

CALIFORNIA HIGH-SPEED TRAIN

Technical Report

Fresno to Bakersfield Section Historic Architectural Survey Report

October 2011



California High-Speed
Rail Authority



U.S. Department of Transportation
Federal Railroad Administration



Historic Architectural Survey Report

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Acronyms and Abbreviations

ACHP	Advisory Council on Historic Preservation
APE	Area of Potential Effects
APN	assessor parcel number
ARRA	American Recovery and Reinvestment Act
ASR	Archaeological Survey Report
AT&SF	Atchison, Topeka & Santa Fe
Authority	California High-Speed Rail Authority
BNSF	BNSF Railway
Caltrans	California Department of Transportation
CCC	Consolidated Canal Company
CEQA	California Environmental Quality Act of 1969
CFR	Code of Federal Regulations
CHRIS	California Historical Resources Information System
CID	Consolidated Irrigation District
CRHR	California Register of Historical Resources
DPR	(California) Department of Parks and Recreation
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
FID	Fresno Irrigation District
FRA	Federal Railroad Administration
GIS	Geographic Information System
HASR	Historic Architectural Survey Report
HMF	heavy maintenance facility
HPSR	Historic Property Survey Report
HST	High-speed train
HST project	Fresno to Bakersfield Section of the California High-Speed Train Project

HST Section 106 PA	Programmatic Agreement among the Federal Railroad Administration, the “Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California High-Speed Rail Authority Regarding Compliance with Section 106 of the National Historic Preservation Act as it Pertains to the California High-Speed Train Project”
HST System	California High-Speed Train System
IAEP	Inventory and Evaluation Plan
KCL	Kern County Land Company
km	kilometer(s)
km ²	square kilometer(s)
m ²	square meter(s)
NEPA	National Environmental Policy Act of 1970
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
OHP	(California) Office of Historic Preservation
QI	Qualified Investigator
ROD	Record of Decision
RTP	Regional Transportation Plan
SF&SJV	San Francisco and San Joaquin Valley Railway
SHPO	State Historic Preservation Officer
Southern Pacific	Southern Pacific Railroad
SR	State Route
TPSS	traction power supply station
UPRR	Union Pacific Railroad
USDA	U.S. Department of Agriculture
USGS	U.S. Geological Survey

Chapter 1.0

Introduction

1.0 Introduction

This Historic Architectural Survey Report (HASR) has been prepared as part of the Fresno to Bakersfield Section of the California High-Speed Train Project (HST project), is one project. This study has been prepared to assist the project proponent, the California High-Speed Rail Authority (Authority), and the lead federal agency, the Federal Railroad Administration (FRA), to comply with Section 106 of the National Historic Preservation Act (NHPA), and its implementing regulations issued by the Advisory Council on Historic Preservation (ACHP), as these pertain to federally funded undertakings and their impacts on historic properties. This study follows the procedures set forth in the "Programmatic Agreement among the Federal Railroad Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California High-Speed Rail Authority Regarding Compliance with Section 106 of the National Historic Preservation Act as It Pertains to the California High-Speed Train Project" (HST Section 106 PA) (Authority and FRA 2011). This study also assists the Authority and FRA to comply with the California Environmental Quality Act (CEQA) and the CEQA Guidelines, as they pertain to historical resources, for this project.

The HST Section 106 PA provides overall guidance to all nine individual HST projects regarding compliance with Section 106 of the NHPA. It provides direction for the development of the Area of Potential Effects (APE) (Appendix A), the identification, documentation and evaluation of historic properties, and the assessment of adverse effect. The PA directs that "historic properties shall be identified to the extent possible within the APE" and requires that identified historic properties be evaluated in a manner consistent with the Secretary of the Interior's Standards and Guidelines for Evaluation and that the evaluations shall be completed by Qualified Investigators (QIs) per the standards of the Secretary of Interior.

The HST Section 106 PA establishes a methodology for the documentation of historic properties. Following that methodology, this HASR includes the "documentation for evaluating historic architectural properties within the Fresno to Bakersfield Section of the HST project that are not eligible for the National Register of Historic Places (NRHP), are non-exempt according to Attachment D of the HST Section 106 PA, and were not reported in the Historic Property Survey Report (HPSR)." These properties are documented in this report and accompanying DPR 523 forms (Appendix B) or as "streamlined documentation properties" (Appendix C). The HST Section 106 PA calls for a "streamlined documentation" format for "*substantially altered* properties constructed more than 50 years ago."

Attachment D of the HST Section 106 PA "defines categories of properties that do not warrant evaluation unless deemed otherwise in the professional judgment of QIs," or "properties exempt from evaluation." Properties exempt from evaluation include "properties less than 50 years old at the time of the intensive survey unless they may have achieved exceptional significance in accordance with National Register Bulletin 22," "properties moved within the past 50 years unless they are among the exceptions noted in 'Criteria Consideration B: Moved Properties' of National Register Bulletin 15," as well as a list of certain railroad related features, water conveyance and control features, recent transportation or pedestrian facilities, highway and roadside features, adjacent features, and movable or minor objects.

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Chapter 2.0

Summary of Findings

2.0 Summary of Findings

The purpose of this HASR document is (1) to present the APE for the historic architectural resources for the project; (2) to identify properties that are not eligible for listing in the NRHP or California Register of Historical Resources (CRHR); (3) to present historic status and the conclusions of evaluations of potential significance for properties within the APE that are not exempt under the HST Section 106 PA and require evaluation to fulfill Section 106 and CEQA obligations; and (4) to present findings that are not reported in the HPSR. The HPSR is a separate document prepared to document known historic properties, those listed or eligible for listing in the NRHP, and to document historical resources for the purpose of CEQA.

As reported in the HPSR, the APE for historic architectural resources for this project contains a survey population of 52 properties containing buildings, structures, or objects that are either known historic properties (identified by previous studies) or require inventory and evaluation because they had not been previously evaluated. Of those 52 historic architectural resources, 5 were previously listed in or determined to be eligible for listing in the NRHP and the CRHR. The HPSR evaluated the remaining 47 properties under NRHP and CRHR criteria. A summary of the findings for the historic architectural resources addressed in the HPSR is as follows:

- Four (4) properties are listed in the NRHP (Status Code 1) and CRHR.
- One (1) property was previously determined eligible for listing in the NRHP (Status Code 2).
- Eight (8) properties appeared to be eligible for listing in the NRHP and CRHR as identified in previous studies (Status Code 3).
- Twelve (12) properties appear to be eligible for listing in the NRHP and CRHR (Status Code 3) as part of the current survey.
- Twenty-seven (27) properties were previously identified and/or listed in a local register (Status Code 5 or 3C) and although they retain their local status, after evaluation for this project they do not appear to be eligible for listing in the NRHP (Status Code 6).

Therefore, of the 52 historic architectural resources surveyed in the APE, 25 historic properties were listed in, have been determined eligible for listing in, or appear to meet the criteria for listing in the NRHP.

This HASR presents findings that are not reported in the HPSR. The HASR will also be submitted to the California State Historic Preservation Officer (SHPO) for review. The SHPO will review and evaluate the adequacy of the accompanying APE, as well as the identification and evaluation findings of the study. Upon SHPO concurrence with the eligibility determinations, future documents will present the Findings of Effect analysis and propose appropriate mitigation for any adverse effects to historic properties that are identified in a Findings of Effect report. The conclusions of both the HPSR and HASR will be used as the basis for the EIR/EIS prepared for the Fresno to Bakersfield Section of the HST System.

The project vicinity and APE are shown on Index Sheets A and B and associated map sheets in Appendix A of this HASR. The APE maps showing historic architectural resources include the assessor parcel numbers (APNs) that serve as the map reference numbers for historic architectural resources inventoried and evaluated by this study. The properties studied are presented on California Department of Parks and Recreation (DPR) 523 forms in Appendix B. Many historic architectural resources within the APE were more than 50 years old, but had been substantially altered, and as such were considered "streamlined documentation properties" under

the HST Section 106 PA. The streamlined documentation report for the 619 historic architectural resources not subject to intensive survey is presented in Appendix C.

The remainder of this summary outlines the conclusions of the intensive inventory and evaluation of historic architectural resources in the APE for the project. The historic architectural APE contains a total survey population of 228 historic architectural resources, 52 of which are addressed in the HPSR. This HASR addresses the other 176 of these resources. (A complete list of these 176 resources is provided in Table 7-1, below.) The evaluations of the 176 resources presented on DPR 523 forms in Appendix B concluded that none appear eligible for listing in the NRHP or the CRHR, none were exempt from study under the HST Section 106 PA, and none were reported in the HPSR. This HASR assists in project compliance with Section 106 by soliciting SHPO concurrence with the findings of the inventory and by evaluating these resources. The survey population resources are in Fresno, Kings, Tulare, and Kern counties and were constructed in or before 1960.

Chapter 3.0

Description of the Undertaking

3.0 Description of the Undertaking

3.1 Project Introduction

The Fresno to Bakersfield Section of the HST project would be approximately 114 miles long, varying in length by only a few miles based on the route alternatives selected. To comply with the Authority's guidance to use existing transportation corridors when feasible, the Fresno to Bakersfield HST Section would be primarily located adjacent to the existing BNSF Railway right-of-way. Alternative alignments are being considered where engineering constraints require deviation from the existing railroad corridor, and to avoid environmental impacts.

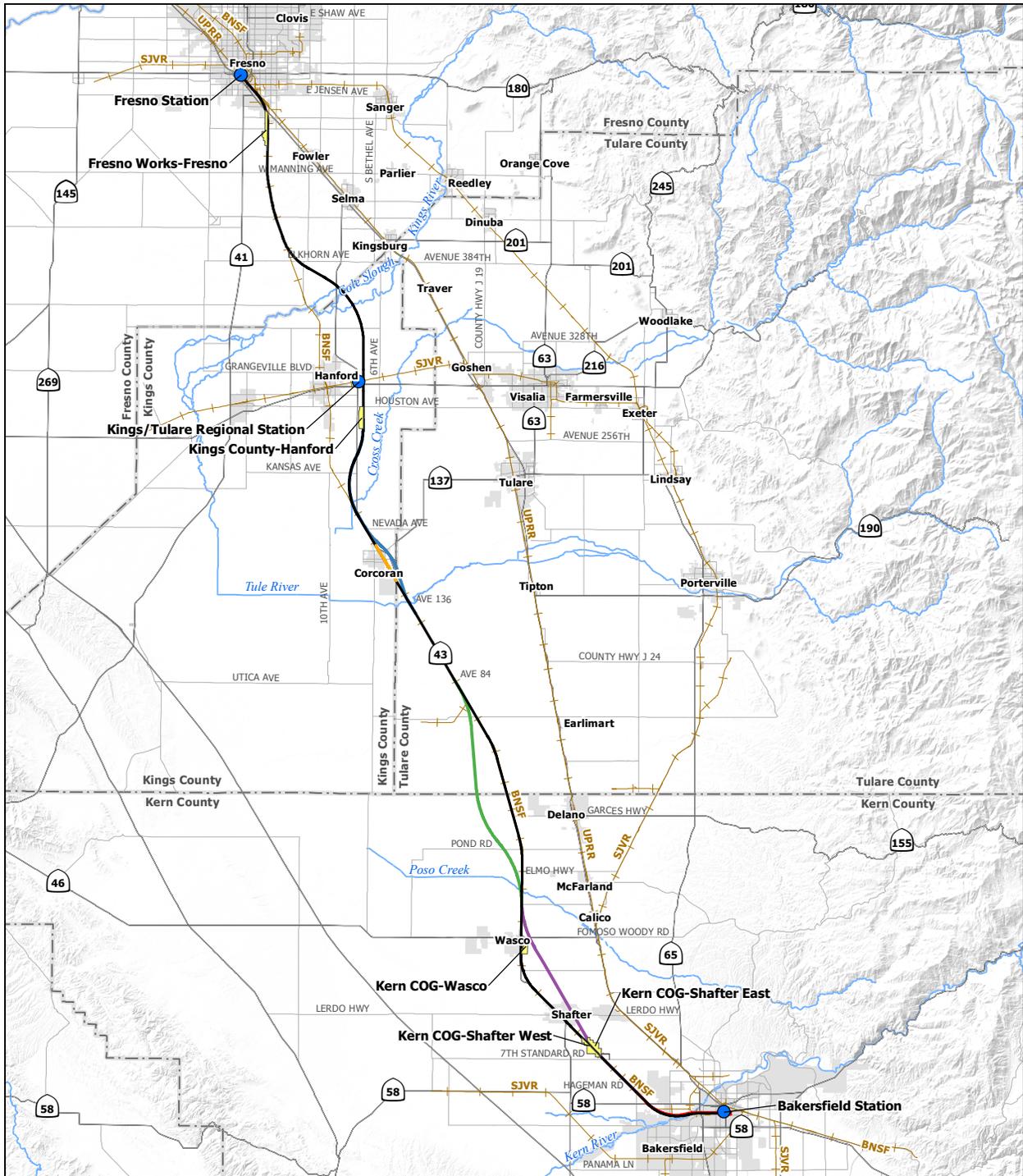
The Fresno to Bakersfield HST Section would cross both urban and rural lands and include a station in both Fresno and Bakersfield, a potential Kings/Tulare Regional Station in the vicinity of Hanford, a potential heavy maintenance facility (HMF), and power substations along the alignment. The HST alignment would be entirely grade-separated, meaning that crossings with roads, railroads, and other transport facilities would be located at different heights (overpasses or underpasses) so that the HST would not interrupt nor interface with other modes of transport. The HST right-of-way would also be fenced to prohibit public or automobile access. The project footprint would consist primarily of the train right-of-way, which would include both a northbound and southbound track in an area typically 100 feet wide. Additional right-of-way would be required to accommodate stations, multiple track at stations, maintenance facilities, and power substations.

The Fresno to Bakersfield Section would include at-grade, below-grade, and elevated track segments. The at-grade track would be laid on an earthen rail bed topped with rock ballast approximately 6 feet off of the ground; fill and ballast for the rail bed would be obtained from permitted borrow sites and quarries. Below-grade track would be laid in an open or covered trench at a depth which would allow roadway and other grade-level uses above the track. Elevated track segments would span long sections of urban development or aerial roadway structures and consist of steel truss aerial structures with cast in place reinforced-concrete columns supporting the box girders and platforms. The height of elevated track sections would depend on the height of existing structures below, and would range from 40 to 80 feet. Columns would be spaced 60 feet to 120 feet apart.

3.2 Project Alternatives

3.2.1 Alignment Alternatives

This section describes the Fresno to Bakersfield HST Section project alternatives, including the No Project Alternative. The project EIR/EIS for the Fresno to Bakersfield HST Section examines alternative alignments, stations, and HMF sites within the general BNSF Railway corridor. Discussion of the HST project alternatives begins with a single continuous alignment (the BNSF Alternative) from Fresno to Bakersfield. This alternative most closely aligns with the preferred alignment identified in the Record of Decision (ROD) for the Statewide Program EIR/EIS. Descriptions of the additional five alternative alignments that deviate from the BNSF Alternative for portions of the route then follow. The alternative alignments that deviate from the BNSF Alternative were selected to avoid environmental, land use, or community issues identified for portions of the BNSF Alternative (Figure 3-1).



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

July 28, 2011

Source: URS, 2011

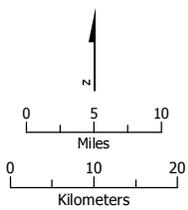
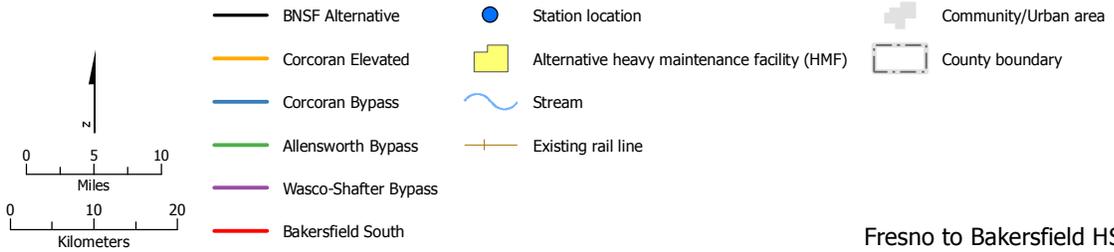


Figure 3-1
Fresno to Bakersfield HST alignment

A. NO PROJECT ALTERNATIVE

Under the No Project Alternative, the HST System would not be built. The No Project Alternative represents the condition of the Fresno to Bakersfield Section as it existed in 2009 (when the Notice of Preparation was issued), and as it would exist without the HST project at the planning horizon (2035). To assess future conditions, it was assumed that all currently known programmed and funded improvements to the intercity transportation system (highway, rail, and transit), and reasonably foreseeable local development projects (with funding sources identified), would be developed by 2035. The No Project Alternative is based on a review of Regional Transportation Plans (RTPs) for all modes of travel, the State of California Office of Planning and Research CEQAnet Database, the Federal Aviation Administration Air Carrier Activity Information System and Airport Improvement Plan grant data, the State Transportation Improvement Program, airport master plans and interviews with airport officials, intercity passenger rail plans, and city and county general plans and interviews with planning officials.

B. BNSF ALTERNATIVE ALIGNMENT

The BNSF Alternative Alignment would extend approximately 114 miles from Fresno to Bakersfield and would lie adjacent to the BNSF Railway route to the extent feasible (Figure 3-1). Minor deviations from the BNSF Railway corridor would be necessary to accommodate engineering constraints, namely wider curves necessary to accommodate the HST (as compared with the existing lower-speed freight line track alignment). The largest of these deviations occurs between approximately Elk Avenue in Fresno County and Nevada Avenue in Kings County. This segment of the BNSF Alternative would depart from BNSF Railway corridor and instead curve to the east on the northern side of the Kings River and away from Hanford, and would rejoin the BNSF Railway corridor north of Corcoran.

Although the majority of the alignment would be at-grade, the BNSF Alternative would include aerial structures in all of the four counties through which it travels. In Fresno County, an aerial structure would carry the alignment over Golden State Boulevard and SR 99 and a second would cross over the BNSF Railway tracks in the vicinity of East Conejo Avenue. The alignment would be at-grade with bridges where it crosses Cole Slough and the Kings River into Kings County.

In Kings County, the BNSF Alternative would be elevated east of Hanford where the alignment would pass over the San Joaquin Valley Railroad and SR 198. The alignment would also be elevated over Cross Creek, and again at the southern end of the city of Corcoran to avoid a BNSF Railway spur. In Tulare County, the BNSF Alternative would be elevated at the crossing of the Tule River and at the crossing of the Alpaugh railroad spur that runs west from the BNSF Railway mainline. In Kern County, the BNSF Alternative would be elevated over Poso Creek and through the cities of Wasco, Shafter, and Bakersfield. The BNSF Alternative would be at-grade through the rural areas between these cities.

The BNSF Alternative Alignment would provide wildlife crossing opportunities by means of a variety of engineered structures. Dedicated wildlife crossing structures would be provided from approximately Cross Creek (Kings County) south to Poso Creek (Kern County) in at-grade portions of the railroad embankment at approximately 0.3-mile intervals. In addition to those structures, wildlife crossing opportunities would be available at elevated portions of the alignment, bridges over riparian corridors, road overcrossings and undercrossings, and drainage facilities (i.e., large diameter [60 to 120 inches] culverts and paired 30-inch culverts). Where bridges, aerial structures, and road crossings coincide with proposed dedicated wildlife crossing structures, such features would serve the function of, and supersede the need for, dedicated wildlife crossing structures.

The preliminary wildlife crossing structure design consists of a modified culvert in the embankment that would support the HST tracks. The typical culvert would be 72 feet long from end to end (crossing structure distance), would span a width of approximately 8 feet (crossing structure width), and would provide 4 feet of vertical clearance (crossing structure height). Additional wildlife crossing structure designs could include circular or elliptical pipe culverts, and larger (longer) culverts with crossing structure distances of up to 100 feet. The design of the wildlife crossing structures may change depending on site-specific conditions and engineering considerations.

C. CORCORAN ELEVATED ALTERNATIVE ALIGNMENT

The Corcoran Elevated Alternative Alignment would be the same as the corresponding section of the BNSF Alternative Alignment from approximately Idaho Avenue south of Hanford to Avenue 136, except that it would pass through the city of 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 at 4th Avenue. Dedicated wildlife crossing structures would be provided from approximately Cross Creek south to Avenue 136 in at-grade portions of the railroad embankment at intervals of approximately 0.3 mile. Dedicated wildlife crossing structures would also be placed between 100 and 500 feet to the north and south of both the Cross Creek and Tule River crossings.

This alternative alignment would cross SR 43 and pass over several local roads on an aerial structure. Santa Fe Avenue would be closed at the HST right-of-way.

D. CORCORAN BYPASS ALTERNATIVE ALIGNMENT

The Corcoran Bypass Alternative Alignment would run parallel to the BNSF Alternative Alignment from approximately Idaho Avenue south of Hanford, to approximately Nevada Avenue north of Corcoran. The Corcoran Bypass Alternative would then diverge from the BNSF Alternative and swing east of Corcoran, rejoining the BNSF Railway route at Avenue 136. The total length of the Corcoran Bypass would be approximately 21 miles.

Similar to the corresponding section of the BNSF Alternative, most of the Corcoran Bypass Alternative would be at-grade. However, one elevated structure would carry the HST over Cross Creek, and another would travel over SR 43, the BNSF Railway, and the Tule River. Dedicated wildlife crossing structures would be provided from approximately Cross Creek south to Avenue 136 in at-grade portions of the railroad embankment at intervals of approximately 0.3 mile. Dedicated wildlife crossing structures would also be placed between 100 and 500 feet to the north and south of each of the Cross Creek and Tule River crossings.

This alternative alignment would cross SR 43, Whitley Avenue/SR 137, and several local roads. SR 43, Waukena Avenue, and Whitley Avenue would be grade-separated from the HST with an overcrossing/undercrossing; other roads would be closed at the HST right-of-way.

E. ALLENSWORTH BYPASS ALTERNATIVE ALIGNMENT

The Allensworth Bypass Alternative Alignment would pass west of the BNSF Alternative, avoiding Allensworth Ecological Reserve and the Allensworth State Historic Park. This alignment was refined over the course of environmental studies to reduce impacts to wetlands and orchards. The total length of the Allensworth Bypass Alternative Alignment would be approximately 19 miles, beginning at Avenue 84 and rejoining the BNSF Alternative at Elmo Highway.

The Allensworth Bypass Alternative would be constructed on an elevated structure only where the alignment crosses the Alpaugh railroad spur and Deer Creek. The alignment would pass through Tulare County mostly at-grade. Dedicated wildlife crossing structures would be provided

from approximately Avenue 84 to Poso Creek at intervals of approximately 0.3 mile. Dedicated wildlife crossing structures would also be placed between 100 and 500 feet to the north and south of both the Deer Creek and Poso Creek crossings.

The Allensworth Bypass would cross County Road J22, Scofield Avenue, Garces Highway, Woollomes Avenue, Magnolia Avenue, Palm Avenue, Pond Road, Peterson Road, and Elmo Highway. Woollomes Avenue and Elmo Highway would be closed at the HST right-of-way, while the other roads would be realigned and/or grade-separated from the HST with overcrossings.

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

F. WASCO-SHAFTER BYPASS ALTERNATIVE ALIGNMENT

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

The Wasco-Shafter Bypass was refined to avoid the Occidental Petroleum tank farm as well as a historic property potentially eligible for listing on the National Register of Historic Places. The Wasco-Shafter Bypass would cross SR 43, SR 46, East Lerdo Highway, and several local roads. SR 46, Kimberlina Road, Shafter Avenue, Beech Avenue, Cherry Avenue, and Kratzmeyer Road would be grade-separated from the HST with overcrossings/undercrossings; other roads would be closed at the HST right-of-way.

G. BAKERSFIELD SOUTH ALTERNATIVE ALIGNMENT

From the Rosedale Highway (State Route [SR] 58) in Bakersfield, the Bakersfield South Alternative Alignment would run parallel to the BNSF Alternative Alignment at varying distances to the north. At Chester Avenue, the Bakersfield South Alternative curves south, and runs parallel to California Avenue. As with the BNSF Alternative, the Bakersfield South Alternative would begin at grade and become elevated starting at Palm Avenue through Bakersfield to its terminus at the southern end of the Bakersfield station tracks. The elevated section would range in height from 50 to 70 feet. Dedicated wildlife crossing structures would be placed between 100 and 500 feet to the north and south of the Kern River.

The Bakersfield South Alternative would be approximately 9 miles long and would cross the same roads as the BNSF Alternative. This alternative includes the Bakersfield Station–South Alternative.

3.2.2 Station Alternatives

The Fresno to Bakersfield HST Section would include a new station in Fresno and a new station in Bakersfield. An optional third station, the Kings/Tulare Regional Station, is under consideration.

Stations would be designed to address the purpose of the HST, particularly to allow for intercity travel and connection to local transit, airports, and highways. Stations would include the station platforms, a station building and associated access structure, as well as lengths of bypass tracks

to accommodate local and express service at the stations. All stations would contain the following elements:

- Passenger boarding and alighting platforms.
- Station head house with ticketing, waiting areas, passenger amenities, vertical circulation, administration and employee areas, and baggage and freight-handling service.
- Vehicle parking (short-term and long-term) and “kiss and ride”¹.
- Motorcycle/scooter parking.
- Bicycle parking.
- Waiting areas and queuing space for taxis and shuttle buses.
- Pedestrian walkway connections.

A. FRESNO STATION ALTERNATIVES

Two alternative sites are under consideration for the Fresno Station.

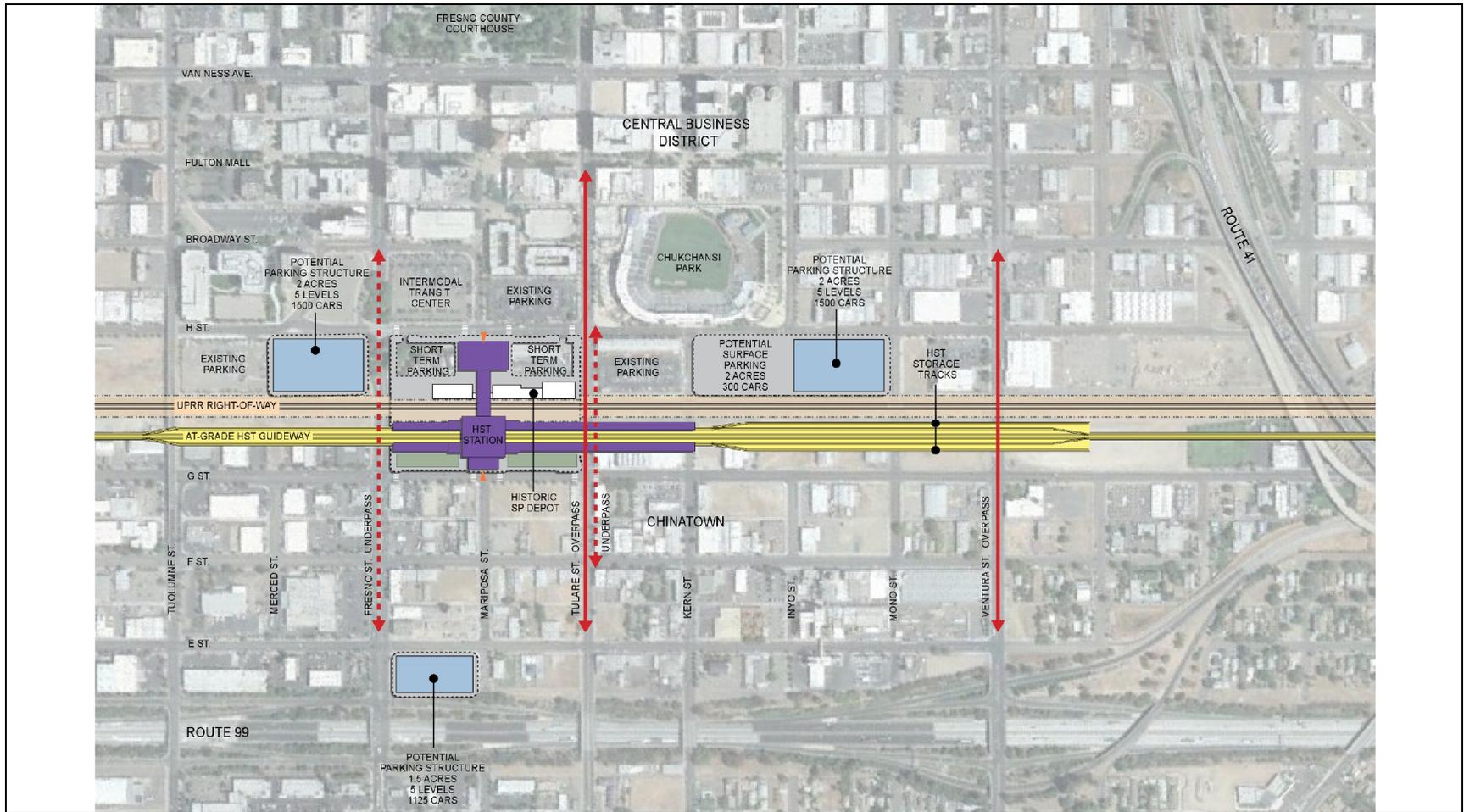
Fresno Station–Mariposa Alternative

The Fresno Station–Mariposa Alternative would be in downtown Fresno, less than 0.5 mile east of SR 99 on the BNSF Alternative. 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 Union Pacific Railroad (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 tracks, and an additional public concourse area. Entrances would be located at both G and H streets. A conceptual site plan of the Fresno Station–Mariposa Alternative is provided in Figure 3-2.

The majority of station facilities would be east of the UPRR tracks. The station and associated facilities would occupy approximately 20.5 acres, including 13 acres dedicated to the station, short term parking, and kiss-and-ride accommodations. A new intermodal facility, not a part of this proposed undertaking, would be located on the parcel bordered by Fresno Street to the north, Mariposa Street to the south, Broadway Street to the east, and H Street to the west (designated “Intermodal Transit Center” in Figure 3-2). Among other uses, the intermodal facility would accommodate the Greyhound facilities and services that would be relocated from the northwestern corner of Tulare and H streets.

¹ “Kiss and ride” refers to the station area where riders may be dropped off or picked up before or after riding the HST.



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

July 28, 2011



NOT TO SCALE

- STATION ENTRANCE
- KEY PEDESTRIAN LINKAGE
- OPEN SPACE
- STATION CAMPUS BOUNDARY
- RIGHT-OF-WAY BOUNDARY
- ROADWAY MODIFICATION

Figure 3-2
Fresno Station-Mariposa Alternative

The site proposal includes the potential for up to three parking structures occupying a total of approximately 5.5 acres. Two of the three potential parking structures would each sit on 2 acres, and each would have a capacity of approximately 1,500 cars. The third parking structure would be slightly smaller in footprint (1.5 acres), with five levels and a capacity of approximately 1,100 cars. An additional 2-acre surface parking lot would provide approximately 300 parking spaces.

Under this alternative, the historic Southern Pacific Railroad depot and associated Pullman Sheds would remain intact. While these structures could be used for station-related purposes, they are not assumed to be functionally required for the HST project and are thus, not proposed to be physically altered as part of the project. The Mariposa station building footprint has been configured to preserve views of the historic railroad depot and associated sheds.

Fresno Station–Kern Alternative

The Fresno Station–Kern Alternative would be similarly situated in downtown Fresno and would be located on the BNSF Alternative, centered on Kern Street between Tulare Street and Inyo Street (Figure 3-3). This station would include the same components as the Fresno Station–Mariposa Alternative, but under this alternative, the station would not encroach on the historic Southern Pacific Railroad depot just north of Tulare Street and would not require relocation of existing Greyhound facilities.

The station building would be approximately 75,000 square feet, with a maximum height of approximately 64 feet. The station building would have two levels housing the same facilities as the Fresno Station–Mariposa Alternative (UPRR tracks, HST tracks, mezzanine, and station office). The approximately 18.5-acre site would include 13 acres dedicated to the station, bus transit center, short term parking, and kiss-and-ride accommodations.

Two of the three potential parking structures would each sit on 2 acres, and each would have a capacity of approximately 1,500 cars. The third structure would be slightly smaller in footprint (1.5 acres) and have a capacity of approximately 1,100 cars. Surface parking lots would provide approximately 600 additional parking spaces. Like the Fresno Station–Mariposa Alternative, the majority of station facilities under the Kern Alternative would be sited east of the HST tracks.

B. KINGS/TULARE REGIONAL STATION

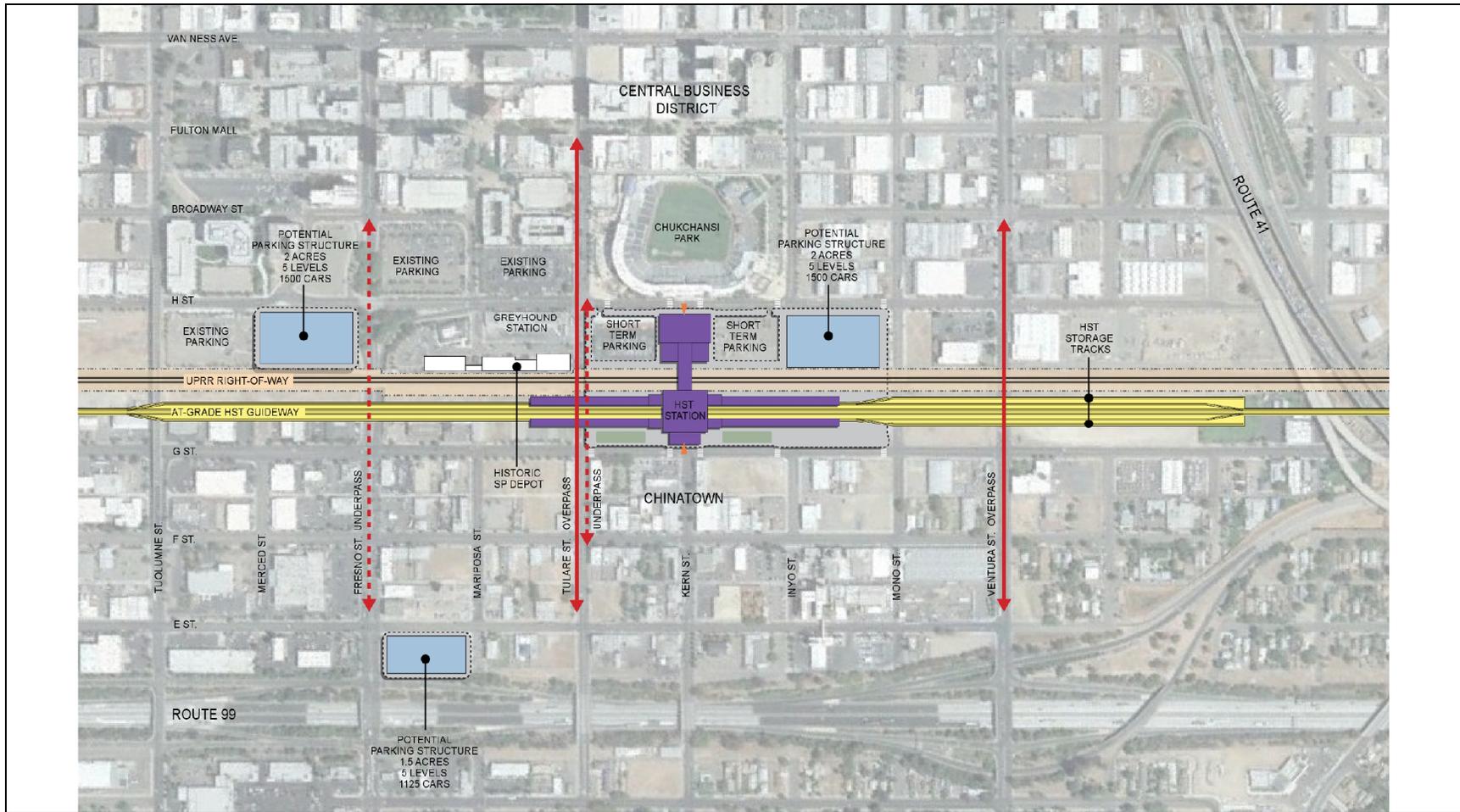
The potential Kings/Tulare Regional Station would be located east of SR 43 (Avenue 8) and north of the Cross Valley Rail Line (San Joaquin Valley Railroad) (Figure 3-4). The station building would be approximately 40,000 square feet with a maximum height of approximately 75 feet. The entire site would be approximately 27 acres, including 8 acres designated for the station, bus transit center, short-term parking, and kiss-and-ride. An additional approximately 19 acres would support a surface parking lot with approximately 1,600 spaces.

C. BAKERSFIELD STATION ALTERNATIVES

Two options are under consideration for the Bakersfield Station.

Bakersfield Station–North Alternative

The Bakersfield Station–North Alternative would be located at the corner of Truxtun and Union Avenue/SR 204 along the BNSF Alternative Alignment (Figure 3-5). 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 trains running along the



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

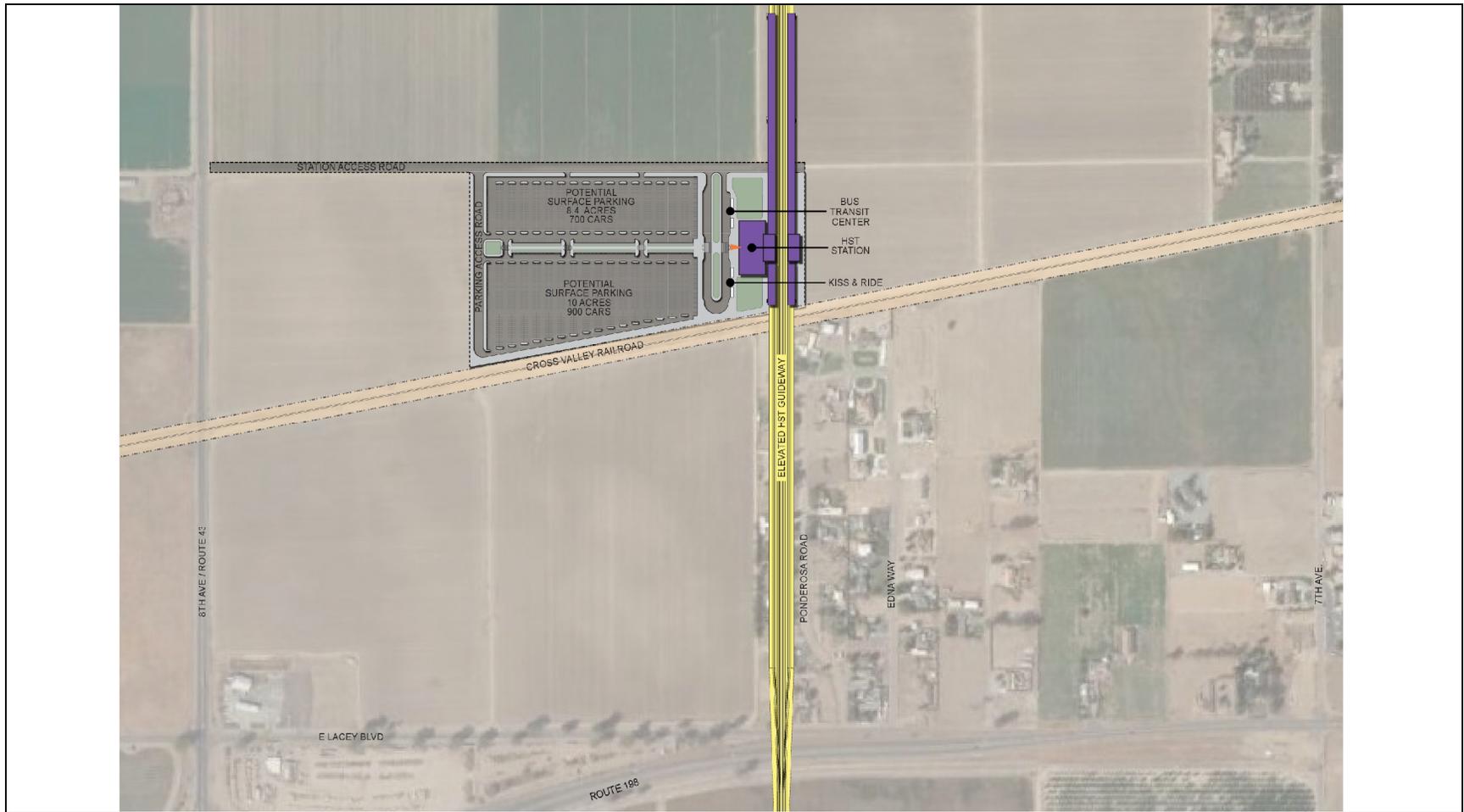
July 28, 2011

- | | | | |
|--|------------------------|--|-------------------------|
| | STATION ENTRANCE | | STATION CAMPUS BOUNDARY |
| | KEY PEDESTRIAN LINKAGE | | RIGHT-OF-WAY BOUNDARY |
| | OPEN SPACE | | ROADWAY MODIFICATION |



NOT TO SCALE

Figure 3-3
Fresno Station-Kern Alternative



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

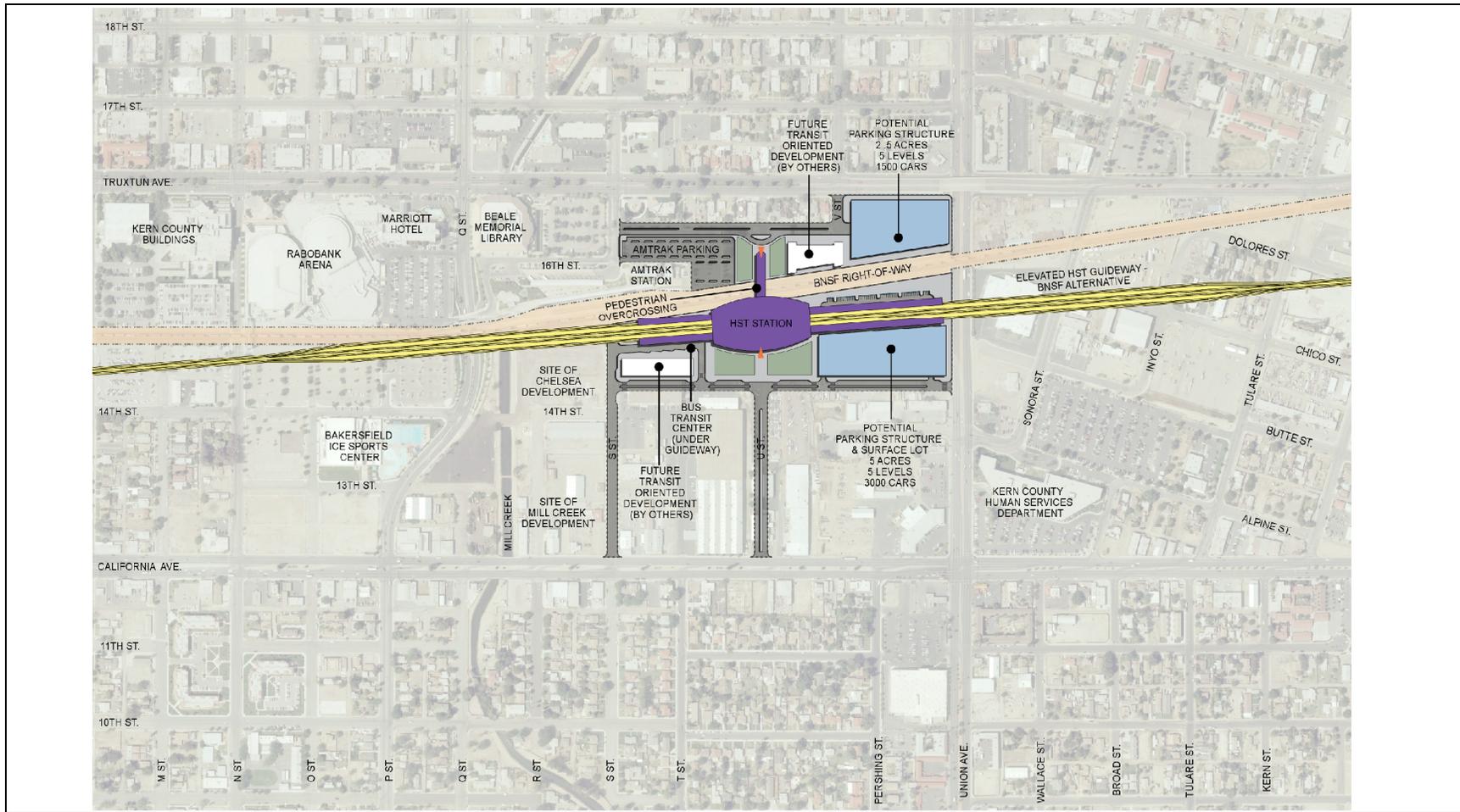
July 28, 2011



NOT TO SCALE

- | | | | |
|---|------------------------|---|-------------------------|
|  | STATION ENTRANCE |  | STATION CAMPUS BOUNDARY |
|  | KEY PEDESTRIAN LINKAGE |  | RIGHT-OF-WAY BOUNDARY |
|  | OPEN SPACE |  | ROADWAY MODIFICATION |

Figure 3-4
Kings/Tulare Regional Station (potential)



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

July 28, 2011



NOT TO SCALE

- | | | | |
|---|------------------------|---|-------------------------|
|  | STATION ENTRANCE |  | STATION CAMPUS BOUNDARY |
|  | KEY PEDESTRIAN LINKAGE |  | RIGHT-OF-WAY BOUNDARY |
|  | OPEN SPACE |  | ROADWAY MODIFICATION |

Figure 3-5
Bakersfield Station-North Alternative

BNSF Railway line. The second level would include the mezzanine; the HST platforms and guideway would pass through the third level. Under this alternative, the station building would be located at the western end of the parcel footprint. Two new boulevards would be constructed to access the station and the supporting facilities.

The 19-acre site would designate 11.5 acres for the station, bus transit center, short-term parking, and kiss-and-ride. An additional 7.5 acres would house two parking structures that together would accommodate approximately 4,500 cars. The bus transit center and the smaller of the two parking structures (2.5 acres) would be located north of the HST tracks. The BNSF Railway line would run through the station at-grade, with the HST alignment running on an elevated guideway.

Bakersfield Station–South Alternative

The Bakersfield Station–South Alternative would be similarly located in downtown Bakersfield, but situated on the Bakersfield South Alternative Alignment along Union and California avenues, just south of the BNSF Railway right-of-way (Figure 3-6). The two-level station building would be 51,000 square feet, with a maximum height of approximately 95 feet. The first floor would house the concourse, and the platforms and the guideway would be on the second floor. Access to the site would be from two new boulevards, one branching off from California Avenue and the other from Union Avenue.

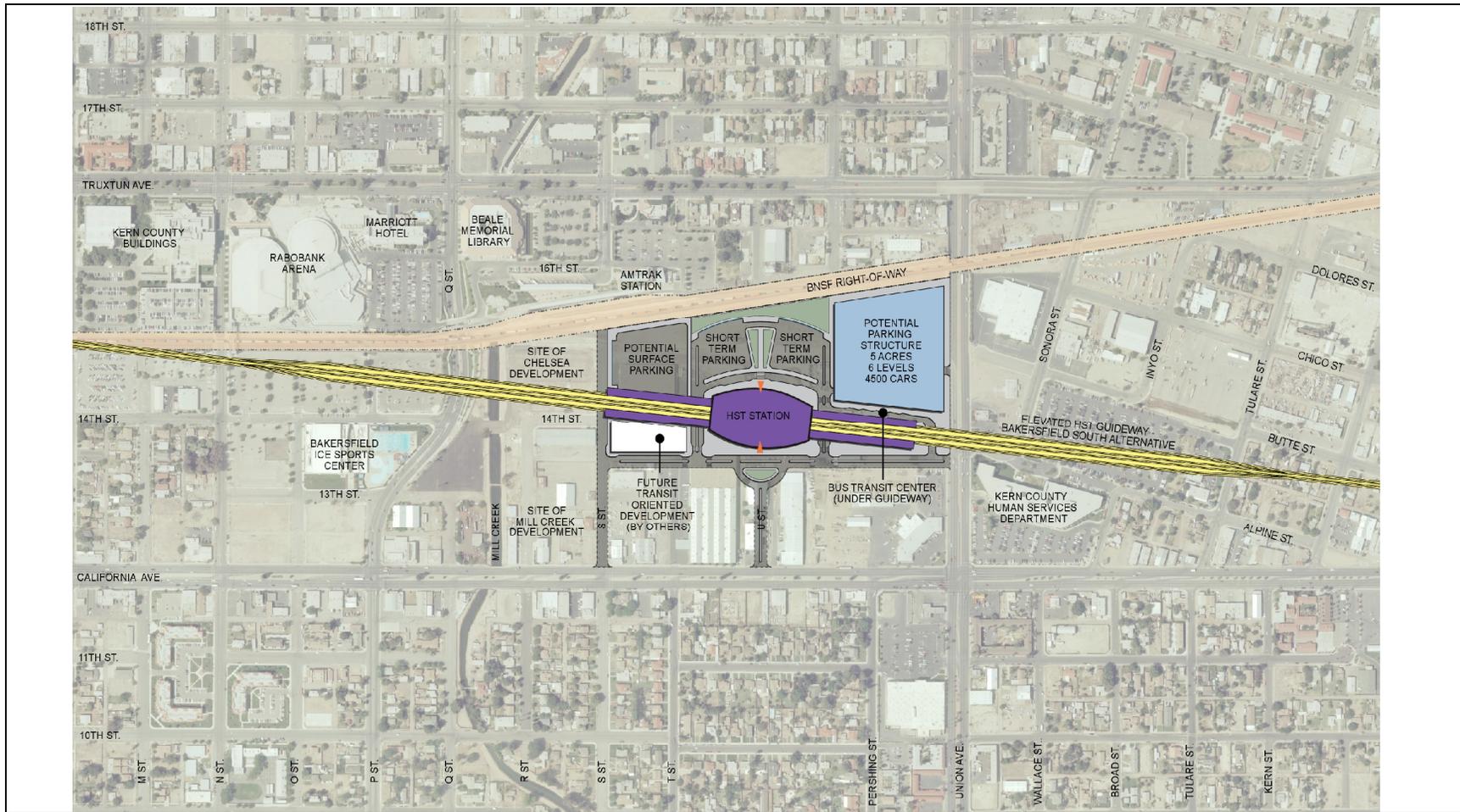
The entire site would be 20 acres, with 15 acres designated for the station, bus transit center, short-term parking, and kiss-and-ride. An additional 5 acres would support one six-level parking structure with a capacity of approximately 4,500 cars. Unlike the Bakersfield Station–North Alternative, this station site would be located entirely south of the BNSF Railway right-of-way.

3.2.3 Heavy Maintenance Facility

One HST heavy vehicle maintenance and layover facility would be sited along either the Merced to Fresno or Fresno to Bakersfield HST section. Before the startup of initial operations, the HMF would support the assembly, testing, commissioning, and acceptance of high-speed rolling stock. During regular operations, the HMF would provide maintenance and repair functions, activation of new rolling stock, and train storage. The HMF concept plan indicates that the site would encompass approximately 150 acres to accommodate shops, tracks, parking, administration, roadways, power substation, and storage areas. The HMF would include tracks that allow trains to enter and leave under their own electric power or under tow. The HMF would also have management, administrative, and employee support facilities. Up to 1,500 employees could work at the HMF during any 24-hour period.

The Authority has determined that one HMF would be located between Merced and Bakersfield; however, the specific location has not yet been finalized. Five HMF sites are under consideration in the Fresno to Bakersfield Section (Figure 3-1):

- The Fresno Works–Fresno HMF site lies within the southern limits of the city of Fresno and county of Fresno next to the BNSF Railway right-of-way between SR 99 and Adams Avenue. Up to 590 acres are available for the facility at this site.
- The Kings County–Hanford HMF site lies southeast of the city of Hanford, adjacent to and east of SR 43, between Houston and Idaho Avenues. Up to 510 acres are available at the site.
- The Kern Council of Governments–Wasco HMF site lies directly east of Wasco between SR 46 and Filburn Street. Up to 420 acres are available for the facility at this site.



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

July 28, 2011



NOT TO SCALE

- | | | | |
|---|------------------------|---|-------------------------|
|  | STATION ENTRANCE |  | STATION CAMPUS BOUNDARY |
|  | KEY PEDESTRIAN LINKAGE |  | RIGHT-OF-WAY BOUNDARY |
|  | OPEN SPACE |  | ROADWAY MODIFICATION |

Figure 3-6
Bakersfield Station-South Alternative

- The Kern Council of Governments–Shafter East HMF site lies in the city of Shafter between Burbank Street and 7th Standard Road to the east of the BNSF Railway right-of-way. This site has up to 490 acres available for the facility.
- The Kern Council of Governments–Shafter West HMF site lies in the city of Shafter between Burbank Street and 7th Standard Road to the west of the BNSF Railway right-of-way. This site has up to 480 acres available for the facility.

3.3 Power

To provide power for the HST, high-voltage electricity at 115 kV and above would be drawn from the utility grid and transformed down to 25,000 volts. The voltage would then be distributed to the trains via an overhead catenary system. The project would not include the construction of a separate power source, although it would include the extension of power lines to a series of power substations positioned along the HST corridor. The transformation and distribution of electricity would occur in three types of stations:

- Traction power supply stations (TPSSs) transform high-voltage electricity supplied by public utilities to the train operating voltage. TPSSs would be sited adjacent to existing utility transmission lines and the HST right-of-way, and would be located approximately every 30 miles along the route. Each TPSS would be 200 feet by 160 feet.
- Switching stations connect and balance the electrical load between tracks, and switch power on or off to tracks in the event of a power outage or emergency. Switching stations would be located midway between, and approximately 15 miles from, the nearest TPSS. Each switching station would be 120 feet by 80 feet and located adjacent to the HST right-of-way.
- Paralleling stations, or autotransformer stations, provide voltage stabilization and equalize current flow. Paralleling stations would be located every 5 miles between the TPSSs and the switching stations. Each paralleling station would be 100 feet by 80 feet and located adjacent to the HST right-of-way.

3.4 Project Construction

The construction plan developed by the Authority and described below would maintain eligibility for eligibility for federal American Recovery and Reinvestment Act (ARRA) funding. For the Fresno to Bakersfield Section, specific construction elements would include at-grade, below-grade, and elevated track, track work, grade crossings, and installation of a positive train control system. At-grade track sections would be built using conventional railroad construction techniques. A typical sequence includes clearing, grubbing, grading, and compacting of the rail bed; application of crushed rock ballast; laying of track; and installation of electrical and communications systems.

The precast segmental construction method is proposed for elevated track sections. In this construction method, large concrete bridge segments would be mass-produced at an onsite temporary casting yard. Precast segments would then be transported atop the already completed portions of the elevated track and installed using a special gantry crane positioned on the aerial structure. Although the precast segmental method is the favored technique for aerial structure construction, other methods may be used, including cast-in-place, box girder, or precast span-by-span techniques.

Pre-construction activities would be conducted during final design and include geotechnical investigations, identification of staging areas, initiation of site preparation and demolition, relocation of utilities, and implementation of temporary, long-term, and permanent road closures.

Additional studies and investigations to develop construction requirements and worksite traffic control plans would be conducted as needed.

Major construction activities for the Fresno to Bakersfield Section would include earthwork and excavation support systems construction, bridge and viaduct construction, railroad systems construction (including trackwork, traction electrification, signaling, and communications), and station construction. During peak construction periods, work is envisioned to be underway at several locations along the route, with overlapping construction of various project elements. Working hours and workers present at any time will vary depending on the activities being performed.

The Authority intends to build the project using sustainable methods that:

- Minimize the use of nonrenewable resources.
- Minimize the impacts on the natural environment.
- Protect environmental diversity.
- Emphasize the use of renewable resources in a sustainable manner.

The overall schedule for construction is provided in Table 3-1.

Table 3-1
 Construction Schedule

Activity	Tasks	Duration
Mobilization	Safety devices and special construction equipment mobilization	March–October 2013
Site Preparation	Utilities relocation; clearing/grubbing right-of-way; establishment of detours and haul routes; preparation of construction equipment yards, stockpile materials, and precast concrete segment casting yard	April–August 2013
Earthmoving	Excavation and earth support structures	August 2013–August 2015
Construction of Road Crossings	Surface street modifications, grade separations	June 2013–December 2017
Construction of Elevated Structures	Viaduct and bridge foundations, substructure, and superstructure	June 2013–December 2017
Track Laying	Includes backfilling operations and drainage facilities	January 2014–August 2017
Systems	Train control systems, overhead contact system, communication system, signaling equipment	July 2016–November 2018
Demobilization	Includes site cleanup	August 2017–December 2019
HMF Phase 1 ^a	Test track assembly and storage	August–November 2017
Maintenance-of-Way Facility	Potentially co-located with HMF ^a	January–December 2018

Table 3-1
 Construction Schedule

Activity	Tasks	Duration
HMF Phase 2 ^a	Test track light maintenance facility	June–December 2018
HMF Phase 3 ^a	Heavy Maintenance Facility	January–July 2021
HST Stations	Demolition, site preparation, foundations, structural frame, electrical and mechanical systems, finishes	Fresno: December 2014–October 2019 Kings/Tulare Regional: TBD ^b Bakersfield: January 2015–November 2019
Notes: ^a The HMF would be sited along either the Merced to Fresno or Fresno to Bakersfield section. ^b ROW would be acquired for the Kings/Tulare Regional Station; however, the station itself would not be part of initial construction. Acronym: TBD = to be determined		

Chapter 4.0

Description of the APE

4.0 Description of the APE

The APE for historic architectural resources was established in consultation with project engineers (Arup) and the Authority to ensure all historic architectural resources, potentially directly or indirectly affected, were included in the APE. The APE will be revised as planning proceeds to reflect refinements to the proposed rail alignment alternatives and as engineering revisions become available. Maps showing the current APE are provided in Appendix A.

The APE for historic architectural resources was defined according to the parameters of Attachment B of the HST Section 106 PA (see Attachment D for the Section 106 PA for the HST project). All parcels within the APE that contain buildings, structures, or objects more than 50 years of age at the time of the survey were subject to intensive-level study or were subject to streamlined documentation as defined in the HST Section 106 PA (this latter group of properties are referred to as "streamlined documentation properties"). The historic architectural resources APE for the Fresno to Bakersfield HST Section includes all legal parcels intersected by the proposed right-of-way, construction of proposed ancillary features (such as grade separations or maintenance facilities), and construction staging areas. If historic architectural resources existed on a large rural parcel within 150 feet (46 meters) of the proposed HST right-of-way, or if it was determined that the resources on that parcel were otherwise potentially affected by the project, the entire parcel was included in the APE. If historic architectural resources on a large rural parcel were more than 150 feet (46 meters) away from the proposed HST at-grade right-of-way, and were otherwise not potentially affected by the project, the APE boundary was set at 150 feet (46 meters) from the right-of-way. In these cases, resources outside the APE on that parcel did not require further survey. This methodology for establishing the Historic Architectural APE follows both standard practices for the discipline and Attachment B of the Section 106.

The historic architectural resources APE also includes parcels adjacent to those intersected by the proposed HST project if the historic architectural resources on that parcel may be indirectly affected. For the HST project, a key phrase in the APE definition in the Section 106 regulations is "may cause alterations in the character or use of historic properties" because some sections of the undertaking may introduce rail service where none existed during the historic era, for example, along a highway or through agricultural fields. For such sections, the undertaking is more likely to change the character or use of a historic property, and the APE was drawn to include legal parcels or historic architectural resources that might be affected by changes to their setting and the introduction of visual or audible elements. Other potential effects that were considered when delineating the APE included, but were not limited to, physical damage or destruction of all or part of a property; physical alterations; moving or realigning property; isolating a property from its setting; visual, audible, or atmospheric intrusions; shadow effects; damage from vibrations; and change in access or use.

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Chapter 5.0

Summary of Identification Effort

5.0 Summary of Identification Effort

Historic architectural resources consist of buildings, structures, and/or objects. These resources can exist singly or as part of a larger district, system, or historic cultural landscape. In addition to buildings, these resources include engineering features (e.g., dams, canals, railroads), or objects, such as statues, gateposts, or fountains. When historic architectural resources appear to be eligible for listing in the NRHP, or are determined eligible for listing, or have been listed, they are called *historic properties*. CEQA and the CEQA guidelines use the term *historical resources* for these properties. For the purposes of this report, which will be summarized in the EIR/EIS for the project, the term *historic properties* will be used to refer to resources that are listed, determined eligible for, or that appear eligible for listing in the NRHP and *historical resources* will refer to those eligible for listing in the CRHR only. Those not eligible for listing in the NRHP and CRHR will be referred to as *historic architectural resources*.

5.1 Identification Effort

Architectural historians, meeting the professional qualifications under the Secretary of the Interior's Standards for Architectural History, and meeting the definition of QI according to the HST Section 106 PA, conducted the identification and evaluation of historic architectural resources for the Fresno to Bakersfield HST Section.

The focus of this HASR is to report on historic architectural resources identified within the APE that are more than 50 years old and that do not appear to be eligible for listing in the NRHP or CRHR. Known historic properties and properties that appear eligible for listing in the NRHP or CRHR are reported separately in the HPSR document in accordance with the HST Section 106 PA. URS Corporation archaeologists conducted Information Center records searches for this project and shared the results regarding historic architectural resources with the QIs studying those resources. The results regarding resources evaluated in previous surveys and found not eligible for listing in either the NRHP or CRHR were incorporated in this HPSR document in accordance with the HST Section 106 PA. Any additional information about historic properties identified within the APE will be included in subsequent amendments to the HASR or HPSR, as appropriate.

In addition to the relevant records search results regarding historic architectural resources, QIs reviewed following references for historic architectural resources:

- National Register of Historic Places—Listed Properties and Determined Eligible Properties
- Directory of Properties in the Historic Property Data Files for Kern, Kings, Tulare, and Madera Counties (OHP 2009).
- California Inventory of Historic Resources (OHP 1976).
- California Points of Historical Interest (OHP 1992).
- California Historical Landmarks (OHP 1996).
- Sanborn Maps in urban areas (see list of maps under Sanborn Map and Publishing Company in Chapter 9 [References]).
- Historic U.S. Geological Survey (USGS) quadrangles (see list of maps under USGS in Chapter 9 [References]).

The Information Center did not have many historic architectural resources in its files that are located within the records search area. In total, the records search identified only 11 historic architectural resources in the search area, which was a 500-foot (152-meter) radius of the current alignment centerline. Of these 11 resources, only 1 was listed in the NRHP: the Shafter Railroad Depot in Kern County. The other historic properties identified in the records search were three canals found locally eligible and a State Historic Landmark marker. The other six resources identified in the search results had been found to be not eligible for listing in the NRHP, had been

destroyed, or had not been fully evaluated. Those not fully evaluated were added to the HASR survey population.

In addition to the Information Center results, QIs also reviewed the California Historical Resources Information System (CHRIS) lists for Fresno, Kings, Tulare, and Kern counties, as well as previous cultural resources reports found in local planning offices and libraries. This effort identified 100 properties that were previously found ineligible for the NRHP and/or CRHR and that do not require further study. (These properties are listed in Table 7-2, below.) Lastly, review of the Caltrans Structure Maintenance and Investigations (Caltrans 2011a, 2011b) identified 12 state-owned highway bridges built in 1960, or before, within the project limits. None of these structures are eligible for listing in the NRHP or the CRHR (Category 5). These bridges are listed in Table 7-3, below.)

Because of the scope and magnitude of the proposed project, the historical context of the project corridor vicinity, and the limited results of the Information Center records search, extensive field survey and background research was undertaken to thoroughly identify historic architectural resources within the APE. The project QIs noted any additional potential historic architectural resources during fieldwork, reviewed local registers and lists of historic properties while conducting research in local repositories, and consulted with local government planning staff to thoroughly account for previously identified historic properties. All previously identified eligible properties are reported separately in the HPSR.

A letter informing parties interested in the historic architectural resources of this project was sent on June 23, 2010. The recipients of the letters include such interested parties as area planning agencies, local government planning departments and/or historic preservation programs, historical societies, and museums, in compliance with the consultation requirements of NHPA and its implementing regulations (36 Code of Federal Regulations [CFR] Part 800). Copies of these letters are provided in Appendix E. All comments and responses received will be included in subsequent revisions of this HASR, and any future correspondence submitted and received will also be included with the HASR at that time. Moreover, future consultation with the cities of Fresno and Bakersfield regarding historic properties will be included. Copies of this correspondence will also be attached to the separate HPSR document.

5.2 Field and Research Methods

Historians and architectural historians (QIs) conducted all intensive-level field surveys and field research for preparation of this draft HASR during the periods between March and May of 2010, and from March through July of 2011.

For this HASR, and consistent with the HST Section 106 PA, JRP conducted an intensive-level survey of historic architectural resources within the APE that were 50 years of age, or older, at the time of survey and that were not exempt from study under the HST Section 106 PA. All surveys were conducted from public thoroughfares. Property owners were contacted to provide entry if the property was not adequately visible from the public road. All access to private property was arranged following the project protocol for such contact and the inventory was completed in each case.

Once the architectural APE was defined (see Chapter 4), JRP staff conducted a reconnaissance-level survey of the area to account in the field for all buildings, structures, and objects found within the APE. This reconnaissance-level survey took into account known resources (addressed in the HPSR), and identified those historic architectural resources that would require survey for the HASR, specifically those buildings, structures, or objects that not only appeared to be more than 50 years old, but also appeared to largely retain historic integrity. These resources were then subject to intensive-level survey, including recordation and evaluation on DPR 523 forms,

which are presented in Appendix B. Built-environment resources that met the HST Section 106 definition of “streamlined documentation properties” are those resources that are more than 50 years old that have been substantially altered. Because they do not retain integrity, they were not subject to full evaluation on DPR 523 forms. Documentation for these resources is presented in Appendix C.

JRP conducted field research in conjunction with the reconnaissance-level survey for the HASR and refined and redirected research efforts in accordance with the results of that survey. JRP proceeded with property-specific research once identification of the HASR survey population was complete. To confirm specific construction dates, and to narrow estimated dates of construction, background research was done through the First American Real Estate Solutions commercial database to review current county property data, as well as through review of historic plat maps and current USGS topographic maps, county assessor records, historic aerial photographs, and other documents. This field reconnaissance and preliminary research helped to determine which resources were built in or before 1960.

The historical overview presented in this report and the property-specific research conducted for the significance evaluations were both based on a wide range of primary and secondary material gathered by QIs (JRP historians and architectural historians). Research on the historic themes and survey population was conducted in both archival and published records including, but not limited to: Kern County Museum (Bakersfield); Beale Memorial Library (Bakersfield); Fresno Historic Preservation Program, Fresno Planning Office; California State University, Fresno, Special Collections; Kings County Assessor; Tulare County Assessor; Kern County Assessor and Recorder; California Geological Survey Library; California State Archives and Library; Bancroft Library (University of California, Berkeley); Shields Library (University of California, Davis); maps and plans obtained from Caltrans District 6 (Fresno); Caltrans Transportation Library and History Center (Sacramento). JRP also reviewed CHRIS listings, California Historical Landmarks and Points of Historical Interest publications and updates, and National Register of Historic Places, California Register of Historical Resources, and local register listings. JRP also used published and digital versions of U.S. Census Bureau information, including population schedules (1850–1930) and agricultural schedules (1850–1880). In addition, JRP staff reviewed previous cultural resources reports, historic-period maps, aerial photography, local- and state-level historical resource lists, public documents such as deeds and assessment records and city directories, and various newspaper and journal articles.