use of “mono-shaft” (single, large diameter pile supporting a beam) foundations and to replace them with bents (two piles supporting a beam) as a superior approach. In some areas, the project footprint was increased slightly to allow for

straddle bent foundations and future maintenance access for the viaduct and straddle bent foundations.

Refinements to allow for Seismic Upgrades of Caltrans Overcrossings: Temporary construction easements were expanded in Fresno to allow for possible seismic upgrades of the existing State Route 41 structure over the BNSF Alternative and the existing City of Fresno bridge on Jensen Avenue that will span the BNSF Alternative.

Summary of Environmental Analysis Changes

The Final EIR/EIS includes a number of revisions to the environmental analysis that can be summarized as follows:

- Revisions in the text in response to comments on the Revised Draft EIR/Supplemental Draft EIS to clarify and amplify the analysis and discussion. For example, the EPA provided a comment to provide additional analysis of local air quality impacts to sensitive receptors. This analysis was completed and added to the Final EIR/EIS;
- Correction to a technical error in the traffic modeling for projected station area traffic intersection impacts;
- Revisions to the analysis of greenhouse gas project impacts and benefits based on refined and updated modeling tools and updated assumptions;
- Revisions to reflect information gathered and analyses conducted in consultation with federal agencies for compliance with Section 106 of the National Historic Preservation Act, Section 404 of the Clean Water Act, and Section 176(c) of the Clean Air Act;
- Revisions to acreage tables that reflect the above changes to the project design, and corollary changes to the environmental analysis where necessary;
- Revisions to mitigation measures for biological resources and wetlands impacts to incorporate recommendations of federal and state regulatory agencies;
- Revisions to add information about the range of potential off-site mitigation areas for biological resources; and
- Inclusion of material as identified by NEPA and CEQA for a Final EIR/EIS, including copies of written comment letters and verbal comments received during the public circulation period for the Revised Draft EIR/Supplemental Draft EIS, and responses to those comments.
- Revisions to cost data in Chapter 5 based on the updated 15% design quantities analysis and the draft 2014 Business Plan.

As discussed above, the alternatives have been refined since circulation of the Revised Draft EIR/Supplemental Draft EIS. Accordingly, the tables in many of the chapters are gray to indicate analytical changes that result from design refinements.

Evaluation of Need for CEQA Recirculation or NEPA Supplement

Neither NEPA nor CEQA are intended to freeze the status of a project as of the time of circulation of a Draft EIR/EIS. Both environmental statutes accommodate the fact that projects may evolve and be refined in response to public input. Under NEPA, a supplemental Draft EIS is required only if the agency makes substantial changes in the proposed action that re relevant to environmental concerns, or there are significant new circumstances or new information relevant to

environmental concerns and bearing on the proposed action and its impacts (40 CFR § 1502.9(c)). Under CEQA, a recirculation of the Draft EIR is required only when significant new information is added to an EIR after public review, but before certification (CEQA Guidelines, § 15088.5). New information added to an EIR is not 'significant' unless 'the EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect (including a feasible project alternative) that the project's proponents have declined to implement (Guidelines, § 15088.5(a)).

The Authority and FRA have carefully considered whether the above changes would necessitate either a recirculated Draft EIR or a supplement to the Draft EIS. None of the above changes result in a new adverse impact on the environment or a substantial increase in the intensity or severity of a previously disclosed adverse impact. Many of the project refinements are responsive to comments received on the Revised Draft EIR/Supplemental Draft EIS, and they help minimize environmental impacts, strengthen mitigation measures, or assist in making the project alternatives incrementally more consistent with local government or individual preferences. Therefore, the Authority and the FRA have determined that recirculation of the EIR or a supplement to the EIS is not required.

What Happens Next?

On November 7, 2013, the Authority Board accepted the Authority staff's recommendation to identify the BNSF Alternative in combination with the Corcoran Bypass, Allensworth Bypass, and Bakersfield Hybrid alternatives as the Preferred Alternative in this Final EIR/EIS. Pursuant to Section 404 of the Clean Water Act, the U.S. Army Corps of Engineers and the U.S. Environmental Protection Agency determined (letters dated December 19, 2013) that the Preferred Alternative contains the least environmentally damaging practicable alternative (LEDPA), which was identified consistent with USACE's permit program (33 CFR Part 320-331) and EPA's Section 404(b)(1) Guidelines (40 CFR Part 230-233).

After issuance of the Final EIR/EIS, the Board will consider certifying the Final EIR/EIS for compliance with CEQA and making a final decision on the project, including adopting CEQA findings of fact, a statement of overriding considerations, and a mitigation monitoring plan. If the Board certifies the Final EIR/EIS and makes a project decision, it will file a notice of determination with the State Clearinghouse.

Federal Approval

The BNSF Alternative, in combination with the Corcoran Bypass, Allensworth Bypass, and Bakersfield Hybrid alternatives, is called a "Preferred Alternative" by FRA to make clear that the federal government has not made a decision until it issues a Record of Decision (ROD) after completion of the Final EIR/EIS and after the Authority completes its decision making process. The federal ROD states FRA's decision on the project, identifies the alternatives considered by the FRA in reaching its decision, and itemizes the Authority's commitments to mitigate project impacts. Issuance of the ROD is a prerequisite for any federal funding.

Fresno to Bakersfield HST Milestone Schedule

August 2011	Public release of Draft EIR/EIS
July 2012	Public release of Revised Draft EIR/Supplemental Draft EIS
April 2014	Final EIR/EIS published
April/May 2014	Notice of Determination and Record of Decision

The schedule for final design, construction, and operation would be refined as the project moves closer to the end of the environmental review and preliminary design phase. The Authority envisions that service would be provided between Fresno and Bakersfield by 2022.