CALIFORNIA HIGH-SPEED TRAIN

Program Environmental Impact Report/Environmental Impact Statement

Bakersfield to Los Angeles

SECTIONS 4(F) AND 6(F) TECHNICAL EVALUATION

January 2004

Prepared for:

California High-Speed Rail Authority

U.S. Department of Transportation
Federal Railroad Administration

CALIFORNIA HIGH SPEED RAIL AUTHORITY

U.S. Department of Transportation
Federal Railroad Administration

CALIFORNIA HIGH-SPEED TRAIN PROGRAM EIR/EIS

Bakersfield to Los Angeles Sections 4(f) and 6(f) Technical Evaluation

***Prepared by*:**

P&D Consultants, Inc.

999 Town and Country Road, 4th Floor
Orange, CA 92868
Sylvia Salenius, AICP, Project Manager
Christine Huard-Spencer, Task Leader

January 2004

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

ACRONYMS

AUTHORITY	California High-Speed Rail Authority
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
COG	Council of Governments
DOI	United States Department of the Interior
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EPA	United States Environmental Protection Agency
FAA	Federal Aviation Administration
FHWA	Federal Highway Administration
FRA	Federal Railroad Administration
FTA	Federal Transit Administration
GIS	Geographic Information System
HST	High Speed Train
HUD	Housing and Urban Development
KM/H	Kilometers per hour
LAUS	Los Angeles Union Station
LOSSAN	Los Angeles to San Diego
MPH	miles per hour
MTA	Metropolitan Transportation Authority
NEPA	national Environmental Policy Act
NRHP	National Register of Historic Places
RTPs	Regional Transportation Plan, Plans
STIP	State Transportation Improvement Plan
USAC	United States Army Corps Of Engineers
U.S.C.	United States Code
USDA	United States Department Of Agricultures
USFWS	United States Fish And Wildlife Service

1.0 INTRODUCTION

The California High-Speed Rail Authority (Authority) was created by the Legislature in 1996 to develop a plan for the construction, operation, and financing of a statewide, intercity high-speed passenger train system.[1] After completing a number of initial studies over the past six years to assess the feasibility of a high-speed train system in California and to evaluate the potential ridership for a variety of alternative corridors and station areas, the Authority recommended the evaluation of a proposed high-speed train (HST) system as the logical next step in the development of California's transportation infrastructure. The Authority does not have responsibility for other intercity transportation systems or facilities, such as expanded highways, or improvements to airports, passenger rail or transit used for intercity trips.

The Authority adopted a *Final Business Plan* in June 2000, which reviewed the economic feasibility of a 1,127-kilometer-long (700-mile-long) HST system. This system would be capable of speeds in excess of 321.8 kilometers per hour (200 miles per hour [mph]) on a dedicated, fully grade-separated track with state-of-the-art safety, signaling, and automated train control systems. The system would connect and serve the major metropolitan areas of California, extending from Sacramento and the San Francisco Bay Area, through the Central Valley, to Los Angeles and San Diego. The HST system is projected to carry a minimum of 42 million passengers annually (32 million intercity trips and 10 million commuter trips) by the year 2020.

Following the adoption of the Business Plan, the appropriate next step for the Authority to take in the pursuit of an HST system is to satisfy the environmental review process required by federal and state laws which will in turn enable public agencies to select and approve an HST system, define mitigation strategies, obtain necessary approvals, and obtain financial assistance necessary to implement an HST system. For example, the Federal Railroad Administration (FRA) may be requested by the Authority to issue a *Rule of Particular Applicability*, which establishes safety standards for HST systems for speeds over 200 mph, and for the potential shared use of rail corridors.

The Authority is both the project sponsor and the lead agency for purposes of the California Environmental Quality Act (CEQA) requirements. The Authority has determined that a Program Environmental Impact Report (EIR) is the appropriate CEQA document for the project at this conceptual stage of planning and decision-making, which would include selecting a preferred corridor and station locations for future right-of-way preservation and identifying potential phasing options. No permits are being sought for this phase of environmental review. Later stages of project development would include project-specific detailed environmental documents to assess the impacts of the alternative alignments and stations in those segments of the system that are ready for implementation.

The decisions of federal agencies, particularly the FRA related to HST systems, would constitute major federal actions regarding environmental review under the National Environmental Policy Act (NEPA). NEPA requires federal agencies to prepare an Environmental Impact Statement (EIS) if the proposed action has the potential to cause significant environmental impacts. The proposed action in California warrants the preparation of a Tier 1 Program-level EIS under NEPA, due to the nature and scope of the comprehensive HST system proposed by the Authority, the need to narrow the range of alternatives, and the need to protect/preserve right-of-way in the future. FRA is the federal lead agency for the preparation of the Program EIS, and the Federal Highway Administration (FHWA), the United States Environmental Protection Agency (EPA), the United States Corps of Engineers (USACE), the Federal Aviation Administration (FAA), the United States Fish and Wildlife Service (USFWS), and the Federal Transit Administration (FTA) are cooperating federal agencies for the EIS.

A combined Program EIR/EIS will be prepared under the supervision and direction of the FRA and the Authority in conjunction with the federal cooperating agencies. It is intended that other federal, state,

[1] Chapter 796 of the Statutes of 1996; SB 1420, Kopp and Costa

regional, and local agencies will use the Program EIR/EIS in reviewing the proposed program and developing feasible and practicable programmatic mitigation strategies and analysis expectations for the Tier 2 detailed environmental review process which would be expected to follow any approval of an HST system.

The statewide HST system has been divided into five regions for study: Bay Area-Merced, Sacramento-Bakersfield, Bakersfield-Los Angeles, Los Angeles-San Diego via the Inland Empire, and Los Angeles-Orange County-San Diego. This Sections 4(f) and 6(f) Technical Evaluation for the Bakersfield-to-Los Angeles region is one of five such reports being prepared for each of the regions on the topic, and it is one of fifteen technical reports for this region. This report will be summarized in the Program EIR/EIS and it will be part of the administrative record supporting the environmental review of the alternatives.

1.1 PROJECT ALTERNATIVES

1.1.1 NO-PROJECT ALTERNATIVE

The No-Project Alternative serves as the baseline for the comparison with the Modal and High-Speed Train (HST) Alternatives (Figure 1.1-1). The No-Project Alternative represents the state's transportation system (highway, air, and conventional rail) as it existed in 1999-2000 and as it would be after implementation of programs or projects currently programmed for implementation and projects that are expected to be funded by 2020. The No-Project Alternative addresses the geographic area serving the same intercity travel market as the proposed HST system (generally from Sacramento and the San Francisco Bay Area, through the Central Valley, to Los Angeles and San Diego). The No-Project Alternative satisfies the statutory requirements under CEQA and NEPA for an alternative that does not include any new actions or projects beyond what is already committed.

The No-Project Alternative defines the existing and future statewide intercity transportation system based on programmed and funded (already in funded programs/financially constrained plans) improvements to the intercity transportation system through 2020, according to the following sources of information:

- State Transportation Improvement Program (STIP)
- Regional Transportation Plans (RTPs) for all modes of travel
- Airport plans
- Intercity passenger rail plans (California Rail Plan 2001-2010, Amtrak Five- and Twenty-year Plans)

As with all the alternatives, the No-Project Alternative will be assessed against the purpose and need topics/objectives for congestion, safety, air pollution, reliability, and travel times.

1.1.2 MODAL ALTERNATIVE

There are currently only three main options for intercity travel between the major urban areas of San Diego, Los Angeles, the Central Valley, San Jose, Oakland/San Francisco, and Sacramento: vehicles on the interstate highway system and state highways, commercial airlines serving airports between San Diego and Los Angeles, and Sacramento and the Bay Area, and conventional passenger trains (Amtrak) on freight and/or commuter rail tracks. The Modal/System Alternative consists of expansion of highways, airports, and intercity and commuter rail systems serving the markets identified for the HST Alternative. (Figures 1.1.2-1 and 1.1.2-3). The Modal Alternative uses the same inter-city travel demand (not capacity) assumed under the high-end sensitivity analysis completed for the HST system ridership in 2020. This same travel demand is assigned to the highways and airports and passenger rail described

under the No-Project Alternative, and additional improvements or expansion of facilities necessary to meet this demand are assumed, regardless of funding potential and without HST service as part of the system.

1.1.3 HIGH-SPEED TRAIN ALTERNATIVE

The Authority has defined a statewide HST system capable of speeds in excess of 200 miles per hour (mph) (320 kilometers per hour [km/h]) on dedicated, fully grade-separated tracks, with state-of-the-art safety, signaling, and automated train control systems. State of the art high-speed steel-wheel-on-steel-rail technology is being considered for the system that would serve the major metropolitan centers of California, extending from Sacramento and the San Francisco Bay Area, through the Central Valley, to Los Angeles and San Diego (Figure 1.1.3-1).

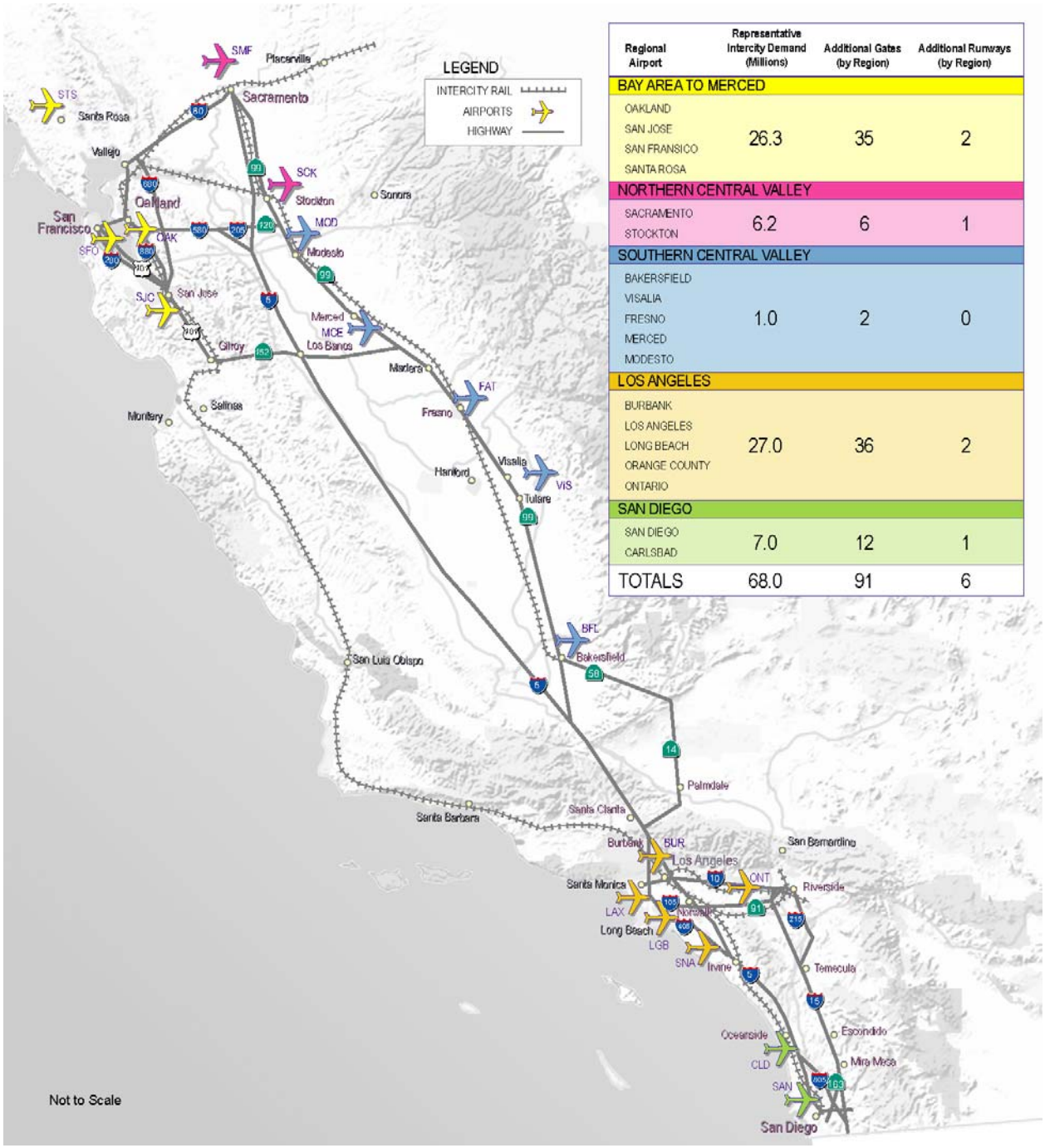
The HST Alternative includes several corridor and station options. A steel-wheel on steel-rail, electrified train, primarily on exclusive right-of-way with small portions of the route on shared track with other rail is planned. Conventional "non-electric" improvements are also being considered along the existing Los Angeles to San Diego (LOSSAN) rail corridor. The train track would be either at-grade, in an open trench or tunnel, or on an elevated guideway, depending on terrain and physical constraints.

For purposes of comparative analysis, the HST corridors are described from station-to-station within each region, except where a by-pass option is considered when the point of departure from the corridor will define the end of the corridor segment.

Figure 1.1.1-1
No-Project Alternative – California Transportation System

Figure 1.1.2-1
Modal Alternative-Highway Component

Figure 1.1.2-2
Modal Alternative-Aviation Component



Regional Airport	Representative Intercity Demand (Millions)	Additional Gates (by Region)	Additional Runways (by Region)
BAY AREA TO MERCED			
OAKLAND SAN JOSE SAN FRANSICO SANTA ROSA	26.3	35	2
NORTHERN CENTRAL VALLEY			
SACRAMENTO STOCKTON	6.2	6	1
SOUTHERN CENTRAL VALLEY			
BAKERSFIELD VISALIA FRESNO MERCED MODESTO	1.0	2	0
LOS ANGELES			
BURBANK LOS ANGELES LONG BEACH ORANGE COUNTY ONTARIO	27.0	36	2
SAN DIEGO			
SAN DIEGO CARLSBAD	7.0	12	1
TOTALS	68.0	91	6

Figure 1.1.3-1
HST Alternative – Corridors and Stations for Continued Investigation

2.0 SECTIONS 4(f) AND 6(f) EVALUATION METHODOLOGY

The Sections 4(f) and 6(f) evaluation methodology for the program-level EIR/EIS focused on the identification of potential impacts to historical, cultural and wildlife resources identified based existing information along corridors for the build alternatives (Modal and HST) and around the HST stations. The potential Sections 4(f) and 6(f) impacts for these alternatives are compared with the No-Project Alternative. For this programmatic document, the primary goal of this analysis was the identification of resources and not the assessment of the severity of the use or constructive use of Sections 4(f)/6(f) resources. The resources were identified based on data bases and study areas developed for the land use (for publicly owned parks, recreation uses and wildlife refuges), cultural, and biological resources and wetlands technical studies. These study areas are listed in Table 4.0-1, below.

Table 2.0-1
Study Areas for the Sections 4(f) and 6(f) Analysis

Environmental Parameter	4(f) and 6(f) Resources	HST Study Area	No-Project/Modal Alternatives
Potential for National Register listed and eligible cultural resources (prehistoric, historic archeological and historic resources)	Potential for National Register listed and eligible cultural resources to occur (Given the level of detail required for this programmatic document, these resources were identified as "areas" and not as individual resources.)	500 feet from each side of the centerline in non-urban areas. 100 feet from each side of the centerline in urban areas.	100 feet from existing highways and existing airport property boundaries
Land Use	Parks, recreational lands	0.25 mile from each side of the centerline.	0.25 mile from each side of the centerline.
Biological	Refuges and conservation lands	1,000 feet around stations and on both sides of the corridor in developed areas. 0.25 mile around stations and on both sides of the corridor in undeveloped areas. 0.5 mile around stations and on both sides of the corridors in sensitive areas (lagoons and wildlife corridors).	1,000 feet around stations and on both sides of the corridor in developed areas. 0.25 mile around stations and on both sides of the corridor in undeveloped areas. 0.5 mile around stations and on both sides of the corridors in sensitive areas (lagoons and wildlife corridors).

Using these study areas, the Sections 4(f) and 6(f) regional analysis teams:

- Identified Sections 4(f) and 6(f) resources that have the potential to be used by the alternatives. A use would occur if the physical features of a proposed alignment (i.e. track work) directly intersect with a portion or all of a Section 4(f) or 6(f) resource and require the use of property from that resource. Construction impacts could also directly use Sections 4(f) and 6(f) resources, if the temporary construction areas require the use of property from an identified Section 4(f) or 6(f) resource. For this programmatic document, any resource that is within 150 feet of the centerline will

be considered to be used by that alternative. This 150 foot distance from the centerline represents the most likely area that would constitute the permanent right-of-way and construction disturbance areas for the alternatives. Although this 150 foot wide area may vary by alternative or along a segment, it is a sufficient representation for this analysis.

- Identified Sections 4(f) and 6(f) resources that have the potential to be indirectly impacted, which is defined as a constructive use. A constructive use would occur if a resource were affected as a result of its proximity to the proposed alignment to the extent that the impacts substantially adversely affect the values that define the Sections 4(f) or 6(f) resource. Possible constructive use could occur as a result of increased noise, dust or vibration at the Section 4(f)/6(f) resource or a substantial change in views from or within a Section 4(f)/6(f) resource. For this program-level document, it is assumed that potential noise impacts will be the predominant determinant of a potential constructive use. Consequently, any resource that is between 150 and 900 feet from the centerline of an alternative will be considered to experience a constructive use as a result of that alternative. However, on roads, noise levels are a function of the number of vehicles and the speed at which those vehicles are traveling. As the numbers of vehicles increase and the speeds increase, noise levels increase. As a result, proposed improvements may not result in a substantial noise increase at a resource if the traffic volumes are low or travel speeds are low. For example, near stations, such as Los Angeles Union Station, the number of vehicles and their speeds would be lower than for a segment of I-5 which would have a larger volume of vehicles, traveling at greater speeds. In addition, the area of potential constructive use would not apply in tunnel sections if there are no surface features or surface construction on those sections that could result in adverse noise impacts on a Section 4(f) or 6(f) resource.
- Identified probable (obvious) measures to minimize harm or avoid a Section 4(f) or 6(f) resource.

The use and/or constructive use of a resource would constitute a Section 4(f) and 6(f) use and would have the potential to be temporary (limited to the construction period) or permanent.

To assess whether an alternative would potentially result in direct and/or constructive use of Section 4(f) or 6(f) resources, the rankings of potential for impacts listed in Table 4.0-2 were used.

Table 2.0-2
Rankings for Potential for Use and Construction Use Impacts on Sections 4(f) and 6(f) Resources

Distance of Resource from Centerline or Station Footprint	Ranking of Potential for Direct and Constructive Use
0 to 150 feet	**High** potential of use. **High** potential for constructive use.
150 to 450 feet	**Medium** potential of constructive use.
450 to 900 feet	**Low** potential of constructive use.

The results of this analysis are summarized in the text and detailed tables in Section 6.0 for the Bakersfield-to-Los Angeles region.

3.0 BAKERSFIELD-TO-LOS ANGELES SECTIONS 4(F) AND 6(F) ANALYSIS

3.1 Summary of Potential Impacts on Sections 4(f) and 6(f) Resources

3.1.1 Impacts by Alternative

Table 3.1-1 lists the segments of the No-Project, Modal and HST alternatives, by segment, and summarizes the number of Sections 4(f) and 6(f) resources which will be potentially adversely impacted by these alternatives, as follows:

High potential: there is high potential for these resources to be used by the alternative. In addition, for the No-Project Alternatives, there are Sections 4(f)/6(f) resources which are immediately adjacent or close to existing rights-of-way on highways such as I-5. Although the No-Project Alternatives will not result in the construction of any physical improvements, increased traffic volumes on these highways under these Alternatives could result in increased noise levels which could adversely affect the Sections 4(f)/6(f) resources. For the HST stations, there are resources immediately adjacent or close to the perimeters of the stations. Therefore, for those Alternatives, there would be **high** potential for constructive uses for resources immediately adjacent to the existing highway facilities or the perimeters for the proposed HST stations.

Medium potential: there is medium potential for these resources to be constructively used by the alternative.

Low potential: there is low potential for these resources to be constructively used by the alternative.

No potential: there is no potential for these resources to be used or constructively used by the alternative.

Some resources were identified as within both 150 feet of the centerline (or station perimeter) and also more than 150 feet from the centerline. Therefore, some resources were identified as having the potential to experience direct use impacts (within 150 feet of the centerline) and constructive use impacts (from 150 to 900 feet from the centerline).

The recreations resources summarized in Table 3.1-1 are listed individually by segment for each alternative later in Table 3.2-1.

TABLE 3.1-1
SUMMARY OF POTENTIAL IMPACTS ON SECTIONS 4(F) AND 6(F) RESOURCES FOR BAKERSFIELD-TO-LOS ANGELES

	Potential Impacts on Section 4(f) Recreation Resources (H, M, L, No Impact) (1)	Potential Impacts on Section 6(f) Recreation Resources (H, M, L, No Impact)	Potential Impacts on Section 106 (Cultural) Resources (H, M, L, No Impact)
NO-PROJECT ALTERNATIVE			
Highways			
I-5: SR-99 to SR-14 (no programmed improvements)	7 Section 4(f) recreation resources.	1 Section 6(f) resource. **No** potential for use:	**Low** potential for impacts on NRHP listed or eligible resources.

	Potential Impacts on Section 4(f) Recreation Resources (H, M, L, No Impact) (1)	Potential Impacts on Section 6(f) Recreation Resources (H, M, L, No Impact)	Potential Impacts on Section 106 (Cultural) Resources (H, M, L, No Impact)
	No potential for use: 7 resources. **High** potential for constructive use: 6 resources. **Medium** potential for constructive use: 0 resource. **No** potential for constructive use: 1 resource.	1 resource. **Medium** potential for constructive use: 1 resource.	
I-5: SR-14 to I-405 (no programmed improvements)	Not applicable: there are no Section 4(f) recreation resources within 0.25 mile of this segment.	Not applicable: there are no Section 6(f) recreation resources within 0.25 mile of this segment.	**Low** potential for impacts on NRHP listed or eligible resources.
I-5: I-405 to Burbank (no programmed improvements)	9 Section 4(f) recreation resources. **No** potential for use: 9 resources. **High** potential for constructive use: 0 resource. **Medium** potential for constructive use: 3 resources. **Low** potential for constructive use: 4 resources. **No** potential for constructive use: 2 resources.	2 Section 6(f) resources. **No** potential for use: 2 resources. **High** potential for constructive use: 1 resource. **No** potential for constructive use: 1 resource.	**Low** potential for impacts on NRHP listed or eligible resources.
I-5: Burbank to LA Union Station (LAUS) (no programmed improvements)	6 Section 4(f) recreation resources. **No** potential for use: 6 resources. **High** potential for constructive use: 1 resources. **Medium** potential for constructive use: 3 resources. **Low** potential for constructive use: 1 resource. **No** potential for constructive use: 1 resource.	2 Section 6(f) resources. **No** potential for use: 2 resources. **High** potential for constructive use: 2 resources.	**Low** potential for impacts on NRHP listed or eligible resources.
SR-58/14: SR-99 to Palmdale (programmed widening of SR-14 in Antelope Valley in existing right of way between Avenue P-8 and Avenue L)	5 Section 4(f) recreation resources. **No** potential for use: 5 resources. **Medium** potential for constructive use: 1 resource. **Low** potential for constructive use: 1 resource. **No** potential for constructive use: 3 resources.	Not applicable: there are no Section 6(f) recreation resources within 0.25 mile of this segment.	**Low** potential for impacts on NRHP listed or eligible resources.
SR-14: Palmdale to I-5 (no programmed improvements)	5 Section 4(f) recreation resources. **No** potential for use: 5 resources. **High** potential for	Not applicable: there are no Section 6(f) recreation resources within 0.25 mile of this segment.	**Low** potential for impacts on NRHP listed or eligible resources.

	Potential Impacts on Section 4(f) Recreation Resources (H, M, L, No Impact) (1)	Potential Impacts on Section 6(f) Recreation Resources (H, M, L, No Impact)	Potential Impacts on Section 106 (Cultural) Resources (H, M, L, No Impact)
	constructive use: 1 resource. **Medium** potential for constructive use: 2 resources. **Low** potential for constructive use: 2 resources.		
Airports			
Burbank (no change)	Not applicable: there are no Section 4(f) recreation resources within 0.25 mile of this segment.	Not applicable: there are no Section 6(f) recreation resources within 0.25 mile of this segment.	**Low** potential for impacts on NRHP listed or eligible resources.
Summary of Potential Impacts of the No-Project Alternative	**No** potential for use: 32 resources. **High** potential for constructive use: 8 resources. **Medium** potential for constructive use: 9 resources. **Low** potential for constructive use: 8 resources. **No** potential for constructive use: 7 resources.	**No** potential for use: 5 resources. **High** potential for constructive use: 3 resources. **Medium** potential for constructive use: 1 resource. **No** potential for constructive use: 1 resource.	**Low** potential for impacts on NRHP listed or eligible resources on all segments.
MODAL			
Highways			
I-5: SR-99 to SR-14 (widen 2 lanes)	7 Section 4(f) recreation resources. **High** potential for use: 5 resources. **No** potential for use: 2 resources. **Medium** potential for constructive use: 6 resources. **No** potential for constructive use: 1 resource.	1 Section 6(f) resource. **No** potential for use: 1 resource. **Medium** potential for constructive use: 1 resource.	**High** potential for use and constructive use impacts on NRHP listed and eligible resources.
I-5: SR-14 to I-405 (double-deck 4 lanes)	Not applicable: there are no Section 4(f) recreation resources within 0.25 mile of this segment.	Not applicable: there are no Section 6(f) recreation resources within 0.25 mile of this segment.	**Medium** potential for use and constructive use impacts on NRHP listed and eligible resources.
I-5: I-405 to Burbank (widen 4 lanes)	9 Section 4(f) recreation resources. **No** potential for use: 9 resources. **Medium** potential for constructive use: 4 resources. **Low** potential for constructive use: 3 resources. **No** potential for constructive use: 2 resources.	2 Section 6(f) resources. **High** potential for use: 1 resource. **No** potential for use: 1 resources. **Medium** potential for constructive use: 1 resource. **No** potential for constructive use: 1 resource.	**Medium** potential for use and constructive use impacts on NRHP listed and eligible resources.

	Potential Impacts on Section 4(f) Recreation Resources (H, M, L, No Impact) (1)	Potential Impacts on Section 6(f) Recreation Resources (H, M, L, No Impact)	Potential Impacts on Section 106 (Cultural) Resources (H, M, L, No Impact)
I-5: Burbank to LAUS (widen 4 lanes)	6 Section 4(f) recreation resources. **High** potential for use: 1 resources. **No** potential for use: 5 resources. **Medium** potential for constructive use: 4 resources. **Low** potential for constructive use: 1 resource. **No** potential for constructive use: 1 resource.	2 Section 6(f) resource. **High** potential for use: 2 resource. **Medium** potential for constructive use: 2 resource.	**High** potential for use and constructive use impacts on NRHP listed and eligible resources.
SR-58/14: SR-99 to Palmdale (no widening)	6 Section 4(f) recreation resources. **No** potential for use: 6 resources. **Medium** potential for constructive use: 1 resource. **Low** potential for constructive use: 1 resource. **No** potential for constructive use: 4 resources.	Not applicable: there are no Section 6(f) recreation resources within 0.25 mile of this segment.	**No** potential for use and **Medium** potential for constructive use impacts on NRHP listed and eligible resources.
SR-14: Palmdale to I-5 (widen 2 lanes)	5 Section 4(f) recreation resources. **High** potential for use: 1 resource. **No** potential for use: 4 resources. **Medium** potential for constructive use: 3 resources. **Low** potential for constructive use: 2 resource.	Not applicable: there are no Section 6(f) recreation resources within 0.25 mile of this segment.	**Medium** potential for use and constructive use impacts on NRHP listed and eligible resources.
Airports			
Burbank (9.9 additional MAP, 19 new gates, 1 new runway, 1 new access)	2 Section 4(f) recreation resources. **High** potential for use: 1 resource. **No** potential for use: 1 resource. **Medium** potential for constructive use: 1 resource **No** potential for constructive use: 1 resource.	Not applicable: there are no Section 6(f) recreation resources within 0.25 mile of this segment.	**High** potential for use and constructive use impacts on NRHP listed and eligible resources.
Summary of Potential Impacts of the Modal Alternative	**High** potential for use: 8 resources. **No** potential for use: 27 resources. **Medium** potential for constructive use: 19 resources. **Low** potential for constructive use: 7 resources. **No** potential for constructive use: 9 resources.	**High** potential for use: 3 resources. **No** potential for use: 2 resources. **Medium** potential for constructive use: 4 resources. **No** potential for constructive use: 1 resource.	**No** potential for use and medium potential for constructive use impacts on one segment. **Medium** potential for use and constructive use impacts on NRHP listed or eligible resources on three segments. **High** potential for use and constructive use impacts on NRHP listed or eligible

	Potential Impacts on Section 4(f) Recreation Resources (H, M, L, No Impact) (1)	Potential Impacts on Section 6(f) Recreation Resources (H, M, L, No Impact)	Potential Impacts on Section 106 (Cultural) Resources (H, M, L, No Impact)
			resources on three segments.
HST CORRIDOR AND STATION OPTIONS			
Bakersfield-to-Los Angeles			
Alignments			
Wheeler Ridge Corridor	6 Section 4(f) recreation resources. **High** potential for use: 3 resources. **No** potential for use: 3 resources. **Medium** potential for constructive use: 3 resources. **Low** potential for constructive use: 1 resource. **No** potential for constructive use: 2 resources.	Not applicable: there are no Section 6(f) recreation resources within 0.25 mile of this segment.	**High** potential for use and constructive use impacts on NRHP listed and eligible resources.
Union Avenue Corridor	2 Section 4(f) recreation resources. **No** potential for use: 2 resources. **Medium** potential for constructive use: 1 resource. **Low** potential for constructive use: 1 resource.	Not applicable: there are no Section 6(f) recreation resources within 0.25 mile of this segment.	**High** potential for use and constructive use impacts on NRHP listed and eligible resources.
I-5: Tehachapi Crossing	6 Section 4(f) recreation resources. **High** potential for use: 5 resources. **No** potential for use: 1 resources. **Medium** potential for constructive use: 6 resources.	1 Section 6(f) resource. **No** potential for use: 1 resource. **Medium** potential for constructive use: 1 resource.	**High** potential for use and constructive use impacts on NRHP listed and eligible resources.
SR-58 Corridor	Not applicable: there are no Section 4(f) recreation resources within 0.25 mile of this segment.	Not applicable: there are no Section 6(f) recreation resources within 0.25 mile of this segment.	**Medium** potential for use and constructive use impacts on NRHP listed and eligible resources.
Antelope Valley Corridor	2 Section 4(f) recreation resources. **No** potential for use: 2 resources. **Low** potential for constructive use: 1 resource. **No** potential for constructive use: 1 resource.	Not applicable: there are no Section 6(f) recreation resources within 0.25 mile of this segment.	**Medium** potential for use and constructive use impacts on NRHP listed and eligible resources.
Soledad Canyon Corridor	2 Section 4(f) recreation resources. **No** potential for use: 2 resources. **Medium** potential for constructive use: 1 resource. **Low** potential for	Not applicable: there are no Section 6(f) recreation resources within 0.25 mile of this segment.	**Medium** potential for use and constructive use impacts on NRHP listed and eligible resources.

	Potential Impacts on Section 4(f) Recreation Resources (H, M, L, No Impact) (1)	Potential Impacts on Section 6(f) Recreation Resources (H, M, L, No Impact)	Potential Impacts on Section 106 (Cultural) Resources (H, M, L, No Impact)
	constructive use: 1 resource.		
Metrolink/UPRR: Sylmar Station North	Not applicable: there are no Section 4(f) recreation resources within 0.25 mile of this segment.	Not applicable: there are no Section 6(f) recreation resources within 0.25 mile of this segment.	**Medium** potential for use and constructive use impacts on NRHP listed and eligible resources.
Metrolink/UPRR: Sylmar Station to Burbank Airport	Not applicable: there are no Section 4(f) recreation resources within 0.25 mile of this segment.	Not applicable: there are no Section 6(f) recreation resources within 0.25 mile of this segment.	**Medium** potential for use and constructive use impacts on NRHP listed and eligible resources.
Burbank Airport to Downtown Burbank	Not applicable: there are no Section 4(f) recreation resources within 0.25 mile of this segment.	Not applicable: there are no Section 6(f) recreation resources within 0.25 mile of this segment.	**High** potential for use and constructive use impacts on NRHP listed and eligible resources.
Metrolink/UPRR: Glendale	3 Section 4(f) recreation resources. **No** potential for use: 3 resources. **Medium** potential for constructive use: 1 resource. **Low** potential for constructive use: 1 resource. **No** potential for constructive use: 1 resource.	Not applicable: there are no Section 6(f) recreation resources within 0.25 mile of this segment.	**High** potential for use and constructive use impacts on NRHP listed and eligible resources.
Metrolink/UPRR: Downtown Burbank to LAUS (over and under I-5 and SR-110)	1 Section 4(f) recreation resource. **No** potential for use: 1 resource. **Low** potential for constructive use: 1 resource.	Not applicable: there are no Section 6(f) recreation resources within 0.25 mile of this segment.	**High** potential for use and constructive use impacts on NRHP listed and eligible resources.
Metrolink/UPRR: Downtown Burbank to LAUS (over I-5 and SR-110, south section)	2 Section 4(f) recreation resources. **High** potential for use: 1 resource. **No** potential for use: 1 resources. **Medium** potential for constructive use: 2 resources.	1 Section 6(f) resource. **No** potential for use: 1 resource. **Medium** potential for constructive use: 1 resource.	**High** potential for use and constructive use impacts on NRHP listed and eligible resources.
Metrolink/UPRR: Downtown Burbank to LAUS (under I-5 and SR-110, south section)	2 Section 4(f) recreation resources. **High** potential for use: 2 resources. **Medium** potential for constructive use: 2 resources.	1 Section 6(f) resource. **No** potential for use: 1 resource. **Medium** potential for constructive use: 1 resource.	**High** potential for use and constructive use impacts on NRHP listed and eligible resources.
I-5: Glendale	4 Section 4(f) recreation resources. **High** potential for use: 2 resources. **No** potential for use: 2 resource. **Medium** potential for constructive use: 3	1 Section 6(f) resource. **High** potential for use: 1 resource. **Medium** potential for constructive use: 1 resource.	**Medium** potential for use and constructive use impacts on NRHP listed and eligible resources.

	Potential Impacts on Section 4(f) Recreation Resources (H, M, L, No Impact) (1)	Potential Impacts on Section 6(f) Recreation Resources (H, M, L, No Impact)	Potential Impacts on Section 106 (Cultural) Resources (H, M, L, No Impact)
	resources. **No** potential for constructive use: 1 resource.		
I-5: Downtown Burbank to LAUS Station (cut and cover at Silver Lake)	1 Section 4(f) recreation resources. **No** potential for use: 1 resource. **No** potential for constructive use: 1 resource.	1 Section 6(f) resource. **High** potential for use: 1 resource. **Medium** potential for constructive use: 1 resource.	**High** potential for use and constructive use impacts on NRHP listed and eligible resources.
I-5: Downtown Burbank to LAUS (aerial at Silver Lake)	1 Section 4(f) recreation resources. **No** potential for use: 1 resource. **No** potential for constructive use: 1 resource.	1 Section 6(f) resource. **High** potential for use: 1 resource. **Medium** potential for constructive use: 1 resource.	**Medium** potential for use and constructive use impacts on NRHP listed and eligible resources.
LAUS East Bank: North	1 Section 4(f) recreation resources. **High** potential for use: 1 resource. **Medium** potential for constructive use: 1 resource.	1 Section 6(f) resource. **No** potential for use: 1 resource. **No** potential for constructive use: 1 resource.	**High** potential for use and constructive use impacts on NRHP listed and eligible resources.
LAUS Existing: East	1 Section 4(f) recreation resource. **No** potential for use: 1 resource. **No** potential for constructive use: 1 resource.	Not applicable: there are no Section 6(f) recreation resources within 0.25 mile of this segment.	**High** potential for use and constructive use impacts on NRHP listed and eligible resources.
LAUS Existing: South	Not applicable: there are no Section 4(f) recreation resources within 0.25 mile of this segment.	Not applicable: there are no Section 6(f) recreation resources within 0.25 mile of this segment.	**High** potential for use and constructive use impacts on NRHP listed and eligible resources.
East Connection	2 Section 4(f) recreation resources. **High** potential for use: 1 resource. **No** potential for use: 1 resource. **Medium** potential for constructive use: 1 resource. **No** potential for constructive use: 1 resource.	Not applicable: there are no Section 6(f) recreation resources within 0.25 mile of this segment.	**High** potential for use and constructive use impacts on NRHP listed and eligible resources.
South Connection	Not applicable: there are no Section 4(f) recreation resources within 0.25 mile of this segment.	Not applicable: there are no Section 6(f) recreation resources within 0.25 mile of this segment.	**High** potential for use and constructive use impacts on NRHP listed and eligible resources.
Stations (including station approach tracks)			
Palmdale Station Siding	1 Section 4(f) recreation resource. **High** potential for use: 1 resource. **High** potential for constructive use: 1 resource.	Not applicable: there are no Section 6(f) recreation resources within 0.25 mile of this segment.	**Low** potential for impacts on NRHP listed or eligible resources.
Metrolink/UPRR: Sylmar Station Siding	2 Section 4(f) recreation	Not applicable: there	**High** potential for use and

	Potential Impacts on Section 4(f) Recreation Resources (H, M, L, No Impact) (1)	Potential Impacts on Section 6(f) Recreation Resources (H, M, L, No Impact)	Potential Impacts on Section 106 (Cultural) Resources (H, M, L, No Impact)
	resources. **High** potential for use: 2 resources. **High** potential for constructive use: 2 resources.	are no Section 6(f) recreation resources within 0.25 mile of this segment.	constructive use impacts on NRHP listed and eligible resources.
Burbank Airport Station Siding	2 Section 4(f) recreation resources. **No** potential for use: 2 resources. **Medium** potential for constructive use: 1 resource. **No** potential for constructive use: 1 resource.	Not applicable: there are no Section 6(f) recreation resources within 0.25 mile of this segment.	**High** potential for use and constructive use impacts on NRHP listed and eligible resources.
Burbank Downtown Station Siding (Metrolink/UPRR)	3 Section 4(f) recreation resources. **High** potential for use: 1 resource. **No** potential for use: 2 resources. **High** potential for constructive use: 1 resource. **Low** potential for constructive use: 2 resources.	1 Section 6(f) resource. **No** potential for use: 1 resource. **No** potential for constructive use: 1 resource.	**High** potential for use and constructive use impacts on NRHP listed and eligible resources.
Burbank Downtown Station Siding (south side of I-5 link)	2 Section 4(f) recreation resources. **High** potential for use: 1 resource. **No** potential for use: 1 resource. **High** potential for constructive use: 1 resource. **Low** potential for constructive use: 1 resource.	Not applicable: there are no Section 6(f) recreation resources within 0.25 mile of this segment.	**High** potential for use and constructive use impacts on NRHP listed and eligible resources.
LAUS Existing Station Siding	1 Section 4(f) recreation resource. **High** potential for use: 1 resource. **High** potential for constructive use: 1 resource.	Not applicable: there are no Section 6(f) recreation resources within 0.25 mile of this segment.	**High** potential for use and constructive use impacts on NRHP listed and eligible resources.
LAUS South Station Siding	2 Section 4(f) recreation resources. **No** potential for use: 2 resources. **No** potential for constructive use: 2 resources.	Not applicable: there are no Section 6(f) recreation resources within 0.25 mile of this segment.	**High** potential for use and constructive use impacts on NRHP listed and eligible resources.
LAUS East Bank Station Siding	2 Section 4(f) recreation resources. **No** potential for use: 2 resources. **Low** potential for	Not applicable: there are no Section 6(f) recreation resources within 0.25 mile of this segment.	**High** potential for use and constructive use impacts on NRHP listed and eligible resources.

	Potential Impacts on Section 4(f) Recreation Resources (H, M, L, No Impact) (1)	Potential Impacts on Section 6(f) Recreation Resources (H, M, L, No Impact)	Potential Impacts on Section 106 (Cultural) Resources (H, M, L, No Impact)
	constructive use: 1 resource. **No** potential for constructive use: 1 resource.		
Downtown LA Maintenance Yard	3 Section 4(f) recreation resources. **High** potential for use: 1 resource. **No** potential for use: 2 resources. **High** potential for constructive use: 1 resource. **Low** potential for constructive use: 1 resource. **No** potential for constructive use: 1 resource.	Not applicable: there are no Section 6(f) recreation resources within 0.25 mile of this segment.	**High** potential for use and constructive use impacts on NRHP listed and eligible resources.
Summary of Potential Impacts of the HST Alternative	The potential impacts of the HST Alternative, by Segment, are summarized in Tables 3.1-2, 3.1-3, 3.1-4 and 3.1-5.		
(1) The potential (high, medium, low, no) for use and constructive use impacts are shown for each resource.			

3.1.2 Summary of Impacts by Segment for the HST Alternative

Tables 3.1-2 through 3.1-5 summarize the potential impacts of the HST alternative, by segment, on Sections 4(f) and 6(f) recreation resources and on Section 106 cultural resources. Only resources identified in Table 3.1-1 as having **high** and **medium** potential for impacts are summarized in these tables. Resources identified as **low** or **no** potential for impacts are not listed; they are summarized in Table 3.1-1. These tables summarize the impacts of the following segments of the HST alternative:

Table 3.1-2: Segment between Bakersfield and Sylmar. This includes the Union Avenue/Wheeler Ridge, I-5: Tehachapi, SR-58/Antelope Valley/Palmdale Station Siding/Soledad Canyon alignment segments.

Table 3.1-3: Sylmar to Downtown Burbank. There is only one alignment on this segment. It includes the Metrolink/UPRR: Sylmar Station North, Sylmar Station Siding, Metrolink/UPRR: Sylmar Station to Burbank Airport, Burbank Airport Station Siding, Metrolink/UPRR: Burbank Airport to Downtown and Burbank Downtown Station Siding alignment segments.

Table 3.1-4: Downtown Burbank to LA. This includes the I-5: Burbank Downtown Siding, I-5: Glendale, I-5: Silverlake Aerial and Cut and Cover, Metrolink/UPRR: Burbank Downtown Siding, Metrolink/UPRR: Glendale, Metrolink/UPRR Over and Under I-5 and SR-110, Metrolink/UPRR: Over I-5 and SR-110 and Metrolink/UPRR Under I-45 and SR-110 alignment segments.

Table 3.1-5: LAUS. This includes the LAUS Existing Siding or LAUS South Siding with LAUS Existing South/South Connection and LAUS Existing East/East Connection; and LAUS East Bank North/LAUS East Bank Siding/South Connection. This segment also includes the maintenance yard.

These Tables allow for a summary comparison of the potential impacts of the HST alternative, by alignment for the segments where more than one alignment was considered. As shown in Table 3.1-2, the HST segment on Wheeler Ridge/I-5: Tehachapi would result in high potential for use of eight Section 4(f) resources; medium potential for constructive use of ten Section 4(f) resources and high potential for use and constructive use impacts on NRHP listed and eligible resources. The Union Avenue/I-5: Tehachapi segment would result in substantially reduced impacts with high potential for use of five Section 4(f) resources; medium potential for constructive use of two Section 4(f) resources and high potential for use and constructive use impacts on NRHP listed and eligible resources. The SR-

58/Antelope Valley/Palmdale Station Siding/Soledad Canyon alignment would result in the least impacts, with high potential for use of only one Section 4(f) resource; high potential for constructive use of one Section 4(f) resource; medium potential for constructive use of one Section 4(f) resource and medium potential for use and constructive use impacts on NRHP listed and eligible resources. Based on the potential for impacts on Sections 4(f), 6(f) and 106 resources, the SR-58/Antelope Valley/Palmdale Station Siding/Soledad Canyon alignment would result in the least impacts of the HST alignments considered for the Bakersfield to Sylmar segment.

Table 3.1-2
Summary of High and Medium Potential for Impacts on Sections 4(f) and 6(f) and Section 106 Resources for the HST Alternative for the Bakersfield to Sylmar Segment

<table>
<tr><td>I-5/Grapevine via Wheeler Ridge

High potential for use: 3 Section 4(f) resources.
Medium potential for constructive use: 3 Section 4(f) resources.
High potential for use and constructive use impacts on NRHP listed and eligible resources.</td><td>I-5/Grapevine via Union Avenue

Medium potential for constructive use: 1 Section 4(f) resource.
High potential for use and constructive use impacts on NRHP listed and eligible resources.</td><td rowspan="2">SR-58
Antelope Valley
Palmdale Station Siding
Soledad Canyon

High potential for use: 1 Section 4(f) resource.
High potential for constructive use: 1 Section 4(f) resource.
Medium potential for constructive use: 1 Section 4(f) resource.
Medium potential for use and constructive use impacts on NRHP listed and eligible resources.</td></tr>
<tr><td colspan="2">I-5: Tehachapi

High potential for use: 5 Section 4(f) resources.
Medium potential for constructive use: 7 Section 4(f) resources.
Medium potential for constructive use: 1 Section 6(f) resource.
High potential for use and constructive use impacts on NRHP listed and eligible resources.</td></tr>
<tr><td colspan="3">Total Potential for Impacts for Bakersfield to Sylmar Segment</td></tr>
<tr><td>High potential for use: 8 Section 4(f) resources.
Medium potential for constructive use: 10 Section 4(f) resources.
High potential for use and constructive use impacts on NRHP listed and eligible resources.</td><td>High potential for use: 5 Section 4(f) resources.
Medium potential for constructive use: 2 Section 4(f) resources.
High potential for use and constructive use impacts on NRHP listed and eligible resources.</td><td>High potential for use: 1 Section 4(f) resource.
High potential for constructive use: 1 Section 4(f) resource.
Medium potential for constructive use: 1 Section 4(f) resource.
Medium potential for use and constructive use impacts on NRHP listed and eligible resources.</td></tr>
</table>

As shown in Table 3.1-3, only one HRS alignment was evaluated on the Sylmar to downtown Burbank segment. This alignment would result in high potential for use of three Section 4(f) resources; high potential for constructive use of three Section 4(f) resources; medium potential for constructive use of one Section 4(f) resource and medium and high potential for use and constructive use impacts on NRHP listed and eligible resources.

Table 3.1-3
Summary of High and Medium Potential for Impacts on Sections 4(f) and 6(f) and Section 106 Resources for the HST Alternative for the Sylmar to Downtown Burbank Segment

Metrolink/UPRR: Sylmar Station North Metrolink/UPRR: Sylmar Station Siding Metrolink/UPRR: Sylmar Station to Burbank Airport Burbank Airport Station Siding Metrolink/UPRR: Burbank Airport to Downtown Burbank Burbank Downtown Station Siding (Metrolink/UPRR) **High** potential for use: 3 Section 4(f) resources. **High** potential for constructive use: 3 Section 4(f) resources. **Medium** potential for constructive use: 1 Section4(f) resource. **Medium** and **High** potential for use and constructive use impacts on NRHP listed and eligible resources.

As shown in Table 3.1-4, several alignments were considered on the downtown Burbank to LA segment. The I-5: Burbank Downtown Siding/I-5 Glendale/Silverlake Aerial and the I-5: Burbank Downtown Siding/I-5 Glendale/Silverlake Cut-and-Cover alignments would result in the same potential impacts, with high potential for use of five Section 4(f) resources; high potential for constructive use of one Section 4(f) resource; medium potential for constructive use of five Section 4(f) resources; high potential for use of two Section 6(f) resources; medium potential for constructive use of two Section 6(f) resources; and medium and high potential for use and constructive use impacts on NRHP listed and eligible resources. The Metrolink/UPRR: Burbank Downtown Siding/Metrolink/UPRR: Glendale/Metrolink/UPRR: Over and Under I-5/SR-110 Metrolink/UPRR: Over I-5 and SR-110 alignment would result in fewer impacts, with high potential for use of two Section 4(f) resources; high potential for constructive use of one Section 4(f) resource; medium potential for constructive use of four Section 4(f) resources; and high potential for use and constructive use impacts on NRHP listed and eligible resources. The Metrolink/UPRR: Burbank Downtown Siding/Metrolink/UPRR: Glendale/Metrolink/UPRR: Over and Under I-5/SR-110 Metrolink/UPRR: Under I-5 and SR-110 alignment would result in nearly the same impacts, with high potential for use of three Section 4(f) resources; high potential for constructive use of one Section 4(f) resource; medium potential for constructive use of four Section 4(f) resources; and high potential for use and constructive use impacts on NRHP listed and eligible resources. Based on the potential for impacts on Sections 4(f), 6(f) and 106 resources, the two Metrolink/UPRR alignments would result in the substantially reduced impacts compared to the two I-5 alignments for the downtown to LA segment.

Table 3.1-4
Summary of High and Medium Potential for Impacts on Sections 4(f) and 6(f) and Section 106 Resources for the HST Alternative for the Downtown Burbank to LA Segment

<table>
<tr><td colspan="2">I-5: Burbank Downtown Siding
I-5 Glendale

High potential for use: 4 Section 4(f) resources.
High potential for constructive use: 1 Section 4(f) resource.
Medium potential for constructive use: 4 Section 4(f) resources.
High potential for use: 1 Section 6(f) resource.
Medium potential for constructive use: 1 Section 6(f) resource.
Medium and High potential for use and constructive use impacts on NRHP listed and eligible resources.</td><td colspan="2">Metrolink/UPRR: Burbank Downtown Siding
Metrolink/UPRR: Glendale
Metrolink/UPRR: Over and Under I-5 and SR-110

High potential for use: 1 Section 4(f) resource.
High potential for constructive use: 1 Section 4(f) resource.
Medium potential for constructive use: 1 Section 4(f) resource.
High potential for use and constructive use impacts on NRHP listed and eligible resources.</td></tr>
<tr><td>Silverlake Aerial

High potential for use: 1 Section 4(f) resource.
Medium potential for constructive use: 1 Section 4(f) resource.
High potential for use: 1 Section 6(f) resource.
Medium potential for constructive use: 1 6(f) resource.
Medium potential for use and constructive use impacts on NRHP listed and eligible resources.</td><td>Silverlake Cut and Cover

High potential for use: 1 Section 4(f) resource.
Medium potential for constructive use: 1 Section 4(f) resource.
High potential for use: 1 Section 6(f) resource.
Medium potential for constructive use: 1 Section 6(f) resource.
High potential for use and constructive use impacts on NRHP listed and eligible resources.</td><td>Metrolink/UPRR: Over I-5 and SR-110

High potential for use: 1 Section 4(f) resource.
Medium potential for constructive use: 3 Section 4(f) resources.
Medium potential for constructive use: 1 Section 6(f) resource.
High potential for use and constructive use impacts on NRHP listed and eligible resources.</td><td>Metrolink/UPRR: Under I-5 and SR-110

High potential for use: 2 Section 4(f) resources.
Medium potential for constructive use: 3 Section 4(f) resources.
Medium potential for constructive use: 1 Section 6(f) resource.
High potential for use and constructive use impacts on NRHP listed and eligible resources.</td></tr>
<tr><td colspan="4">**Total Potential for Impacts for the Downtown Burbank to LA Segment**</td></tr>
<tr><td>**High** potential for use: 5 Section 4(f) resources.</td><td>**High** potential for use: 5 Section 4(f) resources.</td><td>**High** potential for use: 2 Section 4(f) resources.</td><td>**High** potential for use: 3 Section 4(f) resources.</td></tr>
</table>

High potential for constructive use: 1 Section 4(f) resource. **Medium** potential for constructive use: 5 Section 4(f) resources. **High** potential for use: 2 Section 6(f) resources. **Medium** potential for constructive use: 2 Section 6(f) resources. **Medium** and **High** potential for use and constructive use impacts on NRHP listed and eligible resources.	**High** potential for constructive use: 1 Section 4(f) resource. **Medium** potential for constructive use: 5 Section 4(f) resources. **High** potential for use: 2 Section 6(f) resources. **Medium** potential for constructive use: 2 Section 6(f) resources. **Medium** and **High** potential for use and constructive use impacts on NRHP listed and eligible resources.	**High** potential for constructive use: 1 Section 4(f) resource. **Medium** potential for constructive use: 4 Section 4(f) resources. **High** potential for use and constructive use impacts on NRHP listed and eligible resources.	**High** potential for constructive use: 1 Section 4(f) resource. **Medium** potential for constructive use: 4 Section 4(f) resources. **High** potential for use and constructive use impacts on NRHP listed and eligible resources.

Table 3.1-5 summarizes the potential for impacts associated with the HST alternative stations and sidings in the LAUS area, including the maintenance station. The LAUS Existing Station Siding/LAUS Existing South/South Connection/Maintenance Yard would result in high potential for use of two Section 4(f) resources; high potential for constructive use of two Section 4(f) resources and high potential for use and constructive use impacts on NRHP listed and eligible resources. The LAUS Existing Station Siding/LAUS Existing East/East Connection/Maintenance Yard would result in slightly greater impacts, with high potential for use of three Section 4(f) resources; medium potential of constructive use of one Section 4(f) resource; high potential for constructive use of three Section (f) resources and high potential for use and constructive use impacts on NRHP listed and eligible resources. The LAUS South Station Siding/LAUS Existing East/East Connection and the LAUS East Bank North/LAUS East Bank Siding/South Connection alignments would result in the least impacts, with high potential for use of one Section 4(f) resource; medium potential of constructive use of one Section 4(f) resource; and high potential for use and constructive use impacts on NRHP listed and eligible resources.

Table 3.1-5
Summary of High and Medium Potential for Impacts on Sections 4(f) and 6(f) and Section 106 Resources for the HST Alternative for the LAUS and Maintenance Yard Segment

<table>
<tr><td colspan="3">LAUS Existing Station Siding

High potential for use: 1 Section 4(f) resource.
High potential for constructive use: 1 Section 4(f) resource.</td><td>LAUS East Bank North
LAUS East Bank Siding South Connection

High potential for use: 1 Section 4(f) resource.
Medium potential for constructive use: 1 Section 4(f) resource.
High potential for use and constructive use impacts on NRHP listed and eligible resources.</td></tr>
<tr><td>LAUS Existing South/ South Connection

High potential for use and constructive use impacts on NRHP listed and eligible resources</td><td>LAUS Existing East/East Connection

High potential for use: 1 Section 4(f) resource.
Medium potential for constructive use: 1 Section 4(f) resource.
High potential for constructive use: 1 Section 4(f) resource.
High potential for use and constructive use impacts on NRHP listed and eligible resources.</td><td>LAUS South Station Siding

High potential for use and constructive use impacts on NRHP listed and eligible resources.

LAUS Existing East/East Connection

High potential for use: 1 Section 4(f) resource.
Medium potential for constructive use: 1 Section 4(f) resource.
High potential for use and constructive use impacts on NRHP listed and eligible resources.</td></tr>
<tr><td colspan="3">Maintenance Yard

High potential for use: 1 4(f) resource.
High potential for constructive use: 1 4(f) resource.
High potential for use and constructive use impacts on NRHP listed and eligible resources.</td></tr>
<tr><td colspan="4">Total Potential for Impacts for the LAUS and Maintenance Yard Segment</td></tr>
<tr><td>High potential for use: 2 Section 4(f) resources.
High potential for constructive use: 2 Section 4(f) resources.
High potential for use and constructive use impacts on NRHP listed and eligible resources.</td><td>High potential for use: 3 Section 4(f) resources.
Medium potential for constructive use: 1 Section 4(f) resource.
High potential for constructive use: 3 Section 4(f) resources.
High potential for use and constructive use impacts on NRHP listed and eligible resources.</td><td>High potential for use: 2 Section 4(f) resources.
Medium potential for constructive use: 2 Section 4(f) resources.
High potential for use and constructive use impacts on NRHP listed and eligible resources.</td><td>High potential for use: 1 Section 4(f) resource.
Medium potential for constructive use: 1 Section 4(f) resource.
High potential for use and constructive use impacts on NRHP listed and eligible resources.</td></tr>
</table>

3.1.3 Summary Evaluation of Impacts by Alternative and HST Segment

As shown in Table 3.1-1, the No-Project Alternative will result in fewer potential impacts on Sections 4(f) and 6(f) resources and NRHP listed and eligible resources than the Modal and HST Alternatives. The Modal Alternative will result in fewer impacts on Sections 4(f) and 6(f) and NRHP resources than the HST Alternative. This impact comparison considers both the number of resources potentially affected and the types of the effect (use and constructive use). For Sections 4(f) and 6(f) and NRHP resources, both types of effects are considered adverse and require avoidance unless no prudent and feasible avoidance alternative exists. As a result, in this summary, both the number and the types of effects were considered in identifying and evaluating the potential of the various alternatives to affect Sections 4(f) and 6(f) and NRHP resources.

As shown in Table 3.1-2, the SR-58/Antelope Valley/Palmdale Station Siding/Soledad Canyon alignment on the Bakersfield to Sylmar Segment will result in fewer impacts to Sections 4(f) and 6(f) and NRHP resources than the other two alignments (Wheeler Ridge/I-5: Tehachapi and Union Avenue/I-5: Tehachapi) on this Segment. The SR-58/Antelope Valley/Palmdale Station Siding/Soledad Canyon alignment results in the fewest impacts related to use and constructive use of Sections 4(f) and 6(f) and NRHP resources on this HST segment.

As shown in Table 3.1-3, there is only alignment for the Sylmar to Downtown Burbank Segment.

As shown in Table 3.1-4, the two Metrolink/UPRR alignments on the Downtown Burbank to LA Segment would result in fewer impacts on Sections 4(f) and 6(f) and NRHP resources than the two I-5 alignments on this Segment. The Metrolink/UPRR alignments would each result in nearly the same impacts, with the Metrolink/UPRR: Under I-5 and SR-110 resulting in only one more high potential for constructive use of a Section 4(f) resource than the Over I-5 and SR-110 alignment. In summary, for this Segment, the Metrolink/UPRR/Over I-5 and SR-110 alignment would result in the least impacts related to use and constructive use of Sections 4(f) and 6(f) and NRHP resources of the alignments considered for this Segment.

As shown in Table 3.1-5, the LAUS East Bank North/LAUS East Bank Siding/South Connection would result in fewest impacts on Sections 4(f) and 6(f) and NRHP resources than the other three-station options on this segment. Therefore, for this Segment, the LAUS East Bank North would result in the least impacts related to use and constructive use of Sections 4(f) and 6(f) and NRHP resources of the alignments considered for this Segment.

In summary, both the Modal and HST build alternatives would result in the potential for the use and constructive use of Sections 4(f) and 6(f) and NRHP resources. Section 4(f) includes a requirement that use and constructive use of Sections 4(f) and 6(f) and NRHP resources be avoided unless no prudent and feasible alternative for avoidance is possible. As described earlier, the conceptual design and definition of the Modal and HST alternatives considered the potential for adverse effects on Sections 4(f) and 6(f) and NRHP resources. It is further anticipated that future design and project refinement would continue to evaluate and incorporate modifications to avoid, to the extent prudent and feasible, adverse use and constructive use affects on Sections 4(f) and 6(f) and HST resources.

3.2 IDENTIFICATION OF PUBLICLY OWNED PARKS, RECREATIONAL LANDS AND WILDLIFE AND WATERFOWL REFUGES AND POTENTIAL FOR IMPACTS

Existing and planned publicly owned parks, recreation lands and wildlife and waterfowl refuges (collectively "recreation" resources) along the alignments of the alternatives in the Bakersfield-to-Los Angeles study area were identified based on the following sources:

- Mapping available from the HST land use data files.
- General Plans from the local jurisdictions through which the alignments pass or in which project components are located.
- Mapping in the 2002 Thomas Brothers Guide for Los Angeles and Orange Counties.

Sections 4(f) and 6(f) recreation resources in the Bakersfield-to-Los Angeles study area include:

- Federally owned/managed property including National Forests.
- State owned/managed property including State Parks.

- County owned/managed property including regional parks, trails, community centers and other resources serving countywide needs.

- Local jurisdiction (city) resources including mini or pocket parks, neighborhood parks, community centers and other publicly owned and operated recreation facilities and resources.

- There are no Section 4(f) or 6(f) wildlife refuges in the Bakersfield-to-Los Angeles study area.

As defined in the methodology Section, Sections 4(f) and 6(f) recreation resources within 0.25 mile of the centerline of each alignment or from each project feature were identified and mapped on the GIS land use data base mapping. Based on the data sources and mapping, existing and planned publicly owned parks, recreation lands and wildlife and waterfowl refuges along the alignments and in the vicinity of project features are summarized in Table 3.2-1. Detailed maps showing the alternative alignments, the 0.25 mile on each side of the centerline and Sections 4(f) and 6(f) recreation resources in the study area were used to identify resources within 900 feet of the centerline and to calculate the distance from the centerline or project feature to each recreation resource. Table 3.2-1 lists the project segments and features, the Sections 4(f) and 6(f) recreation resources within 900 feet of those project components, and the potential for use or constructive use of those resources.

In addition, Table 3.2-1 lists probable measures to minimize harm to the potentially impacted Sections 4(f) and 6(f) resources. The probable measures focus on the potential use and constructive use impacts. Use of property from a Sections 4(f)/6(f) resources can potentially be mitigated by realignment; shifting the centerline and the facility away from the resource; redesign to narrow the construction and right-of-way limits near the resources and implementation of retaining walls to reduce the need for grading and soil remediation. These are referred to in Table 3.2-1 as “avoidance” measures because they result in physically avoiding the direct use of property from a Section 4(f)/6(f) resource. However, it should be noted that shifting a rail alignment is not a simple process because of the design constraints and considerations such as turning radii and other features which make “minor” shifts or realignments unrealistic or very difficult.

For any resource where the use cannot be avoided, compensation to the property owner would be required. For all resources potentially impacted by a direct use, the avoidance and compensation measures would apply. The measures for constructive use impacts focus on measures to reduce noise, consistent with the findings of the noise study, and to reduce visual impacts, consistent the aesthetics and visual quality report. Measures to avoid or reduce a constructive use of a Sections 4(f)/6(f) resource could include noise walls and/or visual screening. However, these measures could result in adverse impacts on those resources. For example, noise walls could result in adverse visual impacts on Sections 4(f)/6(f) resources. The identification and implementation of measures to minimize harm at each resource need to be conducted in consultation with the owners of the resources to ensure that measures to minimize harm do not adversely affect the values of the resources.

Table 3.2-1
Summary of Potential Impacts and Probable Measures to Minimize Harm to Sections 4(f) and 6(f) Recreation Resources for Bakersfield-to-Los Angeles

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
NO-PROJECT ALTERNATIVE					
Highways					

U.S. Department of Transportation
Federal Railroad Administration
CALIFORNIA HIGH-SPEED RAIL AUTHORITY

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
I-5: SR-99 to SR-14 (no programmed improvements) (2)	Fort Tejon State Historical Park, Unincorporated Kern County	Resource is adjacent to existing I-5.	**No** potential for use because no improvements are proposed.	**High** potential for constructive use because resource is adjacent to I-5.	Noise walls and visual screening, as appropriate.
	Hungry Valley State Vehicular Recreation Area, Unincorporated Los Angeles County	Resource is adjacent to existing I-5.	**No** potential for use because no improvements are proposed.	**High** potential for constructive use because resource is adjacent to I-5.	Noise walls and visual screening, as appropriate.
	Pyramid Lake, Unincorporated Los Angeles County	Resource is adjacent to existing I-5.	**No** potential for use because no improvements are proposed.	**High** potential for constructive use because resource is adjacent to I-5.	Noise walls and visual screening, as appropriate.
	Angeles National Forest, unincorporated Los Angeles County	Resource is adjacent to I-5.	**No** potential for use because no improvements are proposed.	**High** potential for constructive use because resource is adjacent to I-5.	Noise walls and visual screening as appropriate.
	Castaic County Sports Complex, Unincorporated Los Angeles County (6f)	201 feet.	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use.	Noise walls and visual screening, as appropriate.
	Hasley Canyon Park, Unincorporated Los Angeles County	1,312 feet.	**No** potential for use because no improvements are proposed.	**No** potential for constructive use due to distance from I-5.	None.
	Santa Clarita Woodland Park, Towsley Canyon, Unincorporated Los Angeles County	25 feet.	**No** potential for use because no improvements are proposed.	**High** potential for constructive use because the resource is very close to I-5.	Noise walls and/or visual screening, as appropriate.
	Santa Clarita Woodlands Park, East and Rice Canyons, Unincorporated Los Angeles County	Resource is adjacent to existing I-5.	**No** potential for use because no improvements are proposed.	**High** potential for constructive use because resource is adjacent to I-5.	Noise walls and/or visual screening, as appropriate.
I-5: SR-14 to I-405 (no programmed improvements) (2)	There are no Sections 4(f)/6(f) resources within 0.25 mile of the centerline of this segment.	Not applicable.	Not applicable.	Not applicable.	Not applicable.
I-5: I-405 to Burbank (no programmed improvements) (2)	Lundigan Park, City of Burbank	1,148 feet.	**No** potential for use because no improvements are proposed.	**No** potential for constructive use due to distance from I-5.	None.
	McCambridge Park, City of Burbank	820 feet.	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Sun Valley Park and Recreation Center, City of Los Angeles	1,290 feet.	**No** potential for use because no improvements are proposed.	**No** potential for constructive use due to distance from I-5.	None.
	Fernangeles Park, City of Los Angeles	389 feet.	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Carey Ranch Park, City of Los Angeles	562 feet.	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Paxton Park, City of Los Angeles (6f)	1,202 feet.	**No** potential for use because no improvements are proposed.	**No** potential for constructive use due to distance from I-5.	None.
	Richie Valens Park, City of Los Angeles	446 feet.	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Sharp Avenue Park, City of Los Angeles	244 feet.	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Griffith Manor Park, City of Glendale	574 feet.	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Los Angeles Equestrian Center, City of Los Angeles	733 feet.	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Griffith Park, City of Los Angeles (6f)	Resource is adjacent to existing I-5.	**No** potential for use impacts because no improvements are proposed.	**High** potential for constructive use because resource is adjacent to I-5.	Noise walls and/or visual screening, as appropriate.
I-5: Burbank to Los Angeles Union Station (LAUS) (no programmed improvements) (2)	Harding Municipal Golf Course, City of Los Angeles	Resource is adjacent to existing I-5.	**No** potential for use because no improvements are proposed.	**High** potential for constructive use because resource is adjacent to I-5.	Noise walls and/or visual screening, as appropriate.
	North Atwater Park, City of Los Angeles	253 feet.	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Griffith Park, City of Los Angeles (6f)	Resource is adjacent to existing I-5.	**No** potential for use because no improvements are proposed.	**High** potential for constructive use because resource is adjacent to I-5.	Noise walls and/or visual screening, as appropriate.
	Los Feliz Municipal Golf Course, City of Los Angeles	449 feet.	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Elysian Valley Recreation Center, City of Los Angeles	433 feet.	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Elysian Park, City of Los Angeles (6f)	Resource is adjacent to existing I-5.	**No** potential for use because no improvements are proposed.	**High** potential for construction use because resource is adjacent to I-5.	Noise walls and/or visual screening, as appropriate.
	Downey Playground, City of Los Angeles	1,039 feet.	**No** potential for use because no improvements are proposed.	**No** potential for constructive use due to distance from I-5.	None.

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Lincoln Heights Recreation Center, City of Los Angeles	899 feet	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
SR-58/14: SR-99 to Palmdale (programmed widening in Antelope Valley in existing right of way)	Curry Street Park, City of Tehachapi	987 feet.	**No** potential for use because no improvements are proposed outside existing right-of-way.	**No** potential for constructive use due to distance from SR-58/14.	None.
	Mojave East Park, City of Mojave	1,289 feet.	**No** potential for use because no improvements are proposed outside existing right-of-way.	**No** potential for constructive use due to distance from SR-58/14.	None.
	Rosamond Park, City of Rosamond	648 feet.	**No** potential for use because no improvements are proposed outside existing right-of-way.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Lancaster City Park, City of Lancaster	201 feet	**No** potential for use because no improvements are proposed outside existing right-of-way.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Desert Sands Park, City of Palmdale	1,097 feet.	**No** potential for use because no improvements are proposed outside existing right-of-way.	**No** potential for constructive use due to distance from SR-58/14.	None.
SR-14: Palmdale to I-5 (no programmed improvements) (2)	Pelona Vista Park (Sports Complex), City of Palmdale	442 feet.	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Vasquez Rocks County Park, Unincorporated Los Angeles County	Resource is adjacent to existing SR-14.	**No** potential for use because no improvements are proposed.	**High** potential for constructive use because resource is adjacent to SR-14.	Noise walls and/or visual screening, as appropriate.
	Angeles National Forest, unincorporated Los Angeles County	806 feet.	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use.	None.
	Canyon Country Park, City of Santa Clarita	173 feet.	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Oak Spring Canyon Park, City of Santa Clarita	895 feet.	**No** potential for use because no improvements are proposed.	**Low** potential for constructive use.	None identified.
Airports					
Burbank Airport (no change)	There are no Sections 4(f)/6(f) resources	Not applicable.	Not applicable.	Not applicable.	Not applicable.

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	within 0.25 miles of this Airport.				
MODAL ALTERNATIVE					
Highways					
I-5: SR-99 to SR-14 (widen 2 lanes)	Fort Tejon State Historical Park, Unincorporated Kern County	Resource is adjacent to existing I-5.	**High** potential for use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.
	Hungry Valley State Vehicular Recreation Area, Unincorporated Los Angeles County	Resource is adjacent to existing I-5.	**High** potential for use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.
	Pyramid Lake, Unincorporated Los Angeles County	Resource is adjacent to existing I-5.	**High** potential for use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures Noise walls and/or visual screening, as appropriate.
	Angeles National Forest, unincorporated Los Angeles County	Resource is adjacent to I-5.	**No** potential for use because no improvements are proposed.	**Medium** potential for constructive use.	Avoidance and compensation measures.
	Castaic County Sports Complex, Unincorporated Los Angeles County (6f)	201 feet	**No** potential for use because this resource is more than 150 feet from the centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Hasley Canyon Park, Unincorporated Los Angeles County	1,312 feet.	**No** potential for use due to distance from I-5.	**No** potential for constructive use due to distance from I-5.	None.
	Santa Clarita Woodlands Park, Towsley Canyon, Unincorporated Los Angeles County	25 feet.	**High** potential for use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.
	Santa Clarita Woodlands Park, East and Rice Canyons, Unincorporated Los Angeles County	Resource is adjacent to existing I-5.	**High** potential for use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.
I-5: SR-14 to I-405 (double-deck 4	There are no Sections 4(f)/6(f) resources	Not applicable.	Not applicable.	Not applicable.	Not applicable.

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
lanes)	within 0.25 mile of this segment.				
I-5: I-405 to Burbank (widen 4 lanes)	Lundigan Park, City of Burbank	1,148 feet.	**No** potential for use due to distance from I-5.	**No** potential for constructive use due to distance from I-5.	None.
	McCambridge Park, City of Burbank	820 feet.	**No** potential for use due to distance from I-5.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Sun Valley Park and Recreation Center, City of Los Angeles	1,290 feet.	**No** potential for use due to distance from I-5.	**No** potential for constructive use due to distance from I-5.	None.
	Fernangeles Park, City of Los Angeles	389 feet.	**No** potential for use due to distance from I-5.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Carey Ranch Park, City of Los Angeles	562 feet.	**No** potential for use due to distance from I-5.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Paxton Park, City of Los Angeles (6f)	1,202 feet.	**No** potential for use due to distance from I-5.	**No** potential for constructive use due to distance from I-5.	None.
	Richie Valens Park, City of Los Angeles	446 feet.	**No** potential for use due to distance from I-5.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Sharp Avenue Park, City of Los Angeles	244 feet.	**No** potential for use due to distance from I-5.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Griffith Manor Park, City of Glendale	574 feet.	**No** potential for use due to distance from I-5.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Los Angeles Equestrian Center, City of Los Angeles	733 feet.	**No** potential for use due to distance from I-5.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Griffith Park, City of Los Angeles (6f)	Resource is adjacent to existing I-5.	**High** potential for use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.
I-5: Burbank to LAUS (widen 4 lanes)	Harding Municipal Golf Course, City of Los Angeles	Resource is adjacent to existing I-5.	**High** potential for use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	North Atwater Park, City of Los Angeles	253 feet.	**No** potential for use due to distance from I-5.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Griffith Park, City of Los Angeles (6f)	Resource is adjacent to existing I-5.	**High** potential for use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.
	Los Feliz Municipal Golf Course, City of Los Angeles	449 feet.	**No** potential for use due to distance from I-5.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Elysian Valley Recreation Center, City of Los Angeles	433 feet.	**No** potential for use due to distance from I-5.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Elysian Park, City of Los Angeles (6f)	Resource is adjacent to existing I-5.	**High** potential for use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate
	Downey Playground, City of Los Angeles	1,039 feet.	**No** potential for use due to distance from I-5.	**No** potential for constructive use due to distance from I-5.	None.
	Lincoln Heights Recreation Center, City of Los Angeles	899 feet.	**No** potential for use due to distance from I-5.	**Low** potential for constructive use.	None.
SR-58/14: SR-99 to Palmdale (no widening)	Curry Street Park, City of Tehachapi	987 feet.	**No** potential for use due to distance from SR-58/14.	**No** potential for constructive use due to distance from SR-58/14.	None.
	Mojave East Park, City of Mojave	1,289 feet.	**No** potential for use due to distance from SR-58/14.	**No** potential for constructive use due to distance from SR-58/14.	None.
	Rosamond Park, City of Rosamond	648 feet.	**No** potential for use due to distance from SR-58/14.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Lancaster City Park, City of Lancaster	201 feet.	**No** potential for use due to distance from SR-58/14.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Antelope Valley Country Club, City of Palmdale	1,018 feet.	**No** potential for use due to distance from SR-58/14.	**No** potential for constructive use due to distance from SR-58/14.	None.
	Desert Sands Park, City of Palmdale	1,097 feet.	**No** potential for use due to distance from SR-58/14.	**No** potential for constructive use due to distance from SR-58/14.	None.

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
SR-14: Palmdale to I-5 (widen 2 lanes)	Pelona Vista Park (Sports Complex), City of Palmdale	442 feet.	**No** potential for use due to distance from SR-14.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Vasquez Rocks County Park, Unincorporated Los Angeles County	Resource is adjacent to existing SR-14.	**High** potential for use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.
	Angeles National Forest, unincorporated Los Angeles County	806 feet.	**No** potential for use due to distance from centerline.	**Low** potential for constructive use.	None.
	Canyon Country Park, City of Santa Clarita	173 feet.	**No** potential for use due to distance from SR-14.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Oak Spring Canyon Park, City of Santa Clarita	895 feet.	**No** potential for use due to distance from SR-14.	**Low** potential for constructive use.	None.
Airports					
Burbank Airport (9.9 additional MAP, 19 new gates, 1 new runway, 1 new access)	Sun Valley Park and Recreation Center, City of Los Angeles	Resource is within the perimeter of the footprint for the proposed improvements.	**High** potential for use because the resource is within the footprint.	**Medium** potential for constructive use.	Noise control measures for aircraft noise and potentially visual screening.
	Verdugo Mountain Park, City Burbank and unincorporated Los Angeles County	Resource is 1,150 feet from the perimeter of the footprint for the proposed improvements.	**No** potential for use due to distance from footprint.	**No** potential for constructive use due to distance from footprint.	None.
HST CORRIDOR AND STATION OPTIONS					
Bakersfield-to-Los Angeles Alignments					
Wheeler Ridge Corridor	Fort Tejon State Historical Park, Unincorporated Kern County	136 feet.	**High** potential for use.	**Medium** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.
	Weill Park, City of Bakersfield	Resource is adjacent to alignment.	**High** potential for use.	**Medium** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Central Park, City of Bakersfield	Resource is adjacent to alignment.	**High** potential for use.	**Medium** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.
	Casa Loma Park, City of Bakersfield	1,256 feet.	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from centerline.	None.
	Rexland Acres Park, unincorporated Kern County	1,246 feet.	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from centerline.	None.
	Opal Avenue and McKee Road Park, unincorporated Kern County	821 feet.	**No** potential for use due to distance from centerline.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
Union Avenue Corridor	Fort Tejon State Historical Park, Unincorporated Kern County	303 feet.	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Potomac Park, unincorporated Kern County	686 feet.	**No** potential for use due to distance from centerline.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
I-5: Tehachapi Crossing	Castaic County Sports Complex, Unincorporated Los Angeles County (6f)	307 feet.	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Fort Tejon State Historical Park, Unincorporated Kern County	348 feet.	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Hungry Valley State Vehicular Recreation Area, Unincorporated Los Angeles County	Resource is adjacent to alignment.	**High** potential for use.	**Medium** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.
	Pyramid Lake, Unincorporated Los Angeles County	Resource is adjacent to alignment.	**High** potential for use.	**Medium** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.
	Angeles National Forest, unincorporated Los Angeles County	Resource is adjacent to I-5.	**High** potential for constructive use because proposed improvements are potentially within this resource.	**Medium** potential for constructive use.	Avoidance and compensation measures.

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Santa Clarita Woodlands Park, Towsley Canyon, Unincorporated Los Angeles County	Resource is adjacent to alignment.	**High** potential for use.	**Medium** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.
	Santa Clarita Woodland Park, East and Rice Canyons, Unincorporated Los Angeles County	Resource is adjacent to alignment.	**High** potential for use.	**Medium** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.
SR-58 Corridor	There are no Sections 4(f)/6(f) resources within 0.25 mile of the centerline of this segment.	Not applicable.	Not applicable.	Not applicable.	Not applicable.
Antelope Valley Corridor	Duck Pond, unincorporated Los Angeles County	847 feet.	**No** potential for use due to distance from centerline.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Rosamond Park, City of Rosamond	1,272 feet.	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from centerline.	None.
Soledad Canyon Corridor	Soledad Campground, unincorporated Los Angeles County	681 feet	**No** potential for use due to distance from centerline.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Angeles National Forest, unincorporated Los Angeles County	162 feet.	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
Metrolink/UPRR: Sylmar Station North	There are no Sections 4(f)/6(f) resources within 0.25 mile of the centerline of this segment.	Not applicable.	Not applicable.	Not applicable.	Not applicable.
Metrolink/UPRR: Sylmar Station to Metrolink	There are no Sections 4(f)/6(f) resources within 0.25 mile of the centerline of this segment.	Not applicable.	Not applicable.	Not applicable.	Not applicable.
Burbank Airport to Downtown Burbank	There are no Sections 4(f)/6(f) resources within 0.25 mile of the centerline of this segment.	Not applicable.	Not applicable.	Not applicable.	Not applicable.
Metrolink/UPRR: Glendale	Pacific Park, City of Glendale	519 feet.	**No** potential for use due to distance from centerline.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Chevy Chase Park, City of Los Angeles	239 feet.	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Glenhurst Park, City of Los Angeles	983 feet.	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from centerline.	None.
Metrolink/UPRR: Downtown Burbank to LAUS (over and under I-5 and SR-110)	Glenhurst Park, City of Los Angeles	896 feet.	**No** potential for use due to distance from centerline.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
Metrolink/UPRR: Downtown Burbank to LAUS (over I-5 and SR-110, south section)	Cypress Park, City of Los Angeles	351 feet.	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Elysian Park, City of Los Angeles (6f)	407 feet.	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Downey Playground, City of Los Angeles	12 feet.	**High** potential for use.	**Medium** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.
Metrolink/UPRR: Downtown Burbank to LAUS (under I-5 and SR-110, south section)	Cypress Park, City of Los Angeles	54 feet.	**High** potential for use.	**Medium** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.
	Elysian Park, City of Los Angeles (6f)	362 feet.	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Downey Playground, City of Los Angeles	44 feet.	**High** potential for use.	**Medium** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.
I-5: Glendale	Griffith Manor Park, City of Glendale	1,100 feet.	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from centerline.	None.
	Los Feliz Municipal Golf Course, City of Los Angeles	Resource is adjacent to alignment.	**High** potential for use.	**Medium** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	North Atwater Park, City of Los Angeles	Resource is adjacent to alignment.	**High** potential for use.	**Medium** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.
	Griffith Park, City of Los Angeles (6f)	Resource is adjacent to alignment.	**High** potential for use.	**Medium** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.
	Harding Municipal Golf Course, City of Los Angeles	300 feet.	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
I-5: Downtown Burbank to LAUS Station (cut and cover at Silver Lake)	Elysian Valley Recreation Center, City of Los Angeles	1,235 feet.	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from centerline.	None.
	Elysian Park, City of Los Angeles (6f)	Resource is adjacent to alignment.	**High** potential for use.	**Medium** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.
I-5: Downtown Burbank to LAUS (aerial at Silver Lake)	Elysian Valley Recreation Center, City of Los Angeles	1,235 feet.	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from centerline.	None.
	Elysian Park, City of Los Angeles (6f)	Resource is adjacent to alignment.	**High** potential for use.	**Medium** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.
LAUS East Bank: North	Elysian Park, City of Los Angeles (6f)	1,255 feet.	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from centerline.	None.
	Downey Playground, City of Los Angeles	55 feet.	**High** potential for use.	**Medium** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
LAUS Existing: East	Prospect Park, City of Los Angeles	1,079 feet.	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from centerline.	None.
LAUS Existing: South	There are no Sections 4(f)/6(f) resources within 0.25 mile of the centerline of this segment.	Not applicable.	Not applicable.	Not applicable.	Not applicable.
East Connection	Prospect Park, City of Los Angeles	949 feet.	**No** potential for use due to distance from centerline.	**No** potential for constructive use due to distance from centerline.	None.
	Lincoln Park, City of Los Angeles	111 feet.	**High** potential for use.	**Medium** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.
South Connection	There are no Sections 4(f)/6(f) resources within 0.25 mile of the centerline of this segment.	Not applicable.	Not applicable.	Not applicable.	Not applicable.
Bakersfield-to-Los Angeles Stations (including station approach tracks)					
Palmdale Station Siding	Sierra Highway Greenbelt, City of Palmdale	Resource is adjacent to the station site.	**High** potential for use because proposed improvements are adjacent to this resource.	**High** potential for constructive use.	Compensation measures. Noise walls and/or visual screening, as appropriate.
Metrolink/UPRR: Sylmar Station Siding	Recreation Park, City of San Fernando	32 feet.	**High** potential for use because proposed improvements are adjacent to this resource.	**High** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.
	Layne Park, City of San Fernando	Resource is adjacent to the station site.	**High** potential for use because proposed improvements are adjacent to this resource.	**High** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.
Burbank Airport Station Siding	Lundigan Park, City of Burbank	935 feet.	**No** potential for use due to distance from centerline.	**No** potential for constructive use.	None.
	Sun Valley Park and Recreation Center, City of Los Angeles	314 feet.	**No** potential for use due to distance from centerline.	**Medium** potential for constructive use.	Noise walls and/or visual screening, as appropriate.

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
Burbank Downtown Station Siding (Metrolink/UPRR)	McCambridge Park, City of Burbank	898 feet.	**No** potential for use due to distance from centerline.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Griffith Manor Park, City of Glendale	578 feet.	**No** potential for use due to distance from centerline.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Griffith Park, City of Los Angeles (6f)	991 feet.	**No** potential for use due to distance from centerline.	**No** potential for constructive use	None.
	Pelanconi Park, City of Glendale	71 feet.	**High** potential for use because proposed improvements are adjacent to this resource.	**High** potential for constructive use.	Avoidance and compensation Noise walls and/or visual screening, as appropriate.
Burbank Downtown Station Siding (south side of I-5 link)	McCambridge Park, City of Burbank	898 feet.	**No** potential for use due to distance from centerline.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
	Griffith Manor Park, City of Glendale	Resource is adjacent to the station site.	**High** potential for use because proposed improvements are adjacent to this resource.	**High** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
LAUS Existing Station Siding	El Pueblo de Los Angeles State Historic Park, City of Los Angeles	50 feet.	**High** potential for use.	**High** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.
LAUS South Station Siding	Prospect Park, City of Los Angeles	1,079 feet.	**No** potential for use due to distance from centerline.	**No** potential for constructive use.	None.
	El Pueblo de Los Angeles State Historic Park, City of Los Angeles	1,016 feet.	**No** potential for use due to distance from centerline.	**No** potential for constructive use.	None.
LAUS East Bank Station Siding	El Pueblo de Los Angeles State Historic Park, City of Los Angeles	1,079 feet.	**No** potential for use due to distance from centerline.	**No** potential for constructive use.	None.
	Prospect Park, City of Los Angeles	741 feet.	**No** potential for use due to distance from station site.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.
Downtown LA Maintenance Yard	Prospect Park, city of Los Angeles	1,257 feet.	**No** potential for use due to distance from station site.	**No** potential for constructive use.	Noise walls and/or visual screening, as appropriate.

	Sections 4 (f) and 6(f) Recreation Resources Within 900 Feet (1)	Distance from Centerline in Feet	Potential for Use (within 150 feet)	Potential for Constructive Use (greater than 150 and less than 900 feet)	Probable Measures to Minimize Harm
	Lincoln Park, City of Los Angeles	Resource is adjacent to the station site.	**High** potential for use because proposed improvements are adjacent to this resource.	**High** potential for constructive use.	Avoidance and compensation measures. Noise walls and/or visual screening, as appropriate.
	Downey Playground, City of Los Angeles	735 feet	**No** potential for use due to distance from station site.	**Low** potential for constructive use.	Noise walls and/or visual screening, as appropriate.

(1) All these recreation resources are Section 4(f) resources. Section 6(f) resources are noted as (6f) in parenthesis, following the name and jurisdiction for each resource.
All resources within 0.25 of the centerline or project feature are listed; resources more than 900 feet from the centerline or feature are assumed not to be used or constructively used as noted in this table.
(2) Although there are no programmed improvements for these segments, they will experience increased traffic volumes in the future under this Alternative which could result in increased noise levels adjacent to these segments.

3.3 Identification of National Register Listed and Eligible Cultural Resources Areas and Potential for Impacts

The cultural resources study identified the potential for impacts on cultural resources based on:

- The number of previously recorded archeological and historic sites located within the defined Area of Potential Effects (APE) by segment. The APE was 500 feet from the rail centerline for rail alternatives in non-urban areas and 100 feet from the rail centerline in urban areas. The APE was 100 feet from the existing right-of-way for airports and freeways.
- Percent of the APE along each segment developed by historic period (before 1900, between 1900 and 1929, and between 1930 and 1958).
- Prehistoric and historic use of the area.
- The percent of the APE along each segment that has previously been surveyed for cultural resources.

National Register of Historic Places (NRHP) listed and eligible cultural resources were identified in the cultural resources study. The cultural resources study provided a table which indicated the potential for cultural resources (including NRHP listed and eligible resources) occurrences by segment and the potential for impacts (low, medium and high) based on the occurrences and the criteria listed above, and the professional judgment of the authors of the cultural resources technical report. No Traditional Cultural Properties are documented within or in the vicinity of the APE.

Table 3.3-1 provides the data from the cultural resources report by segment and the potential for impacts on cultural resources. Because Sections 4(f) and 6(f) focus only on NHRP listed or eligible resources, all NRHP listed or eligible resources are also included in Table 3.2-1 followed by (NRHP), within the segments within which they occur. In addition, resources listed on the California Historic Landmarks list are also shown in Table 3.3-1 followed by (CHL) because these resources are considered to be potentially

eligible for the NRHP. The potential for use or constructive use of the cultural resources, by segment, is also provided in Table 3.3-1.

The measures to avoid or minimize potential harm to NRHP listed and eligible cultural resources would include:

- Detailed additional studies, described in depth in the cultural resources report, to conduct testing and further evaluation of NRHP listed and eligible sites and development of plans to avoid or reduce impacts to those resources.
- Realignment and/or modification of design to avoid or minimize impacts, as feasible.
- Use of retaining walls, noise walls and/or visual screening.

Table 3.3-1
Potential for Use and Constructive Use Impacts on Cultural Resources, Including National Register Listed and Eligible Resources, Along the Alignments and in the Vicinity of Project Features for Bakersfield-to-Los Angeles (1)

	Number of Recorded Archeological, NRHP and CHL Sites	Percent Developed Before 1900	Percent Developed Between 1900 and 1929	Percent Developed Between 1930 and 1958	Potential for Impacts
NO-PROJECT ALTERNATIVE					
Highways					
I-5: SR-99 to SR-14 (No programmed improvements) (2)	No resources.	Less than 0.1 %	1.5 %	6.5 %	**Low** potential for impacts on NRHP listed or eligible resources.
I-5: SR-14 to I-405 (no programmed improvements) (2)	No resources.	Less than 0.1 %	1.0 %	4.0 %	**Low** potential for impacts on NRHP listed or eligible resources.
I-5: I-405 to Burbank (no programmed improvements) (2)	No resources.	Less than 0.1 %	10.0 %	75.0 %	**Low** potential for impacts on NRHP listed or eligible resources.
I-5: Burbank to LA Union Station (LAUS) (no programmed improvements) (2)	No resources.	1.0 %	11.0 %	79.5 %	**Low** potential for impacts on NRHP listed or eligible resources.
SR-58/14: SR-99 to Palmdale (programmed widening in Antelope Valley in existing right of way)	No resources.	1.0 %	11.0 %	79.5 %	**Low** potential for impacts on NRHP listed or eligible resources.
SR-14: Palmdale to I-5 (no programmed improvements) (2)	No resources.	Less than 0.1 %	1.0 %	2.5 %	**Low** potential for impacts on NRHP listed or eligible resources.
Airports					
Burbank Airport (no change)	No resources.	1.0 %	5.0 %	82.5 %	**Low** potential for impacts on NRHP listed or eligible resources.

	Number of Recorded Archeological, NRHP and CHL Sites	Percent Developed Before 1900	Percent Developed Between 1900 and 1929	Percent Developed Between 1930 and 1958	Potential for Impacts
MODAL					
Highways					
I-5: SR-99 to SR-14 (widen 2 lanes)	18 resources. Fort Tejon Historical Monument, unincorporated Kern County (NRHP) Sebastian (Tejon) Indian Reservation, unincorporated Kern County (CHL) Rose Stage Station, unincorporated Kern County (CHL)	Less than 0.1 %	1.5 %	6.5 %	**High** potential for use and constructive use impacts on NRHP listed and eligible resources.
I-5: SR-14 to I-405 (double-deck 4 lanes)	No resources.	Less than 0.1 %	1.0 %	4.0 %	**Medium** potential for use and constructive use impacts on NRHP listed and eligible resources.
I-5: I-405 to Burbank (widen four lanes)	1 resource.	Less than 0.1 %	10.0 %	75.0 %	**Medium** potential for use and constructive use impacts on NRHP listed and eligible resources.
I-5: Burbank to LAUS (widen 4 lanes)	No resources.	1.0 %	11.0 %	79.5 %	**High** potential for use and constructive use impacts on NRHP listed and eligible resources.
SR-58/14: SR-99 to Palmdale (no widening)	28 resources.	1.0 %	11.0 %	79.5 %	**No** potential for use and **Medium** potential for constructive use impacts on NRHP listed and eligible resources.
SR-14: Palmdale to I-5 (widen 2 lanes)	30 resources.	Less than 0.1 %	1.0 %	2.5 %	**Medium** potential for use and constructive use impacts on NRHP listed and eligible resources.
Airports					
Burbank (9.9 additional MAP, 19 new gates, 1 new runway, 1 new access)	No resources.	1.0 %	5.0 %	82.5 %	**High** potential for constructive use impacts on NRHP listed and eligible resources.
HST CORRIDOR AND STATION OPTIONS					
Bakersfield-to-Los Angeles Alignments					
Wheeler Ridge Corridor	5 resources.	2.5 %	20.0 %	25.0 %	**High** potential for use and constructive use impacts on NRHP listed and eligible resources.

	Number of Recorded Archeological, NRHP and CHL Sites	Percent Developed Before 1900	Percent Developed Between 1900 and 1929	Percent Developed Between 1930 and 1958	Potential for Impacts
Union Avenue Corridor	6 Alex Godey House, City of Bakersfield (CHL)	1.5 %	25.0 %	35.0 %	**High** potential for use and constructive use impacts on NRHP listed and eligible resources.
I-5: Tehachapi Crossing	11 resources. Sebastian (Tejon) Indian Reservation, unincorporated Kern County (CHL) Rose Stage Station, unincorporated Kern County (CHL)	1.0 %	5.0 %	6.5 %	**High** potential for use and constructive use impacts on NRHP listed and eligible resources.
SR-58 Corridor	18 resources.	0.1 %	1.5 %	6.5 %	**Medium** potential for use and constructive use impacts on NRHP listed and eligible resources.
Antelope Valley Corridor	20 resources. Western Hotel, City of Lancaster (CHL)	0.1 %	2.0 %	10.5 %	**Medium** potential for use and constructive use impacts on NRHP listed and eligible resources.
Soledad Canyon Corridor	30 resources. Lang Station, unincorporated Los Angeles County.	Less than 0.1 %	0.2 %	5.0 %	**Medium** potential for use and constructive use impacts on NRHP listed and eligible resources.
Metrolink/UPRR: Sylmar Station North	No resources.	0.5 %	20.0 %	35.0 %	**Medium** potential for use and constructive use impacts on NRHP listed and eligible resources.
Metrolink/UPRR: Sylmar Station to Metrolink	No resources.	0.5%	20.0%	35.0%	**Medium** potential for use and constructive use impacts on NRHP listed and eligible resources.
Metrolink/UPRR: Burbank Airport to Downtown Burbank	No resources.	Less than 0.1 %	8.5 %	75.5 %	**High** potential for use and constructive use impacts on NRHP listed and eligible resources.
Metrolink/UPRR: Glendale	No resources.	3.0 %	30.5 %	53.5 %	**High** potential for use and constructive use impacts on NRHP listed and eligible resources.

	Number of Recorded Archeological, NRHP and CHL Sites	Percent Developed Before 1900	Percent Developed Between 1900 and 1929	Percent Developed Between 1930 and 1958	Potential for Impacts
Metrolink/UPRR: Downtown Burbank to LAUS (over and under I-5 and SR-110)	No resources.	1.0 %	25.5 %	60.5 %	**High** potential for use and constructive use impacts on NRHP listed and eligible resources.
Metrolink/UPRR: Downtown Burbank to LAUS (over I-5 and SR-110, south section)	No resources.	Less than 0.1 %	20.0 %	55.0 %	**High** potential for use and constructive use impacts on NRHP listed and eligible resources.
Metrolink/UPRR: Downtown Burbank to LAUS (under I-5 and SR-110, south section)	No resources.	Less than 0.1 %	19.0 %	52.5 %	**High** potential for use and constructive use impacts on NRHP listed and eligible resources.
I-5: Glendale	No resources.	2.5 %	6.0 %	29.0 %	**Medium** potential for use and constructive use impacts on NRHP listed and eligible resources.
I-5: Downtown Burbank to LAUS Station (cut and cover at Silver Lake)	No resources.	Less than 0.1 %	19.0%	52.5 %	**High** potential for use and constructive use impacts on NRHP listed and eligible resources.
I-5: Downtown Burbank to LAUS (aerial at Silver Lake)	No resources.	Less than 0.1 %	5.5%	10.5%	**Medium** potential for use and constructive use impacts on NRHP listed and eligible resources.
LAUS East Bank: North	No resources.	Less than 0.1 %	11.5 %	20.5 %	**High** potential for use and constructive use impacts on NRHP listed and eligible resources.
LAUS Existing: East	No resources.	4.5 %	31.5 %	22.0 %	**High** potential for use and constructive use impacts on NRHP listed and eligible resources.
LAUS Existing: South	One resource.	Less than 0.1 %	1.5%	2.0%	**High** potential for use and constructive use impacts on NRHP listed and eligible resources.
East Connection	No resources.	2.5 %	19.0 %	18.5 %	**High** potential for use and constructive use impacts on NRHP listed and eligible resources.

	Number of Recorded Archeological, NRHP and CHL Sites	Percent Developed Before 1900	Percent Developed Between 1900 and 1929	Percent Developed Between 1930 and 1958	Potential for Impacts
South Connection	No resources.	1.5 %	5.0 %	21.5 %	**High** potential for use and constructive use impacts on NRHP listed and eligible resources.
Bakersfield-to-Los Angeles Stations (including station approach tracks)					
Palmdale Station Siding	No resources.	Less than 0.1 %	0.5%	25.0 %	**Low** potential for use and constructive use impacts on NRHP listed and eligible resources.
Metrolink/UPRR: Sylmar Station Siding	1 resource.	Less than 0.1 %	10.0 %	50.5 %	**High** potential for use and constructive use impacts on NRHP listed and eligible resources.
Burbank Airport Station Siding	No resources.	Less than 0.1 %	20.0 %	60.0 %	**High** potential for use and constructive use impacts on NRHP listed and eligible resources.
Burbank Downtown Station Siding (Metrolink/UPRR)	No resources.	Less than 0.1 %	19.0 %	49.5 %	**High** potential for use and constructive use impacts on NRHP listed and eligible resources.
Burbank Downtown Station Siding (south side of I-5 link)	No resources.	Less than 0.1 %	19.0 %	49.5 %	**High** potential for use and constructive use impacts on NRHP listed and eligible resources.
LAUS Existing Station Siding	1 resource. Union Station, City of Los Angeles (NRHP)	Less than 0.1 %	1.5 %	2.0 %	**High** potential for use and constructive use impacts on NRHP listed and eligible resources.
LAUS South Station Siding	No resources.	Less than 0.1 %	2.0 %	3.0 %	**High** potential for use and constructive use impacts on NRHP listed and eligible resources.
LAUS East Bank Station Siding	No resources.	Less than 0.1 %	2.0 %	5.5 %	**High** potential for use and constructive use impacts on NRHP listed and eligible resources.
Downtown LA Maintenance Yard	No resources.	Less than 0.1 %	2.0 %	5.5 %	**High** potential for use and constructive use impacts on NRHP listed and eligible resources.

	Number of Recorded Archeological, NRHP and CHL Sites	Percent Developed Before 1900	Percent Developed Between 1900 and 1929	Percent Developed Between 1930 and 1958	Potential for Impacts
(1) The potential for impacts on cultural resources was determined based on the number of previously recorded sites by segment, the percent of each segment developed by historic period, documented prehistoric and historic use of the area, the percent of the APE along the segment that has been previously surveyed for cultural resources and the professional judgment of the authors of the cultural resources technical report.					
(2) Although there are no programmed improvements for these segments, they will experience increased traffic volumes in the future under this Alternative which could result in increased noise levels adjacent to these segments.					

3.4 LIKELIHOOD OF ADDITIONAL RESOURCES BEING IDENTIFIED AT PROJECT LEVEL

3.4.1 Existing Park and Wildlife Refuge Resources Not Currently Identified

There are potentially existing publicly owned recreation resources within 0.25 mile of the centerlines or project features such as stations which were not identified in this current study effort. These resources could include small neighborhood and pocket parks which are not documented in the general maps such as Thomas Brothers maps and General Plans used as data sources for this level of effort. There may also be publicly owned open space areas such as within planned communities that are intended to serve recreation and/or resource protection purposes and which may qualify as Section 4(f) resources. In addition, many public trails are not shown on general maps or in General Plans and, therefore, may not have been identified in this current effort. There may be public golf courses which are owned/operated by public agencies which were not identified in this current study effort. In addition, there may be federal lands such as lands owned/managed by the Bureau of Land Management, which are available for public recreation. Some public agencies, such as flood control districts, may manage publicly owned lands that have multiple purposes including flood control, trails and recreation resources.

Some public schools, including state colleges/universities, and high, middle and elementary schools may have school playing fields which are open for public use (non-restricted) which may qualify as Section 4(f) resources. However, not all school playing facilities provide for unrestricted public use and, therefore, may not qualify as Section 4(f) resources. Each school and its relevant policies would need to be researched.

Similarly, it is possible that there are publicly owned recreation lands and/or wildlife and waterfowl refuges in the study area which may not have been identified based on the general mapping and the General Plans. In particular, there may be small mitigation areas that have been dedicated to public ownership but that are not clearly identified as publicly owned resources in the data sources used for this current effort.

In addition, there are a number of private recreation resources (such as Thousand Trails Soledad Canyon Resort, Californians RV Resort, Oasis Campground, Robin's Nest and White Rock Lake in unincorporated Los Angeles County) which serve recreation needs in this part of southern California. It is possible that, in the future, some of the many privately owned and operated recreation resources in this area could be purchased by a public agency and, therefore, qualify as a Section 4(f) resource. The future study should confirm the public/private ownership status of each recreation resources in the study area, to assess whether any previously privately owned facilities have become publicly owned.

Therefore, it is expected that, during the project level planning and environmental phase, the list of existing publicly owned recreation resources will be updated based on additional research and detailed

consultations with the jurisdictions through which the project alignments pass or in which project components are located, as described later in Section 3.6.

3.4.2 Planned Resources Not Currently Identified for a Specific Site

The local jurisdictions along the alignments protect existing recreation resources and identify future recreation resources in their General Plans. It is likely by the time the project level environmental and planning phases are underway that some previously planned recreation resources will have advanced through the planning and environmental processes and may have been constructed. It is similarly possible that federally protected lands such as the National Forest could have been expanded and/or their designations modified or new federally protected lands identified.

Therefore, it is expected that, during the project-level planning and environmental phases, the list of existing publicly owned recreation resources will be updated based on additional research and detailed consultations with the jurisdictions through which the project alignments pass or in which project components are located, as described below in detail in Section 3.6, to identify previously planned recreation resources which have advanced in planning and/or are operational.

3.4.3 National Register Listed or Eligible Resources

The more detailed analysis that will be conducted in the next phase of environmental study will include surveys and archival research to locate cultural resources, test them for significance and identify measures to avoid or reduce adverse impacts on those resources. Part of these detailed studies will include assessment of resources to identify those already listed on the NRHP and to determine the eligibility of additional resources for listing on the NRHP. Based on the information collected and analyzed for this current effort, it appears likely that additional resources in the APE will be identified as potentially eligible for the NRHP, based on their age, and their association with key prehistoric and historic periods, persons and activities. Therefore, it is likely that the next study phase will identify additional cultural resources that will require assessment under Sections 4(f)/6(f), based on their potential eligibility for the NRHP.

6.5 Avoidance Alternatives or Reasons for no Prudent or Feasible Alternative for 4(f) or 6(f) Use

As shown in Tables 3-2 and 3-3, there are a number of Sections 4(f)/6(f) recreation resources and cultural resources within or immediately adjacent to the proposed alignments of the improvements under the modal and HRT alternatives. Avoidance of use and/or constructive use of these resources is possible in many cases through minor redesign or narrowing of the disturbance limits, noise walls or visual screening. In addition, resources may be avoided or impacts minimized by tunneling, cut-and-cover or other construction techniques to reduce surface disruption and/or land acquisition needs at and near Sections 4(f) and 6(f) resources. However, there may be cases where avoidance of use or constructive use cannot be achieved because:

- Shifting the centerline (and the whole facility) to one side or the other to avoid one or more resources could result in greater impacts on other resources. For example, the segment of I-5 from SR-99 to SR-14 includes a number of very large Sections 4(f)/6(f) resources, on both sides of I-5. It may not be possible to fully avoid use and/or constructive use of all of these resources under the modal alternative.

- The HST alignment cannot easily be shifted because of the large turning radii and other design considerations. A “minor” shift in one location along the HST alignment could result in a substantial

shift further up or down the alignment, potentially resulting in use and/or constructive use impacts on other Sections 4(f)/6(f) resources.

- Measures to reduce harm for constructive use impacts, such as noise walls, could result in adverse visual impacts on Sections 4(f)/6(f) resources. The identification and implementation of measures to minimize harm at each resource need to be conducted in consultation with the owners of the resources to ensure that measures to minimize harm do not adversely affect the values of the resources.

- Alternative construction methodologies (tunneling, cut-and-cover) may not always be possible due to other constraints such as topography, geology, utilities and drainage.

The Sections 4(f)/6(f) resources most at risk for use and/or constructive use impacts which cannot be avoided are those resources closest to the proposed improvements. Table 3.4-1 lists those recreation resources, by alternative, which are within 150 feet of the centerline and which are potentially most at risk for use and/or constructive use impacts which cannot be avoided. Table 3.4-1 also identifies segments on which there is **High** and/or **Medium** potential for use and/or constructive use impacts on NRHP listed and eligible resources. The distance from the centerline for NRHP listed and eligible resources is not provided because this assessment is based on the number of recorded sites and the ages of development along the segment and not on individual resources, as explained in detail in the cultural resources technical report.

Table 3.4-1
Summary of Sections 4(f) and 6(f) Resources within 150 Feet of the Centerline and Most at Risk for Use and Constructive Use Impacts Which Cannot Be Avoided

	Sections 4(f) and 6(f) Recreation Resources Within 150 Feet of the Centerline	Distance from Centerline in Feet
NO-PROJECT ALTERNATIVE		
Highways		
I-5: SR-99 to SR-14 (no programmed improvements)	Fort Tejon State Historical Park, Unincorporated Kern County	Resource is adjacent to existing I-5.
	Hungry Valley State Vehicular Recreation Area, Unincorporated Los Angeles County	Resource is adjacent to existing I-5.
	Pyramid Lake, Unincorporated Los Angeles County	Resource is adjacent to existing I-5.
	Angeles National Forest, unincorporated Los Angeles County	Resource is adjacent to existing I-5.
	Santa Clarita Woodland Park, Towsley Canyon, Unincorporated Los Angeles County	25 feet.
	Santa Clarita Woodlands Park, East and Rice Canyons, Unincorporated Los Angeles County	Resource is adjacent to existing I-5.
I-5: SR-14 to I-405 (no programmed improvements)	There are no Sections 4(f)/6(f) resources within 0.25 mile of the centerline of this segment.	Not applicable.
I-5: I-405 to Burbank (no programmed improvements)	Griffith Park, City of Los Angeles (6f)	Resource is adjacent to existing I-5.
I-5: Burbank to Los Angeles Union Station (LAUS) (no programmed improvements)	Harding Municipal Golf Course, City of Los Angeles	Resource is adjacent to existing I-5.
	Griffith Park, City of Los Angeles (6f)	Resource is adjacent to existing I-5.
	Elysian Park, City of Los Angeles (6f)	Resource is adjacent to existing I-5.

	Sections 4(f) and 6(f) Recreation Resources Within 150 Feet of the Centerline	Distance from Centerline in Feet
SR-58/14: SR-99 to Palmdale (programmed widening in Antelope Valley in existing right of way)	There are no Sections 4(f)/6(f) resources within 150 feet of the centerline of this segment.	Not applicable.
SR-14: Palmdale to I-5 (no programmed improvements)	Vasquez Rocks County Park, Unincorporated Los Angeles County	Resource is adjacent to existing SR-14.
Airports		
Burbank Airport (no change)	There are no Sections 4(f)/6(f) resources within 150 feet of this Airport.	Not applicable.
MODAL ALTERNATIVE		
Highways		
I-5: SR-99 to SR-14 (widen 2 lanes)	Fort Tejon State Historical Park, Unincorporated Kern County	Resource is adjacent to existing I-5.
	Hungry Valley State Vehicular Recreation Area, Unincorporated Los Angeles County	Resource is adjacent to existing I-5.
	Pyramid Lake, Unincorporated Los Angeles County	Resource is adjacent to existing I-5.
	Angeles National Forest, unincorporated Los Angeles County	Resource is adjacent to existing I-5.
	Santa Clarita Woodlands Park, Towsley Canyon, Unincorporated Los Angeles County	25 feet.
	Santa Clarita Woodlands Park, East and Rice Canyons, Unincorporated Los Angeles County	Resource is adjacent to existing I-5.
	High potential for use and constructive use impacts on NRHP listed and eligible resources.	--
I-5: SR-14 to I-405 (double-deck 4 lanes)	There are no Sections 4(f)/6(f) resources within 150 feet of this segment.	Not applicable.
	Medium potential for use and constructive use impacts on NRHP listed and eligible resources.	--
I-5: I-405 to Burbank (widen 4 lanes)	Griffith Park, City of Los Angeles (6f)	Resource is adjacent to existing I-5.
	Medium potential for use and constructive use impacts on NRHP listed and eligible resources.	--
I-5: Burbank to LAUS (widen 4 lanes)	Harding Municipal Golf Course, City of Los Angeles	Resource is adjacent to existing I-5.
	Griffith Park, City of Los Angeles (6f)	Resource is adjacent to existing I-5.
	Elysian Park, City of Los Angeles (6f)	Resource is adjacent to existing I-5.
	High potential for use and constructive use impacts on NRHP listed and eligible resources.	--
SR-58/14: SR-99 to Palmdale (no widening)	There are no Sections 4(f)/6(f) resources within 150 feet of this segment.	Not applicable.
	Medium potential for use and constructive use impacts on NRHP listed and eligible resources.	--
SR-14: Palmdale to I-5 (widen 2 lanes)	Vasquez Rocks County Park, Unincorporated Los Angeles County	Resource is adjacent to existing SR-14.
	High potential for use and constructive use impacts on NRHP listed and eligible resources.	--
Airports		
Burbank Airport (9.9 additional MAP, 19 new gates, 1 new runway, 1 new access)	Sun Valley Park and Recreation Center, City of Los Angeles	Resource is within the perimeter of the footprint for the proposed improvements.

	Sections 4(f) and 6(f) Recreation Resources Within 150 Feet of the Centerline	Distance from Centerline in Feet
	High potential for use and constructive use impacts on NRHP listed and eligible resources.	--
HST CORRIDOR AND STATION OPTIONS		
Bakersfield-to-Los Angles Alignments		
Wheeler Ridge Corridor	Fort Tejon State Historical Park, Unincorporated Kern County	136 feet.
	Weill Park, City of Bakersfield	Resource is adjacent to alignment.
	Central Park, City of Bakersfield	Resource is adjacent to alignment.
	High potential for use and constructive use impacts on NRHP listed and eligible resources.	--
Union Avenue Corridor	There are no Sections 4(f)/6(f) resources within 150 feet of this segment.	Not applicable.
	High potential for use and constructive use impacts on NRHP listed and eligible resources.	--
I-5: Tehachapi Crossing	Hungry Valley State Vehicular Recreation Area, Unincorporated Los Angeles County	Resource is adjacent to alignment.
	Pyramid Lake, Unincorporated Los Angeles County	Resource is adjacent to alignment.
	Angeles National Forest, unincorporated Los Angeles County	Resource is adjacent to existing I-5.
	Santa Clarita Woodlands Park, Towsley Canyon, Unincorporated Los Angeles County	Resource is adjacent to alignment.
	Santa Clarita Woodland Park, East and Rice Canyons, Unincorporated Los Angeles County	Resource is adjacent to alignment.
	High potential for use and constructive use impacts on NRHP listed and eligible resources.	--
SR-58 Corridor	There are no Sections 4(f) resources within 150 of the centerline of this segment.	Not applicable.
	Medium potential for use and constructive use impacts on NRHP listed and eligible resources.	--
Antelope Valley Corridor	There are no Sections 4(f) resources within 150 of the centerline of this segment.	Not applicable.
	Medium potential for use and constructive use impacts on NRHP listed and eligible resources.	--
Soledad Canyon Corridor	Angeles National Forest, unincorporated Los Angeles County	Resource is adjacent to existing I-5.
	Medium potential for use and constructive use impacts on NRHP listed and eligible resources.	--
Metrolink/UPRR: Sylmar Station North	There are no Sections 4(f)/6(f) resources within150 feet of the centerline of this segment.	Not applicable.
	Medium potential for use and constructive use impacts on NRHP listed and eligible resources.	--
Metrolink/UPRR: Sylmar Station to Metrolink	There are no Sections 4(f)/6(f) resources within 0.25 mile of the centerline of this segment.	Not applicable.

	Sections 4(f) and 6(f) Recreation Resources Within 150 Feet of the Centerline	Distance from Centerline in Feet
	Medium potential for use and constructive use impacts on NRHP listed and eligible resources.	--
Metrolink/UPRR: Burbank Airport to Downtown Burbank	There are no Sections 4(f)/6(f) resources within 150 feet of the centerline of this segment.	Not applicable.
	High potential for use and constructive use impacts on NRHP listed and eligible resources.	--
Metrolink/UPRR: Glendale	There are no Sections 4(f)/6(f) resources within 150 feet of the centerline of this segment.	Not applicable.
	High potential for use and constructive use impacts on NRHP listed and eligible resources.	--
Metrolink/UPRR: Downtown Burbank to LAUS (over and under I-5 and SR-110)	There are no Sections 4(f)/6(f) resources within 150 feet of the centerline of this segment.	Not applicable.
	High potential for use and constructive use impacts on NRHP listed and eligible resources.	--
Metrolink/UPRR: Downtown Burbank to LAUS (over I-5 and SR-110, south section)	Downey Playground, City of Los Angeles	12 feet.
	High potential for use and constructive use impacts on NRHP listed and eligible resources.	--
Metrolink/UPRR: Downtown Burbank to LAUS (under I-5 and SR-110, south section)	Cypress Park, City of Los Angeles	54 feet.
	Downey Playground, City of Los Angeles	44 feet.
	High potential for use and constructive use impacts on NRHP listed and eligible resources.	--
I-5: Glendale	Los Feliz Municipal Golf Course, City of Los Angeles	Resource is adjacent to alignment.
	North Atwater Park, City of Los Angeles	Resource is adjacent to alignment.
	Griffith Park, City of Los Angeles (6f)	Resource is adjacent to alignment.
	Medium potential for use and constructive use impacts on NRHP listed and eligible resources.	--
I-5: Downtown Burbank to LAUS Station (cut and cover at Silver Lake)	Elysian Park, City of Los Angeles (6f)	Resource is adjacent to alignment.
	High potential for use and constructive use impacts on NRHP listed and eligible resources.	--
I-5: Downtown Burbank to LAUS (aerial at Silver Lake)	Elysian Park, City of Los Angeles (6f)	Resource is adjacent to alignment.
	Medium potential for use and constructive use impacts on NRHP listed and eligible resources.	--
LAUS East Bank: North	Downey Playground, City of Los Angeles	55 feet.
	High potential for use and constructive use impacts on NRHP listed and eligible resources.	--
LAUS Existing: East	There are no Sections 4(f)/6(f) resources within 150 feet of the centerline of this segment.	Not applicable.

	Sections 4(f) and 6(f) Recreation Resources Within 150 Feet of the Centerline	Distance from Centerline in Feet
	High potential for use and constructive use impacts on NRHP listed and eligible resources.	--
LAUS Existing: South	There are no Sections 4(f)/6(f) resources within 150 feet of the centerline of this segment.	Not applicable.
	High potential for use and constructive use impacts on NRHP listed and eligible resources.	--
East Connection	Lincoln Park, City of Los Angeles	111 feet.
	High potential for use and constructive use impacts on NRHP listed and eligible resources.	--
South Connection	There are no Sections 4(f)/6(f) resources within 150 feet of the centerline of this segment.	Not applicable.
	High potential for use and constructive use impacts on NRHP listed and eligible resources.	--
Bakersfield-to-Los Angeles Stations (including station approach tracks)		
Palmdale Station Siding	Sierra Highway Greenbelt, City of Palmdale	Resource is adjacent to the station site.
Sylmar Metrolink Station Siding	Recreation Park, City of San Fernando	32 feet.
	Layne Park, City of San Fernando	Resource is adjacent to the station site.
	High potential for use and constructive use impacts on NRHP listed and eligible resources.	--
Burbank Airport Station Siding	There are no Sections 4(f)/6(f) resources within 150 feet of the centerline of this segment.	Not applicable.
	High potential for use and constructive use impacts on NRHP listed and eligible resources.	--
Burbank Downtown Station Siding (Metrolink/UPRR)	McCambridge Park, City of Burbank	898 feet.
	High potential for use and constructive use impacts on NRHP listed and eligible resources.	--
	Pelanconi Park, City of Glendale	71 feet.
Burbank Downtown Station Siding (south side of I-5 link)	Griffith Manor Park, City of Glendale	Resource is adjacent to the station site.
	High potential for use and constructive use impacts on NRHP listed and eligible resources.	--
LAUS Existing Station Siding	El Pueblo de Los Angeles State Historic Park, City of Los Angeles	50 feet.
	High potential for use and constructive use impacts on NRHP listed and eligible resources.	--
LAUS South Station Siding	There are no Sections 4(f)/6(f) resources within 150 feet of the centerline of this segment.	Not applicable.
	High potential for use and constructive use impacts on NRHP listed and eligible resources.	--
LAUS East Bank Station Siding	There are no Sections 4(f)/6(f) resources within 150 feet of the centerline of this segment.	Not applicable.

	Sections 4(f) and 6(f) Recreation Resources Within 150 Feet of the Centerline	Distance from Centerline in Feet
	High potential for use and constructive use impacts on NRHP listed and eligible resources.	--
Downtown LA Maintenance Yard	Lincoln Park, City of Los Angeles	Resource is adjacent to the station site.
	High potential for use and constructive use impacts on NRHP listed and eligible resources.	--

4.0 REFERENCES

Parsons Brinckerhoff. *Screening Report.* Prepared for California High-Speed Rail Authority, April 2002.

Parsons Brinckerhoff. *Plans and Profiles.* Prepared for California High-Speed Rail Authority, November 2002.

Parsons Brinckerhoff. *Final Draft Environmental Analysis Methodologies*. Prepared for California High-Speed Rail Authority, November 7, 2002.

P&D Consultants and DMJM+Harris. *Plans and Profiles*. Prepared for the California High-Speed Rail Authority, November 2002.

ESRI, *ESRI Data & Maps CD 2 "United States Parks."* ESRI, 2001.

ESRI, *ESRI Data & Maps CD 3 "Geographic Names Information System Cultural Points Golf Locales."* ESRI, 2001.

California Resources Agency Legacy Project. *Public and Conservation Land*. The California Spatial Information Library, November 8, 2002.

Thomas Brothers Guide, *Los Angeles and Orange Counties*. 2002.

Thomas Brothers. Guide, *Kern County*. 1994.

Kern County Council of Governments (COG), SJV TPA Director's Association, Kern GEONET, *County of Kern - General Plan Valley Wide GIS Project*. Lambert Conformal Conic Datum: NAD27 Zone: California V Spheroid: Clarke 1866 Units: Feet. January 19, 1999.

Kern County COG, SJV TPA Director's Association, Kern GEONET, *County of Kern Zoning - Valley Wide GIS Project*. Lambert Conformal Conic Datum: NAD27 Zone: California V Spheroid: Clarke 1866 Units: Feet. January 19, 1999.

Kern County COG, SJV TPA Director's Association, Kern GEONET, *City of Bakersfield General Plan - Valley Wide GIS Project*. Lambert Conformal Conic Datum: NAD27 Zone: California V Spheroid: Clarke 1866 Units: Feet. January 19, 1999.

Kern County COG, SJV TPA Director's Association, Kern GEONET, *City of Bakersfield Zoning - Valley Wide GIS Project*. Lambert Conformal Conic Datum: NAD27 Zone: California V Spheroid: Clarke 1866 Units: Feet. January 19, 1999.

Kern County COG, SJV TPA Director's Association, Kern GEONET, *City of Tehachapi General Plan Valley Wide GIS Project*. Lambert Conformal Conic Datum: NAD27 Zone: California V Spheroid: Clarke 1866 Units: Feet. January 19, 1999.

Kern County COG, SJV TPA Director's Association, Kern GEONET, *City of Tehachapi Zoning - Valley Wide GIS Project*. Lambert Conformal Conic Datum: NAD27 Zone: California V Spheroid: Clarke 1866 Units: Feet. January 19, 1999.

Southern California Association of Governments, *1993 Existing Land Use for Los Angeles County*. 1993.

5.0 PREPARERS

Sylvia Salenius, AICP Vice President	BA in Political Science and Masters in City and Regional Planning; 30 years of experience preparing CEQA and NEPA documentation for public transportation projects. • Project Manager
Christine Huard-Spencer Principal	BA and MA in Geography; 26 years experience preparing CEQA and NEPA documentation for public transportation projects. • Task Leader for Section 4(f) and Section 6(f)
Jennifer Hobbs Environmental Planner	BS in Geography and Environmental Studies; three years experience preparing CEQA and NEPA documentation and in Geographic Information Systems for public and private projects. • Research, GIS and data compilation.
Vaidas Sekas Environmental Planner	BS and MS in Urban and Regional Planning; five years experience in city and environmental planning and GIS. • Research, GIS and data compilation.