California High-Speed Rail Authority

Burbank to Los Angeles Project Section

Final Record of Decision

March 2022

CALIFORNIA High-Speed Rail Authority

The environmental review, consultation, and other actions required by applicable federal environmental laws for this project are being or have been carried out by the State of California pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated July 23, 2019, and executed by the Federal Railroad Administration and the State of California.

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ACRONYMS AND ABBREVIATIONS

ACHP	Advisory Council on Historic Preservation
Amtrak	National Railroad Passenger Corporation
Authority	California High-Speed Rail Authority
BA	Biological Assessment
BMP	best management practice
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CMF	Central Maintenance Facility
C.F.R.	Code of Federal Regulations
CMF	Central Maintenance Facility
CO	carbon monoxide
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EMF	electromagnetic field
EMI	electromagnetic interference
FAA	Federal Aviation Administration
Fed. Reg.	*Federal Register*
FESA	federal Endangered Species Act
FRA	Federal Railroad Administration
FTA	Federal Transit Administration
GHG	greenhouse gas
HSR	high-speed rail
IAMF	impact avoidance and minimization feature
LAUS	Los Angeles Union Station
LMF	light maintenance facility
Metro	Los Angeles County Metropolitan Transportation Authority
MMEP	Mitigation Monitoring and Enforcement Plan
MOU	memorandum of understanding
NEPA	National Environmental Policy Act
NOAA Fisheries	National Oceanic and Atmospheric Administration Fisheries
NO_X	nitrogen oxides
PA	Programmatic Agreement
$PM_{2.5}$	particulate matter smaller than or equal to 2.5 microns in diameter
PM_{10}	particulate matter smaller than or equal to 10 microns in diameter
PTC	positive train control

ROD	Record of Decision
RSA	resource study area
SCAQMD	South Coast Air Quality Management District
STB	Surface Transportation Board
UPRR	Union Pacific Railroad
USACE	U.S. Army Corps of Engineers
U.S.C.	U.S. Code
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service

1 INTRODUCTION

This document is the California High-Speed Rail Authority's (Authority) Record of Decision (ROD) under the National Environmental Policy Act (NEPA) for the California High-Speed Rail (HSR) Burbank to Los Angeles Project Section (referred to as the project). The Authority is the federal NEPA lead agency under what is commonly referred to as NEPA Assignment. More specifically, the environmental review, consultation, and other actions required by federal environmental laws for this project are being or have been carried out by the State of California pursuant to 23 U.S. Code (U.S.C.) 327 and a Memorandum of Understanding effective July 23, 2019, and executed by the Federal Railroad Administration (FRA) and the State of California. The Authority is also the lead agency for state environmental reviews under the California Environmental Quality Act (CEQA).

This ROD approves the HSR Build Alternative as described in the *California High Speed Rail Project Burbank to Los Angeles Project Section: Final Environmental Impact Report/Environmental Impact Statement* (Final EIR/EIS) dated November 5, 2021. As set forth in this ROD, the HSR Build Alternative best serves the purpose and need for this project and minimizes economic, social, and environmental impacts. It is therefore the Selected Alternative.

The Authority proposes to construct and operate the project after receiving the required approvals from the appropriate federal agencies. These agencies include the federal cooperating agencies—the U.S. Army Corps of Engineers (USACE), the Federal Transit Administration (FTA), the Surface Transportation Board (STB), and the Federal Aviation Administration (FAA). Other federal agencies with specific review or permitting responsibilities include the U.S. Environmental Protection Agency (USEPA), the U.S. Fish and Wildlife Service (USFWS), and the Advisory Council on Historic Preservation (ACHP). Refer to Table 1 on page 1-6 for a list of major NEPA milestones.

To comply with NEPA and CEQA, the Authority issued a joint Draft Environmental Impact Report/Environmental Impact Statement (EIR/EIS) for the project on May 29, 2020. Following public review of the Draft EIR/EIS, the Authority considered and responded to 278 public comments, revised the EIR/EIS to address public comments and various design refinements, and published a Final EIR/EIS on November 5, 2021. Consistent with 40 Code of Federal Regulations (C.F.R.) 1506.2, the Final EIR/EIS is one document that covers both state and federal environmental requirements. However, because this ROD contains only the decision of the Authority under its assigned responsibilities for NEPA, the documents are referred to as the "Draft EIS" and "Final EIS." In making its decision, the Authority considered the information and analysis contained in the 2020 Draft EIS and the 2021 Final EIS (collectively, "EIS Documents"). The Authority also considered public and agency comments received during the public comment period for the Draft EIS.

This ROD provides the decision of the Authority under its assigned responsibilities for NEPA. This ROD is specific to the Burbank to Los Angeles Project Section. The Burbank to Los Angeles Project Section begins at the Burbank Airport Station (at Hollywood Burbank Airport) and crosses the cities of Burbank, Glendale, and Los Angeles before terminating at Los Angeles Union Station (LAUS) in downtown Los Angeles, primarily within an existing, active railroad right-of-way. This existing railroad right-of-way is 14 miles long and is currently owned by the Los Angeles County Metropolitan Transportation Authority (Metro), while the National Railroad Passenger Corporation (Amtrak), Metrolink (governed by the Southern California Regional Rail Authority), and Union Pacific Railroad (UPRR) operate passenger and freight service along the corridor. The Burbank to Los Angeles Project Section would share this railroad corridor. This project section would be within a narrow and constrained urban environment, crossing major streets and highways, and in some areas would be adjacent to the Los Angeles River.

The HSR Build Alternative includes stations at Burbank Airport and LAUS (included in Metro's Link US Project). The HSR Build Alternative would be entirely grade-separated at crossings, meaning that roads, railroads, and other transportation facilities would be at different heights so that the HSR system would neither interrupt nor interface with other modes of transport, including vehicle, bicycle, and pedestrian. The HSR Build Alternative would be fenced to prohibit public or unauthorized vehicle access. The HSR Build Alternative would be primarily within the existing

railroad right-of-way, which is typically 70 to 100 feet wide, and would include northbound and southbound electrified tracks for high-speed trains. The HSR Build Alternative would include new and upgraded track, systems facilities, grade separations, drainage, communication towers, security fencing, and other necessary facilities to introduce HSR service.

The Authority Board reviewed the proposed Burbank to Los Angeles Project Section during its meeting on November 15, 2018, to consider whether to identify the HSR Build Alternative as the Preferred Alternative in the Draft EIS. The Authority considered the following alternatives: the HSR Build Alternative and the No Project Alternative. The Authority Board concurred with the staff recommendation that the HSR Build Alternative (Figure 1) should be identified as the state's Preferred Alternative in the Burbank to Los Angeles Project Section Draft EIS.[1] The HSR Build Alternative would meet the program and project purpose and need, as stated in the 2005 Statewide Program EIR/EIS and Chapter 1 of the EIS.

The Authority has prepared this ROD in accordance with the NEPA Assignment Memorandum of Understanding (MOU) dated July 23, 2019, the Council on Environmental Quality (CEQ) regulations implementing NEPA (40 C.F.R. 1505.2 and 1506.10),[2] and FRA's Procedures for Considering Environmental Impacts (64 Fed. Reg. 28545, May 26, 1999), as modified by 78 Fed. Reg. 2713 (January 14, 2013) (FRA Environmental Procedures).

Specifically, this ROD:

- Provides background on the NEPA process leading to the Final EIS, including a summary of public involvement and agency coordination
- States and reaffirms the project's Purpose and Need
- Summarizes the alternatives analysis process that led to the identification of the alternatives not carried forward for study in the Draft EIS
- Discusses agency roles and responsibilities
- Identifies the alternatives considered in the EIS Documents
- Identifies the HSR Build Alternative as the Selected Alternative
- Identifies the Environmentally Preferable Alternative
- Summarizes environmental benefits and adverse effects
- Discusses and makes determinations required under other relevant laws and guidance, including:
  - The National Historic Preservation Act of 1966, as amended (54 U.S.C. 306101-307106 et seq.)
  - Section 4(f) of the Department of Transportation Act of 1966 (49 U.S.C. 303)
  - Section 7 of the Endangered Species Act of 1973 (16 U.S.C. 1531-1544)
  - Section 404 of the Clean Water Act (33 U.S.C. 1251-1387)
  - U.S. Executive Order 12898 (Environmental Justice)
  - U.S. Executive Order 11988 (Floodplain Management)
  - FRA's General Conformity Determination pursuant to the Clean Air Act (42 U.S.C. 7401-7671q)

[1] Resolution #HSRA 18-20 can be found on the Authority's website (https://www.hsr.ca.gov/docs/brdmeetings/2018/brdmtg_111518_Item5_Final_Resolution_HSRA18_20_Preferred_Alternative_for_Burb-LA.pdf).

[2] The Council on Environmental Quality issued new regulations on July 14, 2020, effective September 14, 2020, updating the NEPA implementing procedures at 40 C.F.R. Parts 1500--1508. However, this Project initiated NEPA analysis before the effective date and is not subject to the new regulations, relying on the regulations as they existed prior to September 14, 2020. All subsequent citations to Council on Environmental Quality regulations in this environmental document refer to the prior regulations, pursuant to 40 C.F.R. 1506.13 (2020) and the preamble at 85 Fed. Reg. 43340.

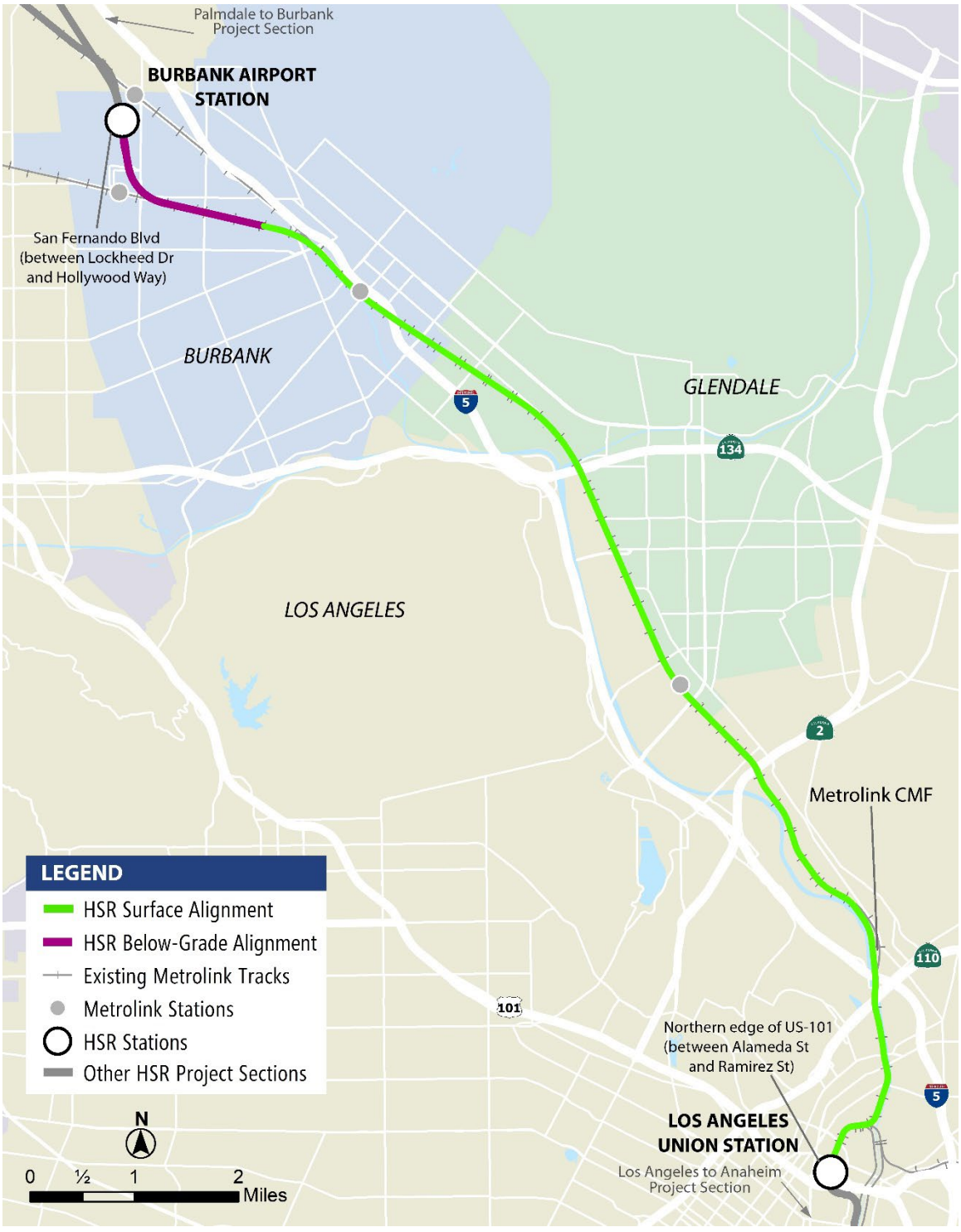

Figure 1 Overview of the Burbank to Los Angeles Project Section

- Summarizes the comments received on the Final EIS and responds to substantive comments that have not been previously addressed
- Imposes impact avoidance and minimization features (IAMF) and mitigation measures that will be implemented to avoid and minimize environmental harm and sets forth a binding monitoring and enforcement program for all such features and measures
- Presents the Authority's decision, determinations, and findings on the proposed project and identifies and discusses the factors that were balanced by the Authority in making its decision
- Summarizes the status of compliance with permitting and other environmental requirements

The ROD also includes the following:

- Appendix A: Mitigation Monitoring and Enforcement Plan (MMEP)
- Appendix B: Errata Sheet for Final EIS
- Appendix C: State Historic Preservation Officer Section 106 Concurrence and Memorandum of Agreement, October 25, 2021
- Appendix D: Section 4(f) Concurrence Letters
- Appendix E: General Conformity Determination for Air Quality, December 9, 2021
- Appendix F: U.S. Fish and Wildlife Service Determination, April 12, 2021
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1.1 The California High-Speed Rail System

The Authority is responsible for planning, designing, constructing, and operating the California HSR System. The Authority's mandate under the High-Speed Rail Act is to develop an HSR system that coordinates with the state's existing transportation network, which includes intercity rail and bus lines, regional commuter rail lines, urban rail and bus transit lines, highways, and airports.

The Authority proposes to construct, operate, and maintain an electric-powered HSR system in California, connecting the San Francisco Bay Area and Central Valley to Southern California (Figure 2). When completed, the nearly 800-mile train system would provide new passenger rail service to more than 90 percent of the state's population. More than 200 weekday trains would serve the statewide intercity travel market.[3] The system would use state-of-the art, electrically powered, steel-wheel-on-steel-rail technology, including contemporary safety, signaling, and automated train control systems, with trains capable of operating at speeds of up to 220 miles per hour in HSR sections that are fully grade-separated and on a dedicated track alignment.

The Authority plans two phases of California HSR System development. The California HSR Program 2020 Business Plan (Authority 2021) describes in detail how the California HSR System will be implemented and recognizes current budgetary and funding realities. The California HSR System Phase 1, as approved through Tier 1 decisions, has been divided into eight individual sections for site-specific, Tier 2 analysis. The Authority and FRA defined HSR project sections such that they would have independent utility or independent significance (i.e., be usable even if later sections of the HSR system are not completed). In 2020, the Authority issued draft Tier 2 environmental documents for the following sections:

- Bakersfield to Palmdale (issued February 2020)
- San Jose to Merced (issued April 2020)
- Burbank to Los Angeles (issued May 2020)
- San Francisco to San Jose (issued July 2020)

[3] "Intercity rail passenger transportation" is defined at U.S. Code Title 49, Section 24102(4), as "rail passenger transportation except commuter rail passenger transportation." "Commuter rail passenger transportation" is defined at 49 U.S. Code 24102(3) as "short-haul rail passenger transportation in metropolitan and suburban areas usually having reduced fare, multiple ride, and commuter tickets and morning and evening peak period operations."

Figure 2 Statewide High-Speed Rail System, Program Alignments and Stations

1.2 Burbank to Los Angeles Project Section

Following the completion of a programmatic review of the California HSR System in 2005, the Authority and the FRA, as joint lead agencies for NEPA, commenced the environmental review process for the Burbank to Los Angeles Project Section on July 24, 2014. The Authority held scoping meetings for the project in August 2014. Public and agency involvement for the Draft EIS started in 2014 and continued through publication of the Draft EIS. During this period from 2014 to 2020, public and agency involvement was focused on the development and refinement of feasible and practicable study alternatives to carry forward for environmental review and evaluation in the Draft EIS. The public review and comment period on the Draft EIS began on May 29, 2020 and was originally scheduled to conclude on July 16, 2020. However, in response to agency and stakeholder requests and in consideration of the limitations caused by the outbreak of the novel coronavirus (COVID-19), the Authority elected to extend the public review and comment period an additional 45 days, to August 31, 2020, for a total public review period of 94 days.

The Draft EIS presented one project alternative (HSR Build Alternative) and the No Project Alternative and their potential environmental impacts; provided environmental information to assist decision-makers in selecting the project alternative to be built; identified measures to avoid and minimize impacts and, when necessary, provided measures to mitigate adverse impacts; and considered cumulative impacts as part of the environmental review process.

The Draft EIS informed decision-makers, interested parties, and the public about the alternatives and potential impacts. The Authority held a virtual public hearing on July 8, 2020, to provide opportunities for the public to comment on the Draft EIS verbally and in writing. During the review period, 272 comments were received on the Draft EIS. The Authority also considered 6 comments on the Draft EIS that were received after August 31, 2020.

The Authority considered the information presented in the comments received on the Draft EIS when preparing the Final EIS. The Final EIS, published November 5**,** 2021, identified the HSR Build Alternative as the Selected Alternative. The Final EIS also included responses to all substantive comments and minor design refinements to the HSR Build Alternative resulting from public comments on the Draft EIS.

Table 1 provides a summary of major NEPA milestones and completion dates.

Table 1 Summary of Major NEPA Milestones

Milestone	Date
Notice of Intent	July 24, 2014
Public Scoping Meetings (7)	August 5–19, 2014
Federal Agency Scoping Meeting (1)	August 8, 2014
Notice of Availability Published and Circulation of Draft EIS and Section 4(f) Evaluation	May 29, 2020
Public Hearing to Receive Public Comment	July 8, 2020
Publication of Draft General Conformity Determination	September 19, 2021
Notice of Availability and Publication of Final EIS/Section 4(f) Evaluation	November 5, 2021
Issuance of Final General Conformity Determination	December 9, 2021
End of review period for Final EIS and Section 4(f) Evaluation	December 9, 2021

2 FEDERAL AGENCY ROLES AND RESPONSIBILITIES

The Authority is the NEPA lead agency, pursuant to the NEPA Assignment MOU. As required by law and the NEPA Assignment MOU, FRA has retained the responsibility for making the project-level Clean Air Act general conformity determination (under 42 U.S.C. 7506) and conducting formal government-to-government tribal consultations. The USACE, the FTA, the STB, and the FAA are NEPA cooperating agencies. The specific roles and responsibilities of the Federal agencies involved in the Burbank to Los Angeles Project Section including lead, cooperating, and permitting agencies, are further described below.

2.1 Federal Railroad Administration

As required by law and the NEPA Assignment MOU, FRA has retained responsibility for making air quality conformity determinations under the Clean Air Act (42 U.S.C. 7506) and for government-to-government consultation with Indian tribes (23 C.F.R. 773.105(b)(4)). The project is subject to review under the General Conformity Rule; therefore, FRA has prepared a General Conformity Determination for the Burbank to Los Angeles Project Section consistent with the applicable regulatory requirements. FRA issued the final air quality General Conformity Determination on December 9, 2021 (see Appendix E of this ROD).

The NEPA Assignment MOU also requires the Authority to consult with FRA prior to making any proposed constructive use determinations under Section 4(f) of the Department of Transportation Act of 1966 (49 U.S.C. 303); however, there are no such determinations associated with the Selected Alternative.

FRA has authority over railroad safety under 49 U.S.C. 20103. As such, FRA may exercise certain regulatory authority over the project. FRA also administers certain grant funds provided to the Authority under the American Recovery and Reinvestment Act of 2009 and oversees the Authority's compliance with a grant agreement for the HSR system.

2.2 U.S. Army Corps of Engineers

The USACE is responsible for issuing permits under the Clean Water Act, Section 404 (33 U.S.C. 1344) (Section 404), and the Rivers and Harbors Act Section 14 (33 U.S.C. 408) (Section 408). The USACE is required to comply with NEPA and issue its own NEPA decision before it can issue a permit under Section 404 or Section 408.

As a first step in project permitting, the Authority, FRA, USACE, and USEPA executed an MOU (NEPA/404/408 MOU) on December 21, 2010. The MOU outlines a process to integrate the requirements of NEPA with the requirements of Section 404 and Section 408. The purpose of the MOU is to ensure the analysis underlying the EIS Documents for each California HSR System section is sufficient to support USACE's Preliminary Least Environmentally Damaging Practicable Alternative determination and for USACE to issue a NEPA decision.

Under Section 404, the USACE and USEPA regulate the discharge of dredged and fill materials into the waters of the U.S. Project sponsors must obtain a permit from the USACE for discharges of dredged or fill materials into waters of the U.S. Based on the Authority's analysis of permanent impacts on waters of the U.S. and coordination with the USACE, the Burbank to Los Angeles Project Section would qualify for coverage under the Nationwide Permit program under Nationwide Permit 14, Linear Transportation Projects.[4] Specifically, the Authority expects to

[4] Nationwide Permit 14 covers activities required for the construction, expansion, modification, or improvement of linear transportation projects (e.g., roads, highways, railways, trails, airport runways, and taxiways) in waters of the U.S. For linear transportation projects in nontidal waters, the discharge cannot cause the loss of greater than 0.5 acre of waters of the U.S. Any stream channel modification, including bank stabilization, is limited to the minimum necessary to construct or protect the linear transportation project; such modifications must be in the immediate vicinity of the project. This Nationwide Permit also authorizes temporary structures, fills, and work necessary to construct the linear transportation project. Further, it should be noted that the USACE Los Angeles District categorizes direct impacts on concrete-lined channels as "temporary impacts" rather than a permanent loss of waters of the U.S.

qualify for Nationwide Permit 14 for three project components that are considered "single and complete projects" in the context of the Nationwide Permit program.[5] Therefore, an individual Clean Water Act Section 404 permit is not anticipated to be required for the Burbank to Los Angeles Project Section.

The Burbank to Los Angeles Project Section would require review from the USACE under Section 408 where the subsection would include modifications or alterations of any federal flood control facility to ensure that its usefulness is not impaired. The Los Angeles River, Burbank Western Channel, and Verdugo Wash are USACE facilities under Section 14 of the Rivers and Harbors Act of 1899, as amended and codified in 33 U.S.C. 408 (Section 408). Therefore, during the design phase, the Authority would be required to coordinate with the Los Angeles County Flood Control District and the USACE to obtain Section 408 review for the Los Angeles River new bridge crossing and for the modifications to the Burbank Western Channel, and Verdugo Wash.

Section 408 provides that USACE may grant permission for another party to alter a USACE flood control facility upon a determination that the alteration proposed would not be injurious to the public interest and would not impair the usefulness of the facility. The NEPA/404/408 MOU signed by the FRA, the Authority, USACE, and USEPA in November 2010 provides for early consultation with USACE to establish the appropriate level of review and to provide a preliminary determination on whether the proposed modifications or alterations to the subject federal flood control facilities are likely to be granted permission.

2.3 Federal Transit Administration

The FTA agreed via email, dated January 12, 2011, to be a cooperating agency. Although no funding from the FTA is anticipated, FRA invited the FTA to be a cooperating agency for its expertise related to the commuter rail operations because the surface portion of the HSR Build Alternative would be designed with structural flexibility to accommodate shared operations with other passenger rail operators, such as Amtrak and Metrolink.

2.4 Surface Transportation Board

The STB has authority over construction and operation of new rail lines (49 U.S.C. 10901). As the STB explained in its June 13, 2013, decision authorizing construction of the 65-mile section of the California HSR System between Merced and Fresno (Docket No. FD_35724_0), 49 U.S.C. 10501(a)(2)(A) gives the STB jurisdiction over transportation by rail carrier in one state, as long as that intrastate transportation is carried out "as part of the interstate rail network." The STB determined that the California HSR System will be constructed as part of the interstate rail network. The STB therefore concluded that it has jurisdiction over the California HSR System. The STB has participated as a cooperating agency in this environmental review process. Following completion of this process, the STB may adopt the Authority's EIS (or conduct additional review as appropriate) and issue a separate ROD authorizing the project.

2.5 Federal Aviation Administration

Following public circulation of the Draft EIS, the FAA accepted cooperating agency status via a letter dated September 3, 2020. To address the potential for disruption of airfield and airspace operations at Hollywood Burbank Airport as a result of construction of the HSR Build Alternative, the Authority and/or the construction contractor(s) would submit construction plans and/or information to the Burbank-Glendale-Pasadena Airport Authority for ultimate submittal to the FAA for approval as required by 14 C.F.R. Part 77, which may include the location of planned HSR construction and construction staging areas within and adjacent to the boundary of Hollywood Burbank Airport, the types and height of proposed equipment, and planned time/duration of

[5] The term "single and complete project" is defined as that portion of the total linear project proposed or accomplished by one owner/developer or partnership, or other association of owners/developers, that includes all crossings of a single water of the U.S. (i.e., a single waterbody) at a specific location. For linear projects crossing a single or multiple waterbodies several times at separate and distant locations, each crossing is considered a single and complete project for purposes of Nationwide Permit authorization.

construction, to ensure construction within and adjacent to the boundary of Hollywood Burbank Airport does not intrude into imaginary surfaces as defined in 14 C.F.R. Section 77.9(b). Additionally, the Authority would implement measures required by the FAA to ensure continued safety of air navigation during HSR construction pursuant to 14 C.F.R. Section 77.5(c).

A notice of proposed construction or alteration (FAA form 7460-1) has been filed with the FAA and would be filed again prior to construction at Hollywood Burbank Airport. Coordination with the FAA is ongoing. On March 5, 2020, the FAA provided a determination to the Authority that the FAA does not object to the construction of the portion of the tunnel under Runway 8-26, Taxiway D, the proposed extended Taxiway C, and critical airport safety zones with respect to the safe and efficient use of navigable airspace and the safety of persons and property on the ground, conditioned on certain requirements outlined in this determination. This determination expired on September 5, 2021. Additionally, this determination does not cover the construction of the station building north of Runway 8-26; FAA recommended refiling a notice for this construction closer to the start of construction.

The Authority would continue coordination with the FAA to ensure all necessary approvals are obtained.

2.6 U.S. Fish and Wildlife Service

The Authority initiated the Federal Endangered Species Act (FESA) Section 7 (16 U.S.C. 1536) consultation process, pursuant to 50 C.F.R. Part 402. Section 7 of FESA requires federal agencies to consult with USFWS and/or the National Oceanic and Atmospheric Administration Fisheries (NOAA Fisheries), depending on the type of species or habitat affected, to ensure that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of threatened or endangered fish, wildlife, or plant species or result in the destruction or adverse modification of designated critical habitat for any such species. The Magnuson-Stevens Fisheries and Conservation Management Act (16 U.S.C. 1801 et seq.) requires federal agencies to consult with NOAA Fisheries on activities that may adversely affect Essential Fish Habitat for species that are managed under federal fishery management plans in U.S. waters. Impacts associated with Essential Fish Habitat are addressed through a coordination process with NOAA Fisheries that may be combined with FESA Section 7 consultation.

If an action may affect a threatened or endangered species, under Section 7 a study that describes the effects, known as a Biological Assessment (BA), is generally required to be submitted to the appropriate agency with jurisdiction over the resource (USFWS and/or NOAA Fisheries). After the appropriate agency has accepted the BA, the agency will render a Biological Opinion. A Biological Opinion is the agency's opinion as to whether a project is likely to jeopardize the continued existence of a FESA-listed species or result in the destruction or adverse modification of a species' critical habitat. For the Burbank to Los Angeles Project Section, the Authority is only required to consult with the USFWS because there are no fish species present that would come under the jurisdiction of NOAA Fisheries.

Because the project may affect threatened or endangered species, the Authority prepared a BA for the project and consulted with USFWS, as required. A Draft BA requesting concurrence with a *May Affect, Not Likely to Adversely Affect* determination for least Bell's vireo was submitted to USFWS by the Authority in March 2020. Following USFWS comments on the Draft BA and the focused least Bell's vireo survey that took place on June 19, 2020, a Final BA was submitted to USFWS in November 2020. The USFWS provided concurrence with a *May Affect, Not Likely to Adversely Affect* determination for least Bell's vireo on April 12, 2021 (see Appendix F of this ROD).

2.7 Advisory Council on Historic Preservation

The ACHP is an independent federal agency that promotes the preservation, enhancement, and productive use of our nation's historic resources, and advises the President and Congress on national historic preservation policy. Established by the National Historic Preservation Act in

1966, the ACHP has the legal responsibility to encourage federal agencies to factor historic preservation into federal project requirements (50 C.F.R. 1502.25).

3 PURPOSE AND NEED

3.1 Purpose of the High-Speed Rail System

As established in the Final Program EIS for the Proposed California HSR System, the purpose of the California HSR System is to provide a reliable high-speed electric-powered train system that links the major metropolitan areas of California, delivering predictable and consistent travel times. A further objective is to provide an interface with commercial airports, mass transit, and the highway network and to relieve capacity constraints of the existing transportation system as increases in intercity travel demand in California occur, in a manner sensitive to and protective of California's unique natural resources (Authority and FRA 2005).

3.2 Purpose of the Burbank to Los Angeles Project Section

The purpose of the project is to implement the Burbank to Los Angeles Project Section of the California HSR system to provide the public with electric-powered HSR service that provides predictable and consistent travel times between major urban centers and connectivity to airports, mass transit systems, and the highway network in the San Fernando Valley and the Los Angeles Basin, and to connect the northern and southern portions of the Statewide HSR system.

3.3 Statewide and Regional Need for the High-Speed Rail System in the Burbank to Los Angeles Project Section

The approximately 14-mile-long Burbank to Los Angeles Project Section is an essential component of the statewide HSR system. It will provide access to a new transportation mode and contribute to increased mobility throughout California. This project section would connect to both the Palmdale to Burbank and Los Angeles to Anaheim project sections.

The capacity of California's intercity transportation system, including within the greater Los Angeles area, is insufficient to meet existing and future travel demands. The current and projected system congestion will continue to result in deteriorating air quality, reduced reliability, and increased travel times. The current transportation system has not kept pace with the tremendous increase in population, economic activity, and tourism in the state, including that in Southern California. The interstate highway system, commercial airports, and the conventional passenger rail system[6] serving the intercity travel market are operating at or near capacity and will require large public investments for maintenance and expansion to meet existing demand and future growth. Moreover, the feasibility of expanding many major highways and key airports is uncertain; some necessary expansions may be impractical or are constrained by physical, political, environmental, and other factors. The need for improvements to intercity travel in California, including intercity travel between the Burbank to Los Angeles Project Section, the Bay Area, Sacramento, and San Diego, relates to the following issues:

- Future growth in demand for intercity travel, including the growth in demand in Southern California
- Capacity constraints that will result in increasing congestion and travel delays, including those within the Burbank to Los Angeles Project Section
- Unreliability of travel stemming from congestion and delays, weather conditions, accidents, and other factors that affect the quality of life and economic well-being of residents, businesses, and tourism in California, including within the project vicinity
- Increased frequency of accidents on intercity highways and passenger rail lines in congested corridors of travel, including within the project vicinity

[6] Conventional passenger rail systems include interregional commuter rail services such as Amtrak and Metrolink. These are not to be confused with local, light, and heavy rail transit systems that generally operate within a smaller sub-regional area (e.g., Los Angeles County's Metro Rail system).

- Reduced mobility as a result of increasing demand on limited modal connections between major airports, transit systems, and passenger rail in the state, including within the project vicinity
- Poor and deteriorating air quality and pressure on natural resources and agricultural lands due to expansion of highways and airports, as well as continued urban development, including in Southern California
- Legislative mandates to moderate the effects of transportation upon climate change, including required reductions in greenhouse gas (GHG) emissions caused by vehicles powered by the combustion of carbon-based fuels.

4 ALTERNATIVES CONSIDERED

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

4.1 Alternatives Analysis Process and Alternatives Considered but Eliminated from Detailed Study

The Burbank to Los Angeles Project Section was originally part of the larger Palmdale to Los Angeles Project Section. Various corridor alternatives for the Palmdale to Los Angeles Project Section were evaluated in the 2005 Statewide Program EIR/EIS (Authority and FRA 2005). Of the various corridor alternatives considered, the existing Metro/Metrolink rail corridor was ultimately selected as the preferred corridor for the Los Angeles Basin portion of the Palmdale to Los Angeles Project Section. In the subsequent 2010 Preliminary Alternatives Analysis and 2011 Palmdale to Los Angeles Supplemental Alternatives Analysis, specific alignment alternatives within or in the vicinity of the existing Metro/Metrolink rail corridor were introduced, evaluated, and either withdrawn or carried forward (Authority 2010b, 2011). The 2010 Preliminary Alternatives Analysis recommended alignment alternatives and station options in the Los Angeles Basin based on refinements to the program-level corridor selected in 2005. The Supplemental Alternatives Analysis focused specifically on the subsections from the community of Sylmar to LAUS.

In 2014, the Palmdale to Los Angeles Project Section was split into two project sections: Palmdale to Burbank and Burbank to Los Angeles. The split was in response to the 2014 Business Plan (Authority 2014), which proposed an initial operating segment as a part of the implementation strategy, with service beginning between the Central Valley and San Fernando Valley. The Authority and FRA determined that the Burbank Station would be the logical terminus in the San Fernando Valley, and that it would be beneficial to prepare separate environmental documentation for the split sections. Additionally, the Authority and FRA determined that separate environmental documents would be more beneficial to address environmental impacts and conduct stakeholder outreach. On July 24, 2014, the Authority released a CEQA Notice of Preparation, and FRA published a NEPA Notice of Intent to prepare separate EIR/EIS Documents for the Palmdale to Burbank and Burbank to Los Angeles project sections.

The Authority conducted further planning studies to continue to analyze potential alignments between Burbank and Los Angeles, which were presented in the 2016 Burbank to Los Angeles Supplemental Alternatives Analysis (Authority 2016a). The 2016 Supplemental Alternatives Analysis, which refined the alignments for the subsection between Alameda Avenue in the City of Burbank and LAUS, recommended one Build Alternative. The subsection between the Burbank Airport Station and Alameda Avenue was studied in the 2016 Palmdale to Burbank Supplemental Alternatives Analysis (Authority 2016b), which proposed two station options near Hollywood Burbank Airport and two alignment options for the subsection.

The alternatives analysis documents were prepared with extensive public engagement, including engagement of minority and low-income (“environmental justice”) populations. Starting in 2017, after stakeholder input and based on concerns about community impacts, further refinement of the station options at Hollywood Burbank Airport was completed. The refinement included withdrawing an at-grade station option that would have significant community effects and revising alignments and the depth of the below-ground station option such that the intensity of construction would be reduced. The refined below-ground station would be adjacent to the relocated Hollywood Burbank Airport terminal, which would allow for the opportunity to directly link these two important transportation hubs.

The alternatives analysis process is further summarized in Chapter 2 of the EIS.

4.2 Alternatives Carried Forward for Study in the EIS

The Burbank to Los Angeles Project Section is substantially constrained by dense urban development and restricted linear rights-of-way. Accordingly, the Burbank to Los Angeles Project

Section does not have a broad range of alignment alternatives with separate impacts for each alternative. The EIS evaluates the HSR Build Alternative in comparison to the No Project Alternative.

4.2.1 No Project Alternative

NEPA requires the evaluation of a no action alternative in an EIS (CEQ Regulations § 1502.14(d)). The No Project Alternative (synonymous with the No Action Alternative) represents the condition of the Burbank to Los Angeles Project Section as it existed in 2015 and the conditions that would occur in the forecast year (in this case, 2040) if the proposed action (in this case, the Burbank to Los Angeles Project Section) were not implemented.

The No Project Alternative assumes that all currently known programmed and funded improvements to the intercity transportation system (highway, rail, and transit) and reasonably foreseeable local land development projects (with funding sources identified) would be developed by 2040. The No Project Alternative is based on a review of the following: regional transportation plans for all modes of travel; the State Transportation Improvement Program; the Federal Transportation Improvement Program; Southern California Regional Rail Authority strategic plans, transportation plans, and programs for Los Angeles County; airport master plans; and city and county general plans.

4.2.2 HSR Build Alternative

The HSR Build Alternative alignment (Figure 3) would begin at the southern edge of San Fernando Boulevard at Lockheed Drive to the north of the underground Burbank Airport Station and would consist of two new electrified tracks. After exiting the underground station, the alignment would travel southeast beneath Hollywood Burbank Airport in a tunnel. The alignment would run under airport property, including under Runway 8-26, Taxiway D, the proposed extended Taxiway C, and critical airport safety zones. The tunnel alignment under the runway and taxiways would be built using the sequential excavation method of construction to avoid disruptions to airfield operations. Section 2.9.5.3 in the EIS describes the sequential excavation method of construction in more detail. The alignment from south of Runway 8-26 to where it would join the Metrolink Ventura Subdivision would be built as cut-and-cover, including portions running under surface parking lots on airport property. The alignment would then transition to a trench within the Metrolink Ventura Subdivision. The existing Metrolink Ventura Subdivision tracks would be realigned north within the existing right-of-way, and an existing UPRR siding track between Buena Vista Street and Beachwood Drive would be realigned north of the relocated Metrolink Subdivision tracks within the existing right-of-way. These non-electrified tracks would remain at-grade. The trench, which would be south of and parallel to the relocated non-electrified tracks, would be dedicated for HSR tracks only. During construction of the below-grade alignment, shoofly tracks[7] would be provided to support Metrolink and UPRR operations. The proposed shoofly tracks would be aligned between Hollywood Way and Buena Vista Street outside the existing right-of-way and would result in temporary roadway impacts to Vanowen Street. Construction of the below-grade alignment and shoofly tracks conflicts with two extraction wells, a valve vault, and ancillary infrastructure that are currently being used to supply municipal drinking water and remediate the San Fernando Valley Area 1 Superfund site. Construction of the HSR Build Alternative would require the extraction wells, the valve vaults, and ancillary infrastructure to be replaced, with the detailed design for such infrastructure to be performed during a later stage of design.

[7] A shoofly track is a temporary track used to avoid an obstacle that blocks movement on the normal track section.

Source: California High-Speed Rail Authority, 2019

Figure 3 HSR Build Alternative Overview

(Sheet 1 of 3)

Source: California High-Speed Rail Authority, 2019

Figure 3 HSR Build Alternative Overview

(Sheet 2 of 3)

Source: California High-Speed Rail Authority, 2019

Figure 3 HSR Build Alternative Overview

(Sheet 3 of 3)

The HSR tracks would transition from the trench and emerge to at-grade within the existing railroad right-of-way near Beachwood Drive in the City of Burbank. Near Beachwood Drive, the HSR tracks would curve south out of the existing railroad right-of-way and cross Victory Place on a new railroad bridge, which would be directly south of the existing Victory Place bridge. South of Burbank Boulevard, the HSR tracks would re-enter the existing railroad right-of-way and run parallel to the Metrolink Antelope Valley Subdivision tracks. Between Burbank Boulevard and Magnolia Boulevard, two UPRR industry tracks west of the right-of-way would be removed to accommodate HSR tracks; with the addition of HSR tracks, the existing UPRR industry tracks would become inaccessible. One of the industry tracks is not active, but the other serves one business. The business currently served by the UPRR tracks could feasibly be served by trucks.

Continuing south, the HSR alignment would pass the Downtown Burbank Metrolink Station, which would be modified. HSR tracks would be placed within the existing parking lot west of the southbound platforms, and new pedestrian connections and relocated parking would be provided. Section 2.5.2.3 in the EIS provides more details on design modifications for the Downtown Burbank Metrolink Station.

Between Olive Avenue to the north end of the Metrolink Central Maintenance Facility (CMF), the existing non-electrified tracks would be shifted east within the right-of-way to accommodate the addition of the electrified tracks within the right-of-way. Throughout this area, both sets of tracks would be at-grade, with a retained-fill segment between Western Avenue and SR 134.

Continuing south, the alignment would cross Verdugo Wash, where an existing railroad bridge would be rebuilt as a new clear-span structure to accommodate the additional set of electrified tracks. The alignment would continue south within the existing railroad right-of-way, which follows the Glendale and Los Angeles city borders. Between SR 134 and Chevy Chase Drive, a UPRR siding track would be realigned to the east of the non-electrified tracks, for a total of five tracks within the right-of-way in this area. This siding track is currently at the Metrolink CMF, but it would need to be relocated to accommodate HSR operations at the CMF.

The alignment would pass by the Glendale Metrolink Station (originally known as the Southern Pacific Railroad Depot), a known historical resource listed on the National Register of Historic Places and located north of Glendale Boulevard. No modifications would be necessary for the Glendale Metrolink Station. At Tyburn Street, the alignment would enter the city of Los Angeles. Continuing south, the two sets of tracks would diverge at the north end of the Metrolink CMF. The electrified tracks would travel along the west side of the CMF, and the non-electrified, mainline tracks would travel along the east side of the facility.

The CMF is the Southern California Regional Rail Authority's major daily servicing location and maintenance facility in the region. The Burbank to Los Angeles Project Section proposes reconfiguring the various yard and maintenance facilities within the CMF to accommodate HSR. Based on comments on the Draft EIR/EIS received from the Southern California Regional Rail Authority, all existing yard and maintenance facility functions, as well as train storage capacity, would be maintained at the CMF site. This is a more comprehensive reconstruction of the CMF than described in the Draft EIR/EIS, but allows for the reconstructed CMF to continue to function as it currently does throughout construction and operation of the Burbank to Los Angeles Project Section. The proposed changes include new mainline-to-yard track connections, partial demolition and reconstruction of the existing maintenance shop, a revised roadway network with reconfigured parking areas, and track relocations. Additionally, several facilities would need to be relocated within the CMF, including a progressive maintenance and wheel truing facility; a train washing/reclamation building, a yard pumphouse, and two service and inspection tracks. Utilities would also need to be relocated within the CMF, including domestic and fire water; underdrains and rebuilt catch basins; power facilities, including emergency generator and electric substation; hazardous materials storage; fueling facilities and storage tanks; oil water separator; and sanitary sewer systems. The construction work at the CMF would be phased to minimize the disruption to the existing operations and to maintain the key operational facilities.

At the south end of the CMF, the two electrified and two non-electrified tracks would converge briefly within the right-of-way and then diverge again south of Figueroa Street. The electrified

tracks would cross over the west bank of the Los Angeles River on the existing Metrolink Downey Bridge. The existing tracks on the Downey Bridge would be electrified, which would allow for both HSR and passenger rail operations. The non-electrified tracks would remain on the east bank of the Los Angeles River and cross the Arroyo Seco on an existing railroad bridge, which would not require modifications. The non-electrified tracks would connect with the existing tracks on the east bank, which currently serve UPRR and nonrevenue trains.

South of Main Street, on the east bank of the Los Angeles River, the existing tracks would be modified at Mission Junction to be usable by freight and passenger rail. They would cross the river on the existing Mission Tower bridge to join the electrified tracks within the railroad right-of-way. The existing Mission Tower bridge has two tracks, but currently only one track is functional and utilized by Metrolink. The HSR Build Alternative would replace the trackwork to conform to the most current design standards and specifications, which may require a retrofit to the bridge.

The two sets of tracks would continue south to terminate at a modified LAUS at the north edge of U.S. Route 101 (between Alameda Street and Ramirez Street). The electrified tracks and HSR station platforms would be on the west side of the station, while the non-electrified tracks would merge with the Metrolink and Amtrak tracks. The configuration at LAUS is described in further detail in Section 2.5.2.3 in the EIS and shown on Figure 2-31 in Chapter 2 of the EIS.

4.3 Description of the Selected Alternative

The Authority's Selected Alternative for the Burbank to Los Angeles Project Section is the HSR Build Alternative. The Selected Alternative includes stations at Burbank Airport and LAUS (included in Metro's Link US Project). The Selected Alternative would be entirely grade-separated at crossings, meaning that roads, railroads, and other transportation facilities would be at different heights so that the HSR system would neither interrupt nor interface with other modes of transport, including vehicle, bicycle, and pedestrian. The Selected Alternative would be fenced to prohibit public or unauthorized vehicle access. The Selected Alternative would be primarily within the existing railroad right-of-way, which is typically 70 to 100 feet wide, and it would include northbound and southbound electrified tracks for high-speed trains. The Selected Alternative would include new and upgraded track, systems facilities, grade separations, drainage, communication towers, security fencing, and other necessary facilities to introduce HSR service.

The Selected Alternative would begin at the underground Burbank Airport Station and would consist of two new electrified tracks. The Burbank Airport Station would have both underground and aboveground facilities and would include train boarding platforms, a station building (which would house ticketing areas, passenger waiting areas, restrooms, and related facilities), pick-up/drop-off facilities for private automobiles, a transit center for buses and shuttles, surface parking areas, and stormwater capture/drainage facilities. After exiting the underground station, the Selected Alternative would travel southeast beneath Runway 8-26, Taxiway D, the proposed extended Taxiway C, and critical airport safety zones at Hollywood Burbank Airport in a tunnel. The Selected Alternative south of the airport would be below-grade traveling south from the Burbank Airport Station and would transition to a surface alignment heading south to the surface station at LAUS. The electrified tracks and HSR station platforms would be on the west side of LAUS, while the non-electrified tracks would merge with the Metrolink and Amtrak tracks. The existing LAUS campus and surrounding tracks are being reconfigured as part of the Metro Link US Project. The Selected Alternative would require additional modifications within the Link US Project area. These modifications include track modifications and installing an overhead catenary system. The surface portion of the alignment would be designed with structural flexibility to accommodate shared operations with other passenger rail operators. Throughout most of the Burbank to Los Angeles Project Section (between Alameda Avenue and State Route 110), two new electrified tracks would be placed along the west side of the existing railroad right-of-way, which would be useable for HSR and other passenger rail operators. The existing tracks would be replaced with nonelectrified tracks placed farther east within the railroad right-of-way, which would be usable for freight and other passenger rail operators but not for HSR, as shown on Figure 2-22 in Chapter 2 of the EIS.

4.4 Environmentally Preferable Alternative

The CEQ NEPA regulations require that the lead agency identify the alternative or alternatives considered to be environmentally preferable, which is defined as, "the alternative that will promote the national environmental policy as expressed in the NEPA, Section 101" (40 C.F.R. 1505.2). Section 101 of NEPA states, "the continuing policy of the Federal Government, in cooperation with State and local governments, and other concerned public and private organizations, to use all practicable means and measures, including financial and technical assistance, in a manner calculated to foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans" (42 U.S.C. § 4331(a)). Chapter 2, Alternatives, in the EIS provides details regarding the alternatives considered during the alternatives screening process, the range of potential alternatives considered and findings, as well as the alignment and station alternatives evaluated in the EIS.

The HSR Build Alternative would travel through the cities of Burbank, Glendale, and Los Angeles, but would be almost entirely within an existing railroad right-of-way owned by Metro. A new HSR station would be constructed near Hollywood Burbank Airport and new platforms for HSR service would be added at LAUS. The Authority analyzed the environmental effects associated with the HSR Build Alternative as well as those associated with the No Project Alternative in the EIS. The Authority also analyzed the environmental benefits associated with the HSR Build Alternative compared to the No Project Alternative.

In determining an environmentally preferable alternative, the Authority considered the HSR Build Alternative as well as the No Project Alternative. The Authority weighed and balanced the physical environmental and social effects associated with the HSR Build Alternative as well as those associated with the No Project Alternative. The Authority identified the Selected Alternative by balancing the adverse and beneficial impacts of the project on the human and natural environment. Chapter 7, Other CEQA/NEPA Considerations, in the EIS provides details regarding transportation, environmental, economic, and employment benefits that would result from implementation of the HSR Build Alternative.

Transportation benefits of the HSR Build Alternative include:

- Provides an essential building block to establish very high-speed passenger rail service as part of Phase 1 of the HSR system to meet the state's growing demands on its transportation system
- Adds capacity to the state's transportation infrastructure via the new HSR transportation mode, thereby reducing pressure on the state's existing transportation infrastructure, including highways and airports
- Improves transit, bicycle, and pedestrian safety

Environmental benefits of the HSR Build Alternative include:

- Provides long-term reductions in regional vehicle miles traveled by automobile
- Provides long-term improvements in regional air quality by reducing criteria pollutants and GHGs generated by automobiles and aircraft
- Provides long-term reduction in transportation-related energy requirements
- Supports achieving the state's GHG reduction goals as described in Assembly Bill 32, Senate Bill 32, and the California Air Resources Board's 2017 Scoping Plan
- Supports the state's goals for reducing vehicle miles traveled and promoting transit-oriented development, as reflected in Senate Bill 743
- Reduces emergency response times and enhances roadway safety as a result of grade-separating existing crossings

- Improves growth and investments in station areas by increasing statewide accessibility and reducing travel time
- Provides compatibility with the goals and policies of the cities of Burbank, Glendale, and Los Angeles that support development of the HSR stations
- Provides a catalyst for the improved accessibility and transit-oriented development envisioned in local planning documents

Economic and employment benefits of the HSR Build Alternative include:

- Provides economic and employment benefits from construction and operation
- Improves access to jobs, community amenities, and new employment opportunities
- Results in beneficial effects related to sales tax gains and regional employment

There was no single determining factor in identifying the environmentally preferable alternative. Based on the analysis in the EIS, the Authority determined that the adverse environmental effects associated with the HSR Build Alternative are less substantial than the consequences associated with the No Project Alternative in terms of safety, statewide and regional criteria pollutants and GHG emissions, energy consumption, and the regional transportation system.

Positive train control (PTC) and grade separations included as part of the HSR Build Alternative would provide an overall benefit to rail safety compared to the No Project Alternative. PTC is a train safety system designed to automatically implement safety protocols and provide communication with other trains to reduce the risk of a potential collision. Communication towers and ancillary facilities are included in the Burbank to Los Angeles Project Section in compliance with FRA PTC requirements. PTC infrastructure consists of integrated command, control, communications, and information systems for controlling train movements that improve railroad safety by substantially reducing the probability of collisions between trains, casualties to roadway workers and equipment, and over-speed accidents. PTC is especially important in “blended” corridors, such as in the Burbank to Los Angeles Project Section, where passenger trains need to safely share the same tracks with freight trains.

Additionally, rail service would be enhanced by the grade separations for existing rail lines under the HSR Build Alternative. Grade separations would provide safer travel where roadways currently cross railroad corridors at grade by eliminating the potential for train and automobile/bicycle/pedestrian conflicts that would continue under the No Project Alternative. In addition, the grade separations would improve connectivity between communities and neighborhoods currently divided by the existing rail corridor with at-grade roadway crossings. The grade separations would also provide a benefit to emergency access because passing trains and active grade-crossing safety equipment would no longer cause travel delays to emergency vehicles.

The overall reduction of vehicle trips would result in a net emission decrease in statewide and regional criteria air pollutants and GHG emissions compared to the No Project Alternative, resulting in a long-term beneficial impact on statewide and regional air quality and global climate change. The Burbank to Los Angeles Project Section would contribute to meeting the state’s GHG emissions reduction goals as identified in the California Air Resources Board’s Scoping Plan (2014).

Overall, operation of the Burbank to Los Angeles Project Section would reduce regional energy consumption from transportation by approximately 2.1 to 2.3 percent; and statewide energy consumption from transportation by approximately 2.7 to 3.8 percent, depending on the ridership scenario.

The HSR Build Alternative would provide benefits to the regional transportation system by reducing the number of vehicles operating on the regional roadway network through diversion of intercity road trips to HSR. In 2040, implementation of the HSR Build Alternative would result in a net reduction in vehicle miles traveled ranging from about 931 million to 1.28 billion (an approximately 1.1 percent to 1.5 percent reduction) for the medium and high ridership scenarios, respectively, compared to the No Project Alternative. This is a net benefit to transportation and traffic operations because a reduction in vehicle miles traveled helps maintain or potentially

improve the operating conditions of regional roadways. This reduction in future vehicle trips would improve the level-of-service (LOS) (i.e., operating quality) of the regional roadway system compared with the No Project Alternative.

Compared with the No Project Alternative, the HSR Build Alternative would be a stronger catalyst for transit-oriented development envisioned in local planning documents. Residential and commercial property values in the vicinity of HSR stations could appreciate because of access to the HSR transportation system and the associated intensification of development that could occur around station locations. Operation of the HSR Build Alternative would encourage compact, efficient land use by increasing property values and providing an economic driver for high-density, infill development around stations. Employment growth from construction and operation of the HSR Build Alternative would be a net benefit for the region. The benefits of the HSR Build Alternative related to sales tax gains, regional employment, regional transportation, transportation safety, and regional air quality would affect all populations, including low-income and minority populations, compared to the No Project Alternative.

Considering these factors, the Authority identifies the HSR Build Alternative as environmentally preferable.

5 SUMMARY OF POTENTIAL EFFECTS

To fully understand the potential range of impacts of the Selected Alternative, the Final EIS analyzed all reasonably foreseeable potential environmental impacts resulting from construction and operation of the project. A full discussion of the potential impacts of the Selected Alternative, organized by resource area, can be found in Chapter 3 of the Final EIS. The Selected Alternative will not result in impacts in the following resource areas: Air Quality and Global Climate Change (operation), Hydrology and Water Resources (operation), Geology, Soils, Seismicity, and Paleontological Resources (construction and operation), Hazardous Materials and Wastes (operation), Safety and Security (construction), Station Planning, Land Use, and Development (construction), Agricultural Farmland and Forest Land (construction and operation), Cultural Resources (operation), and Regional Growth (construction and operation). In determining that the Selected Alternative will not result in impacts on these resources, implementation of IAMFs, mitigation measures, and best management practices (BMP) are presumed and will be required as part of project implementation as described further in Section 6 of the ROD. The following sections summarize the adverse impacts and the beneficial impacts that may occur with construction and operation of the Selected Alternative.

5.1 Transportation

As discussed in Section 3.2, Transportation, of the Final EIS, the Selected Alternative will provide a beneficial effect to the regional transportation system by reducing vehicle trips on the freeways through the diversion of intercity trips from road trips to HSR. This reduction in future vehicle trips would improve the future LOS of the regional roadway system compared with the No Project Alternative. In addition, grade separations would make travel safer where roadways currently cross the railroad corridor at grade by eliminating the potential for train and automobile/bicycle/pedestrian conflicts that currently exists.

The PTC and grade separations included as part of the Selected Alternative will be beneficial to rail safety. PTC infrastructure to control train movements would improve railroad safety by reducing the probability of collisions between trains, casualties to roadway workers and damage to equipment, and over-speed accidents. In addition, travel delays would no longer be caused by passing trains or active grade-crossing safety equipment.

The Selected Alternative will cause temporary access and circulation disruptions throughout the construction period. These disruptions may affect emergency responders and other modes of transportation using the affected roadways and intersections. Law enforcement, fire, and emergency services will experience increased response times as a result of construction-related road closures, detours, and increased traffic congestion. However, emergency vehicle access for police and fire protection services will always be maintained and construction will be phased to prevent concurrent closures from limiting emergency access.

During operation, the Selected Alternative will result in impacts on 24 intersections and 7 roadway segments along the alignment. Traffic mitigation measures will be implemented to improve operations at intersection and roadway segments by widening lanes, modifying and adding signals, adding lanes and restriping, and identifying alternative routes. However, due to limited available right-of-way and adjacent land uses, no mitigation was considered feasible to reduce the impacts at seven intersections in 2040.

The Selected Alternative was designed to provide adequate emergency access and will therefore not result in operational impacts on emergency access. There will be no impacts related to design feature hazards or incompatible uses during operation. As a rail facility, the HSR project is subject to specific design and safety requirements to prevent conflicts with other modes of transportation. In addition, most of the Selected Alternative will be built in an existing rail corridor and will not conflict with the existing rail uses.

5.2 Air Quality and Global Climate Change

As discussed in Section 3.3, Air Quality and Global Climate Change, of the Final EIS, volatile organic compound, particulate matter smaller than or equal to 10 microns in diameter (PM_{10}),

particulate matter smaller than or equal to 2.5 microns in diameter ($PM_{2.5}$), and sulfur dioxide emissions will be below the general conformity threshold during construction with the application of mitigation measures and control measures for all years. Carbon monoxide (CO) and nitrogen oxide (NO_X) emissions will exceed general conformity applicability thresholds and the South Coast Air Quality Management District (SCAQMD) thresholds for most of the construction phase with or without on-site mitigation. IAMFs are included as part of the Selected Alternative and will be implemented to avoid or minimize impacts. These IAMFs will reduce potential adverse impacts resulting from factors related to criteria pollutants during construction. However, direct emissions from the construction phase of the Selected Alternative will exceed the general conformity applicability thresholds for CO and NO_X in certain calendar years, in which construction would take place. CO and NO_X emissions that exceed the general conformity thresholds are therefore considered to have the potential to cause adverse air quality impacts. General conformity thresholds will not be exceeded for any of the other criteria pollutants.

The Final EIS identified a mitigation measure to offset these construction-related air impacts through funding a SCAQMD emission offset program. Purchase of emission offsets through an anticipated SCAQMD emission offset program or SCAQMD Air Quality Investment Program, emission reduction credits, or another mechanism, subject to discussion with and approval by SCAQMD, will offset and/or decrease NO_X emissions to the extent necessary to satisfy General Conformity. The Authority's Sustainability Policy has a goal to achieve net zero emissions from construction. As this project section advances towards construction, the Authority will work with SCAQMD to assess the estimated emissions, availability of offsets, and cost for achieving the Authority's Sustainability Policy goal to the extent possible. To further address construction emission impacts, the Final EIS identified a mitigation measure to reduce construction emissions through the use of zero-emission and/or near-zero emission vehicles and off-road equipment. Use of zero-emission and near-zero emission technology will decrease NO_X emissions. However, the impact is still considered significant and unavoidable for NO_X and CO emissions as the precise equipment that will be used for the project is unknown at this time.

There are no available offset programs to reduce CO emissions. The Authority will participate in the SCAQMD emission offset program to the maximum extent that offsets are available to reduce construction period NO_X emissions. One mitigation measure that was considered in the Final EIS would extend the construction schedule and limit construction equipment and usage, which would reduce hourly/daily emission concentrations. However, this would not be a feasible measure, because increasing the length of the construction schedule would delay the opening year of the Burbank to Los Angeles Project Section and extend the duration of impacts that affect other railroad operators in the right-of-way, such as Metrolink, Amtrak, and Union Pacific Railroad.

Short-term construction activities will have a localized impact on regional air quality and sensitive receptors because the 1-hour average nitrogen dioxide concentrations near sensitive and residential receptors will exceed the National Ambient Air Quality Standards during alignment construction with or without on-site mitigation.

Operation of the Selected Alternative under medium and high ridership scenarios will result in a net emission decrease of criteria pollutants (i.e., between approximately -62 and -64 tons per year of reactive organic gases, -926 to -1,050 tons per year of CO, -507 to -522 tons per year of NOx, -54 to -56 tons per year of sulfur oxides, -126 to -183 tons per year of PM_{10}, and -43 to -57 tons per year of $PM_{2.5}$) and GHG emissions compared to the No Project Alternative for horizon year 2040, resulting in beneficial effects to regional air quality and global climate change. Additionally, the operation of the Selected Alternative will have no effect on localized emissions of PM_{10} or $PM_{2.5}$ and no effect on localized air quality for sensitive receptors.

5.3 Noise and Vibration

As discussed in Section 3.4, Noise and Vibration, of the Final EIS, construction of the Selected Alternative will result in temporary increases in noise and vibration levels at sensitive receivers in the vicinity of construction areas. Noise-sensitive receivers (residences and schools) within 311 feet of a construction zone may be exposed to noise levels exceeding the FRA criteria for daytime hours (7:00 a.m. to 10:00 p.m.) for one or more phases of construction. Noise-sensitive

receivers (residences) within 973 feet of a construction zone may be exposed to noise levels exceeding the FRA criteria for nighttime hours (10:00 p.m. to 7:00 a.m.) for one or more phases of construction. Noise and vibration mitigation measures to reduce temporary exposure of sensitive receptors to construction noise include the placement of temporary construction site sound barriers near noise sources, locating stationary construction equipment as far as possible from noise-sensitive sites to mitigate construction noise, and weekly monitoring of construction noise.

Pile driving has substantial potential for damaging effects and could affect structures at distances of up to 30 feet for the least sensitive buildings and at distances of up to 75 feet for the most sensitive buildings. Human annoyance or interference from construction vibration would be expected within a distance of up to 500 feet, depending on the type of land use and type of equipment used. A noise and vibration mitigation measure will reduce the impact from increased vibration levels by requiring the contractor to use vibration reduction methods to meet FRA standards for construction vibration.

The Selected Alternative will have no operational noise effects associated with stationary facilities and traffic noise. Operation of the Selected Alternative will result in noise impacts to sensitive receivers. Although the implementation of noise mitigation measures, including sound barriers, would reduce Selected Alternative noise impacts, severe residual noise impacts would still remain at 48 locations.

In addition to the impacts associated with construction and operation of the Selected Alternative, there will be a benefit associated with the five new grade separations at Sonora Avenue, Grandview Avenue, Flower Street, Goodwin Avenue/Chevy Chase Avenue, and Main Street. Currently, the rail corridor is at-grade with existing roadways, which requires horns to be sounded when passenger and freight trains approach the crossings. Because the Selected Alternative will grade-separate the rail corridor from the roadways, horn sounding will no longer be necessary. This would lower noise levels experienced by those receptors near current at-grade crossings, providing a more desirable noise environment.

5.4 Electromagnetic Interference and Electromagnetic Fields

As discussed in Section 3.5, Electromagnetic Interference and Electromagnetic Fields, of the Final EIS, construction of the Selected Alternative could result in impacts, which include interference with sensitive equipment, resulting from movement of large construction vehicles or high-current electric welding. An electromagnetic interference/electromagnetic fields (EMI/EMF) mitigation measure to protect nearby equipment sensitive to EMI/EMF during construction, which may include establishing magnetic field shielding walls around sensitive equipment or installing radio frequency filters into sensitive equipment, will be implemented.

Operation of the Selected Alternative could result in impacts, which include interference with implanted medical devices, corrosion of underground metal structures, nuisance shocks from underground metal, minor interference with adjacent railroads, interference with sensitive equipment, EMI effects at four schools and one daycare, and radio interference with airport communications and navigation systems at Hollywood Burbank Airport. All impacts resulting from construction and operation of the Selected Alternative will be avoided or minimized through implementation of the project IAMFs or mitigated by the mitigation measures.

5.5 Public Utilities and Energy

As discussed in Section 3.6, Public Utilities and Energy, of the Final EIS, construction of the Selected Alternative will have impacts related to temporary interruption of utility service, accidents and disruption of services, conflicts with existing utilities, or effects from upgrade or construction of power lines. This will occur during the construction of the Selected Alternative, as these utilities are encountered and may need to be relocated if they conflict with the Selected Alternative. Construction of the Selected Alternative will have no impacts with regard to effects from water demand, stormwater infrastructure, waste generation, potential conflicts with oil wells, and energy consumption. Construction of the Selected Alternative will require energy and water usage; however, the additional energy and water demand can be met with existing local sources.

The Selected Alternative will affect seven extraction wells from the San Fernando Valley Superfund site that are part of the Burbank and Glendale Operable Units' remediation infrastructure used to provide potable water from these extraction wells. Five of these wells, V01, V02, V03, V04, and V07, will be protected in place and their function will not be impaired. Construction of the below-grade alignment and shoofly tracks conflicts with two extraction wells, a valve vault, and ancillary infrastructure that are currently being used to supply municipal drinking water and remediate the San Fernando Valley Area 1 Superfund site. There are two wells that will require replacement (V05 and V06) (Jacobs 2021). The realignment of Goodwin Avenue, which will be depressed to cross under a new railroad bridge supporting the Selected Alternative, will conflict with an extraction well and ancillary infrastructure that are currently being used to supply municipal drinking water and remediate the San Fernando Valley Area 2 Superfund site. The Authority will coordinate the replacement of these wells with the USEPA to construct new wells prior to the removal of any of the extraction wells for the San Fernando Valley Groundwater Basin Superfund Site to avoid disruption to the ongoing groundwater remediation in the Burbank and Glendale Operable Units. This will avoid disruption to the supply of potable water from these wells.

Operation of the Selected Alternative will have potential impacts related to water supply in the city of Los Angeles because it has not yet been determined if the project-generated increase in operational water demand at LAUS is within the existing and future service capacity of the Los Angeles Department of Water and Power. A public utilities and energy mitigation measure that requires the Authority to prepare an updated water demand analysis in coordination with the Los Angeles Department of Water and Power will be implemented to determine if allocations for additional water supply are needed for project operation at LAUS. Operation of the Selected Alternative will have no impacts with regard to reduced access to existing utilities in the HSR right-of-way, wastewater service demand, effects on storm drain facilities, effects on waste generation, effects from hazardous waste generation, and energy demand. The operation of the Selected Alternative will require utilities, energy, and other public utility facilities to operate; however, this will be supported without the need to expand existing local resources.

5.6 Biological and Aquatic Resources

As discussed in Section 3.7, Biological and Aquatic Resources, of the Final EIS, biological and aquatic resources within the Burbank to Los Angeles Project Section are primarily associated with the Los Angeles River. A summary of construction-related effects to biological and aquatic resources is provided below.

- Although no special-status plant species have been documented as occurring within the Botanical resource study area (RSA), project construction will result in direct and indirect effects on suitable habitat for southern tarplant, a nonlisted special-status plant species that has a low to moderate probability of occurring within the Botanical RSA. No listed plant species are expected to occur within the Botanical RSA or to be adversely affected by the Selected Alternative.
- Project construction will result in direct and indirect effects on suitable roosting habitat for common and special-status (nonlisted) bat species (e.g., bridge and culvert hinges and crevices) and could result in temporary indirect impacts (e.g., noise, lighting, dust, and vibration) to suitable habitat for special-status species that have potential to occur along the Los Angeles River. While the federally and state-listed least Bell's vireo has been documented as occurring within riparian habitats in the Wildlife RSA, no direct effects on this species or associated suitable habitat will occur under the Selected Alternative. Due to the potential for indirect effects on this species, such as increased noise, vibration, and lighting during construction, the Authority has conducted consultation with USFWS in accordance with Section 7 of FESA. The USFWS provided concurrence with a *May Affect, Not Likely to Adversely Affect* determination for least Bell's vireo on April 12, 2021**.** The project will not have direct or indirect impacts on any other listed special-status species. The Selected Alternative will affect no designated critical habitat or lands identified within an adopted Habitat Conservation Plan or recovery plan.

- While there will be no direct impacts on special-status natural communities under the proposed Selected Alternative, there is potential for indirect impacts (e.g., dust and the spread or introduction of nonnative plant species) on wetland habitats associated with Verdugo Wash and the Glendale Narrows area within the Los Angeles River.
- Project construction will result in direct and indirect impacts on nonwetland, concrete-lined aquatic resources (e.g., storm channels) under the jurisdiction of the USACE, SWRCB, and California Department of Fish and Wildlife. No direct impacts on wetlands will occur under the Selected Alternative.
- Project construction may temporarily and locally affect the movement of wildlife habituated to the urban setting of the RSAs. However, no permanent barriers will be placed within any designated wildlife movement corridors.
- Project construction will result in direct and indirect impacts on trees protected under local ordinances. However, the Selected Alternative will not result in the removal of any large groves of trees or trees protected as part of any special-status natural community, and locally specified procedures related to the trimming or removal of such trees will be implemented under the Selected Alternative.

There is limited potential for impacts on biological and aquatic resources after construction of the Selected Alternative due to the urbanized setting of the proposed HSR alignment and the high level of existing disturbance related to human activity. A summary of the operations-related impacts on biological and aquatic resources that will result from the Selected Alternative is provided below:

- Potentially suitable habitat for southern tarplant may be subjected to disturbance and the spread or introduction of nonnative plant species during project maintenance activities.
- Special-status wildlife species, particularly protected bat and avian species, may be subjected to direct and indirect operational and maintenance impacts (e.g., vegetation trimming/removal, structural maintenance work within or near bat roosting habitat, increased dust, wind, noise, lighting, and vibration).
- Wetlands and other aquatic resources within the Aquatic RSA may be subjected to indirect operational and maintenance impacts, including increased dust and the spread or introduction of nonnative plant species. However, the Selected Alternative will not likely alter existing conditions affecting wetlands and other aquatic resources within the RSA.
- While maintenance activities may temporarily and locally affect the movement of wildlife, no permanent barriers will be placed within any designated wildlife movement corridors.
- While project maintenance activities and operation have the potential to affect trees covered under local ordinances through direct trimming and indirect disturbances, operation of the Selected Alternative will not affect protected trees within the RSAs.

5.7 Hydrology and Water Resources

As discussed in Section 3.8, Hydrology and Water Resources, of the Final EIS, construction activities associated with the Selected Alternative, such as grading and excavation, will alter existing drainage patterns, redirect stormwater runoff, and increase pollutants of concern in stormwater runoff. The project is within the San Fernando Valley Groundwater Basin Superfund site, which contains numerous hazardous waste sites that have contributed to groundwater contamination (ID Nos. 62, 79, 88, 114, 144, 174, 203, and 210). The San Fernando Valley Groundwater Basin Superfund site is currently being remediated under the oversight of the USEPA and the Los Angeles Regional Water Quality Control Board. The remediation includes extraction wells and pipelines that extract and convey groundwater to a treatment plant in Burbank and to a treatment plant in Glendale. The treatment plants remove groundwater contaminants including trichloroethylene, tetrachloroethylene, and 1,2,3-trichloropropane to established California Department of Health Services Division of Drinking Water standards, to provide drinking water to citizens in the Burbank area.

Surface water dewatering or diversion and discharge of groundwater during dewatering activities could introduce pollutants to surface waters. Groundwater dewatering, particularly during construction of the below-grade sections, could reduce groundwater levels and mobilize pollutant plumes. In addition, construction activities could decrease infiltration and contribute pollutants of concern to groundwater. However, with implementation of IAMFs, mitigation measures (including below-grade section constructability and hydrogeological monitoring), compliance with applicable regulatory permits, and water quality monitoring during surface water dewatering or diversion, no temporary or permanent effects related to construction would occur.

Construction of the Selected Alternative will take place in or over Federal Emergency Management Agency-designated floodplains and will place new structures within the 100-year floodplain. With implementation of IAMFs, which will limit structures and construction activities in the floodplain and ensure restoration of impacted floodplains, and will require flood protection measures that minimize effects to 100-year floodplain water surface elevations, as well as compliance with the requirements set forth in U.S. Executive Order 11988 and the Federal Emergency Management Agency regulations, no effects to designated floodplains during construction will occur.

Operation and maintenance of the Selected Alternative will increase generation of pollutants of concern and could introduce pollutants to stormwater that could infiltrate groundwater. Operation and maintenance of the Selected Alternative will not substantially deplete groundwater volumes compared to the existing condition because the project will not include extraction of groundwater. With implementation of IAMFs, which will require implementation of operational BMPs to treat stormwater and remove pollutants of concern, compliance with applicable regulatory permits, and preparation of a Water Supply Assessment, no effects to groundwater quality or quantity will occur during operation of the Selected Alternative.

Operations and maintenance of the Selected Alternative will have no effect on drainage patterns, stormwater runoff, hydraulic capacity, or floodplains. With implementation of IAMFs, no effects from release of pollutants from inundation will occur during operation of the Selected Alternative.

The project will require review from USACE under Section 14 of the Rivers and Harbors Act of 1899, as amended and codified in 33 U.S. Code 408 (Section 408) where the Selected Alternative will occupy, alter, or use any federal flood control facility to ensure that its usefulness is not impaired. The Los Angeles River, Burbank Western Channel, and Verdugo Wash are the USACE facilities regulated under Section 408 which will be occupied, altered or modified by the Selected Alternative during construction.[8] During the design phase, the Authority will be required to coordinate with the Los Angeles County Flood Control District and USACE to obtain Section 408 review for these facilities. Section 408 provides that USACE may grant permission for another party to alter a USACE flood control facility upon a determination that the alteration proposed will not be injurious to the public interest and will not impair the usefulness of the facility. The NEPA/404/408 MOU signed by the FRA, the Authority, USACE, and USEPA on December 21, 2010, provides for early consultation with USACE to establish the appropriate level of review and to provide a preliminary determination on whether the proposed modifications or alterations to the subject federal flood control facilities are likely to be granted permission. The Authority and the USACE have been coordinating under the 2010 MOU with respect to the following facilities and project construction: 1) Los Angeles River (Main Street grade separation); 2) the Burbank Western Channel (clear span bridge); 3) Verdugo Wash (clear span bridge); 4) Los Angeles River (retaining wall near Metrolink CMF); and 5) Los Angeles River (retaining wall near the Metro Gold Line and Broadway). Meetings were held between the USACE and the Authority on August 11, 2021 and August 24, 2021 and technical work is being prepared to support the coordination under the 2010 MOU in the *Burbank to Los Angeles Checkpoint C Section 408 Request for Preliminary Determination Report* (Authority 2021).

During a coordination meeting between the Authority and the USACE on October 27, 2021, the USACE expressed concern that the originally proposed retaining wall at the Gold Line would not facilitate or may limit proposed future improvements associated with the Los Angeles River

[8] The USACE (LA District) has confirmed that the Lockheed Channel is not a federal 408 facility.

Ecosystem Restoration Project at this location (commonly referred to as the Cornfields). The USACE has since requested that the Authority eliminate the proposed retained cut and retaining wall at the Cornfields location. Because of this concern, the Authority has modified the current design which no longer includes the retaining wall at the Cornfields location but retains the existing track elevation and includes a reduced clearance of the Authority's catenary design and electrical system.

5.8 Geology, Soils, Seismicity, and Paleontological Resources

As discussed in Section 3.9, Geology, Soils, Seismicity, and Paleontological Resources, of the Final EIS, geological hazards (e.g., ground subsidence and expansive soils), primary seismic hazards (e.g., seismic ground motion), secondary seismic hazards (e.g., liquefaction and lateral spreading), geological resources (e.g., mineral resources and fossil fuel resources), and paleontological resources have the potential to affect or be affected by construction and/or operation of the Selected Alternative. As such, construction and/or operation activities could result in an impact. However, all of these impacts will be avoided or minimized through implementation of IAMFs, such as complying with the latest seismic design criteria and halting operations of the HSR system in the event of an earthquake. While the effects from some hazards, such as seismic ground shaking, cannot be completely avoided, the project design and project features will not increase the risk to passengers, workers, or the general public from these hazards.

5.9 Hazardous Materials and Wastes

As discussed in Section 3.10, Hazardous Materials and Wastes, of the Final EIS, transport, storage, use, and disposal of hazardous materials and generation, storage, or disposal of hazardous wastes during construction of the Selected Alternative could result in the release of hazardous materials or wastes. Implementation of IAMFs will minimize impacts from the release of hazardous materials or wastes by ensuring that hazardous materials and wastes are stored and transported in compliance with state and federal regulations, BMPs for hazardous materials storage and handling will be followed, procedures for spill prevention will be in place prior to construction, and the full inventory of hazardous materials in use during construction of the Selected Alternative will be available to first responders. Additionally, construction of the Selected Alternative will involve the transport, storage, and use of hazardous substances or mixtures within 0.25 mile of schools, which could be a health or safety hazard to students or employees in the event of a release of hazardous materials or wastes. IAMFs include measures to reduce the potential for hazardous emissions within 0.25 mile of a school by implementing a spill prevention plan and hazardous materials and waste plan, a demolition plan, and a remediation plan. However, these IAMFs will not completely avoid the potential of a release. Implementation of mitigation measures will further limit the use of extremely hazardous materials within 0.25 mile of a school by requiring the contractor to prepare a memorandum establishing BMPs related to construction activity for approval by the Authority.

Construction of the Selected Alternative could inadvertently release hazardous materials and wastes as a result of accidents or spills related to the transport, shipping, and use of hazardous materials. With implementation of IAMFs, the potential for inadvertent release of hazardous materials and wastes will be reduced.

During construction of the Selected Alternative, trenching and other ground-disturbing activities could encounter or disturb previously undocumented or unknown hazardous materials or contamination. Implementation of IAMFs will minimize the potential for hazardous materials exposure of workers or the public and releases into the environment as a result of inadvertent disturbance of undocumented contamination.

Construction of the Selected Alternative on or near potential environmental sites of concern could expose workers, the public, or the environment to hazardous materials or wastes. Construction activities such as demolishing structures, excavating, and drilling into the ground could also increase the risk of damaging or interfering with groundwater remediation facilities such as

extraction and monitoring wells, pumps, or pipelines. Implementation of IAMFs will minimize impacts associated with construction on or near these sites.

One site of special concern within the Burbank to Los Angeles Project Section is the Burbank Operable Unit of the San Fernando Valley Groundwater Basin Superfund site, which contains numerous hazardous waste sites that contributed to the soil, soil vapor, and groundwater contamination currently being remediated under a plan approved by the USEPA. As noted above, in Section 5.5, Public Utilities and Energy, the Selected Alternative will affect seven extraction wells in Area 1 used to extract contaminated groundwater from the Superfund site. Five of these wells (V01, V02, V03, V04, and V07) will be protected in place and their function will not be impaired. Two other wells will require replacement (V05 and V06). The design of the Selected Alternative will also require the relocation of the conveyance pipeline and some of the ancillary infrastructure, most notably the sampling cabinets, to allow for realignment of the Lockheed Channel. In Area 2, the Selected Alternative will conflict with one extraction well (GS-04), which will need to be replaced. The Authority will coordinate the replacement of these wells and infrastructure with the USEPA as required under CERCLA. The replaced extraction wells will be installed and functional prior to the removal of any of the extraction wells for the Superfund site to avoid disruption of the ongoing remediation program for the San Fernando Valley Groundwater Basin Superfund site.

Demolition of roadways, track modification, and dismantling and removal of building or other structure components or debris could accidently release lead and asbestos, exposing workers and the public to hazardous materials and wastes during demolition prior to construction of the Selected Alternative. IAMFs include measures that will ensure the safe demolition and removal of materials and debris, preventing the accidental release of lead and asbestos.

Construction of the Selected Alternative on or near active or closed landfills and oil and gas wells could increase the risk of exposure or accident associated with hazardous materials and wastes to the public and workers. Implementation of IAMFs will minimize the potential risk of exposure or accident associated with hazardous materials and wastes to the public and workers.

Operation and maintenance of the Selected Alternative has the potential to affect the environment and the public through the transport, use, storage, and disposal of hazardous materials and wastes for the maintenance of the HSR trains, track, light maintenance facility, and stations. Implementation of an environmental management system and hazardous materials monitoring plans will reduce or avoid impacts.

Operation and maintenance of the Selected Alternative will require limited and intermittent handling of small amounts of hazardous materials, substances, or wastes within 0.25 mile of schools. A hazardous materials plan; a spill prevention, containment, and control plan; and an Environmental Management System will be prepared and implemented.

Additionally, operation and maintenance of the Selected Alternative could result in the accidental release of hazardous materials and wastes, presenting health and safety risks to the public and workers, and contamination of the environment. IAMFs include measures that require preparation of a hazardous materials plan; a spill prevention, containment, and control plan; and an Environmental Management System that will limit the risks of upsets and accident conditions.

Operation and maintenance of the Selected Alternative on or near sites of undocumented or known contamination and associated risks would be negligible because these types of sites will be identified, tested, and remediated prior to construction. In addition, operations and maintenance activities will have limited potential for ground disturbance.

5.10 Safety and Security

As discussed in Section 3.11, Safety and Security, of the Final EIS, a portion of the Selected Alternative crosses under Runway 8-26, Taxiway D, the proposed extension of Taxiway C, and critical airport safety zones at Hollywood Burbank Airport. This section of the HSR alignment will be constructed by utilizing the sequential excavation method, which minimizes surface disruption and will be limited to the tunnel entry and exit points, located outside of the critical airport safety

zones. The construction contractor will be required to comply with any relevant state and federal regulations and standards regulating the construction of underground tunnels to address the potential for construction workers to be exposed to safety concerns due to the reduced light conditions, potentially difficult or limited access and egress, and the potential for exposure to air contaminants and the hazards associated with underground tunnel construction. Additionally, SS-IAMF#2, which requires the contractor to develop a Safety and Security Management Plan, a Site-Specific Health and Safety Plan, and a Site-Specific Security Plan that identify the local conditions and requirements unique to the construction site and work to be performed, will be implemented. Construction of the Selected Alternative will have no effects related to accidents and health risks at construction sites; accidents associated with construction-related detours; increased response times for fire, rescue, and emergency services from temporary road closures; and crime at construction sites.

Under the Selected Alternative, implementation of PTC, grade separations, and fencing will provide a safe means of intercity and regional travel and will therefore have a beneficial impact with regard to motor vehicle, pedestrian, and bicycle accidents associated with train operations. Operation of the Selected Alternative will have no impacts related to:

- Train accidents
- HSR accidents associated with seismic events
- Risk of fire
- Increased response times for fire, rescue, and emergency services due to permanent road closures
- Increased response times for fire, rescue, and emergency services associated with elevated track and tunnels
- The need for expansion of existing fire, rescue, and emergency services facilities (with applicable mitigation measures)
- Accident risks to airports, private airstrips, and heliports
- Hazards to the HSR system from nearby facilities
- Hazards to residences from high-speed train derailment
- Safety at schools
- Hazards to HSR passengers and employees from extreme weather conditions and from winds
- Criminal activity
- Emergencies aboard trains and at stations, rights-of-way, and facilities

5.11 Socioeconomics and Communities

As discussed in Section 3.12, Socioeconomics and Communities, of the Final EIS, the construction and operation of the HSR project will have potential impacts on socioeconomics and communities related to community cohesion, displacement and relocation, the need for additional facilities, access disruption, and permanent physical deterioration. The intensity of these impacts will be minimized through implementation of the mitigation measures. However, the Selected Alternative will result in the displacement of 6 single-family residential units, 6 multifamily residential units, and 84 businesses.

After implementation of air quality mitigation measures, aesthetic and visual quality mitigation measures, hazardous materials and wastes mitigation measures, and noise and vibration mitigation measures, the Selected Alternative will result in temporary and permanent impacts related to the disruption of community cohesion or division of existing communities from construction. The incorporation of IAMFs, including preparation of a construction management plan to minimize impacts on low-income and minority populations, compliance with the Uniform

Relocation Assistance and Real Property Acquisition Policies Act, and development of a relocation mitigation plan to minimize the economic disruption related to relocation, will minimize or avoid impacts to community cohesion and division of existing communities.

Permanent benefits include improved mobility within the region, improved traffic conditions on freeways, improvements in regional air quality, new employment opportunities, and increased tax revenues in the region.

5.12 Station Planning, Land Use, and Development

As discussed in Section 3.13, Station Planning, Land Use, and Development, of the Final EIS, construction of the Selected Alternative will cause temporary and intermittent disruption of access to some properties, will temporarily inconvenience nearby residents and businesses, and will result in the direct temporary conversion of approximately 113 acres and direct permanent conversion of approximately 153 acres of existing and planned land uses. Most of this land conversion will be adjacent to an existing railroad corridor and is spread over a distance of 14 miles between the proposed Burbank Airport Station and LAUS. Construction of the Selected Alternative will result in impacts; however, the magnitude of the impacts will be limited due to the small percentage of land use conversion when compared to the overall size of the RSA.

Operation of the Selected Alternative will result in some impacts related to direct and indirect permanent land use conflicts. Operation of the Selected Alternative will result in increased noise levels adjacent to sensitive land uses and will generate EMFs that could interfere with some adjacent land uses. Operation of the Selected Alternative will also induce growth, which although small compared to the forecast regional growth, could accelerate implementation of local plans in Burbank and Los Angeles around the proposed HSR station site. Implementation of IAMFs and mitigation measures, including the implementation of sound barriers as needed, acquiring easements on properties severely affected by noise, and HSR vehicle noise specification, will minimize the potential for operation of the Selected Alternative to result in direct permanent conflicts with surrounding land uses and will reduce the potential indirect impacts of the station on surrounding land use patterns.

5.13 Agricultural Farmland and Forest Land

As discussed in Section 3.14, Agricultural Farmland and Forest Land, of the Final EIS, the Burbank to Los Angeles Project Section will not result in any impacts on agricultural farmland and forest land because no agricultural farmland and forest land is present within the RSA.

5.14 Parks, Recreation, and Open Space

As discussed in Section 3.15, Parks, Recreation, and Open Space, of the Final EIS, the Selected Alternative will have temporary and permanent construction impacts related to recreational resources as it will affect the planned Phase 3 of the San Fernando Bike Path, the Los Angeles River Bike Path (Planned Extension), and the planned San Fernando Railroad Bike Path. The Selected Alternative will require a permanent easement on a 0.28-mile portion of the planned Phase 3 of the San Fernando Bike Path in the City of Burbank, between Burbank Boulevard and Chandler Boulevard, where the bike path is planned to run adjacent to the Lockheed Channel and to the east of the Burbank Water Reclamation Plant. Construction of the Selected Alternative may require permanent easements along the planned extension of the Los Angeles River Bike Path. The affected portions of the planned extension of the bike path appear to be minor in size in relation to the entire extension of the bike path, although exact acreages of impact were not generated because of the multiple alignment options for the path. The Selected Alternative will require a permanent easement within the Metro-owned right-of-way, along the entire 4.5-mile planned San Fernando Railroad Bike Path, to operate HSR trains in this area. The impacts on these resources from permanent conversion of land will result in a loss of connectivity and recreational use. Construction of the Selected Alternative will also result in a cell tower easement within Albion Riverside Park (0.12-acre portion of land in the southern corner of the park). Through adherence to IAMFs and implementation of mitigation measures, which will include coordinating trail and bicycle lane closures and detours with local jurisdictions and preparing a

public awareness and notification plan regarding proposed alternative access via temporary detours, temporarily diminished access from construction of the Selected Alternative and temporary and permanent impacts on recreational facilities will be reduced.

During operation of the Selected Alternative, noise from passing trains and maintenance activities will be audible. However, because the resources generate their own audible noise levels through active recreation, users of the resources would not be highly sensitive to changes in external noises. Visual changes will occur as a result of operations of the Selected Alternative. However, because the resources are used for active recreation, users of the resources are not sensitive to visual changes, and the presence of HSR infrastructure will not detract from the public's use of the resources.

5.15 Aesthetics and Visual Quality

As discussed in Section 3.16, Aesthetics and Visual Quality, of the Final EIS, during construction of the Selected Alternative, the addition of intrusion-protection railings to the three historic bridges (the Arroyo Seco Parkway Historic District Bridge, the Broadway Viaduct Bridge, and the Spring Street Viaduct Bridge) will conflict with the visual character of these historic properties and create an impact on the scenic values of these visual/cultural resources. Even after implementation of mitigation measures, the residual impacts on the three historic bridges will be an impact under NEPA.

The construction of the Sonora Avenue grade separation, the Grandview Avenue grade separation, and the Flower Street grade separation will introduce prominent visual elements to the existing cultural environment, which will substantially degrade the existing visual character or quality at these locations. A mitigation measure to reduce impacts to the existing cultural environment will require the contractor to work with the Authority and local jurisdictions to incorporate the Authority-approved aesthetic preferences for nonstation structures into final design and construction. Even with implementation of mitigation measures, the proposed grade separations will be out of scale with the surrounding commercial uses and the project's scale will contrast with the existing cultural environment. The project's overall visual character will be incompatible with the visual character of the existing cultural environment.

5.16 Cultural Resources

As discussed in Section 3.17, Cultural Resources, of the Final EIS, construction and operation of the Selected Alternative will have an adverse effect on four historic built resources (Arroyo Seco Parkway Historic District [including the Los Angeles River Bridge], the Broadway Viaduct, the Spring Street Viaduct, and the Main Street Bridge) because of the proposed physical alterations necessary to add new intrusion-protection railing on the historic bridge decks above the HSR alignment to prevent people and objects from entering the right-of-way from the bridge. Also, construction and operation of the Selected Alternative will have a potential effect on archaeological resource P-19-101229 (a vestige of a small circular brick wall feature) that is assumed eligible at this time. Because the exact location of archaeological resource P-19-101229 is not known at this time, there remains a potential that construction activities could result in the partial or total destruction or removal of this resource. Cultural resource mitigation measures include the preparation of interpretive or educational materials, the development of a design for an intrusion-protection railing for the historic bridge decks, and the development of a feasibility study to explore design options that will maintain the historic use of the Main Street Bridge to the maximum extent feasible while still meeting safety requirements. In addition, there is a potential for construction to affect unknown archaeological resources if they are discovered during site surveys and cannot be avoided, or if they are discovered during construction. Mitigation measures, such as halting construction if a previously undiscovered archaeological site is revealed, conducting archaeological monitoring near identified or sensitive sites, and planning intentional site burial and preservation in place if avoidance is not feasible, will reduce impacts.

5.17 Regional Growth

As discussed in Section 3.18, Regional Growth, of the Final EIS, the impacts of construction and operation of the Selected Alternative are anticipated to result in small increases in employment and population in the RSA. The Selected Alternative will have beneficial effects related to short-term construction-related employment effects and long-term operational employment effects due to economic activity related to construction and operation of the Selected Alternative. The Selected Alternative will induce housing demand in the RSA, which will be met with available land supply and housing capacity in the short and long term. The demand will be met based on the existing and projected housing units within the RSA.

5.18 Cumulative Impacts

As discussed in Section 3.19, Cumulative Impacts, of the Final EIS, the Selected Alternative, in combination with other past, present, and reasonably foreseeable probable future actions or projects, will result in the following cumulative construction-period impacts: air quality and GHGs; noise and vibration; socioeconomics and communities (community character and cohesion); and cultural (archaeological) resources. In addition, the Selected Alternative, in combination with other cumulative projects, will result in cumulative transportation impacts, noise impacts, and public utilities impacts during long-term operation of the Selected Alternative.

6 MITIGATION COMMITMENTS AND MONITORING

Consistent with 40 C.F.R. 1505.2(c), all practicable means to avoid or minimize environmental harm caused by the Selected Alternative have been identified and included as mitigation measures in the MMEP (see Appendix A of this ROD). The Authority will monitor the implementation of environmental commitments in the MMEP consistent with the NEPA Assignment MOU and with CEQ regulations and guidance. The MMEP describes mitigation measures that will avoid, minimize, or compensate for reasonably foreseeable environmental impacts that result from constructing and operating the Burbank to Los Angeles Project Section of the California HSR System. Pursuant to its responsibilities under the NEPA Assignment MOU, these measures were developed by the Authority in consultation with appropriate agencies, as well as with input received from the public. The Authority is required to comply with all mitigation measures adopted with the ROD.

The Selected Alternative also incorporates IAMFs and BMPs that are identified in the Final EIS and described in detail in the technical reports. The Authority identified these IAMFs and BMPs to avoid and minimize potential project impacts. The Authority will apply these IAMFs and BMPs to avoid impacts in several resource areas. In addition, various regulatory requirements (such as those related to hazardous material disposal and various mandatory safety requirements) provide additional assurance that adverse effects on the environment will not occur or will be minimized to the fullest extent practicable. The applicable regulatory requirements and IAMFs that are part of the Selected Alternative are described in more detail in the MMEP. The IAMFs are a condition of project approval and must be implemented by the Authority during design, construction, and operation of the Selected Alternative approved by this ROD.

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

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7 SUMMARY OF COMMENTS ON THE FINAL EIS AND RESPONSES

During the 30-day review period following publication of the Final EIS and through the January 20, 2022 Board meeting, the Authority received comment submittals. Staff reached out to commenters throughout the waiting period and until the Board meeting and provided responses. The range and types of comments received by the Authority during the review period included comments on the following topics:

- Current information regarding the police division in the County of Los Angeles
- Recommendation for crime prevention through environmental design
- General support of the project
- General appreciation for ongoing coordination as well as requests for continued coordination
- Potential impacts to businesses
- Level of design and mitigation developed
- Non-residential displacements
- Impacts to Rio de Los Angeles State Park and Taylor G1 and G2 sites
- Impacts to the Los Angeles River Bike Path project
- Recommendations for additional alternatives
- Deferred analysis and mitigation
- Request for an ombudsman

The range and types of comments received during the January 19 and 20, 2022 Board meeting included concerns and questions on the following topics:

- Concerns over potential interference with existing water remediation wells and impacts to water supply in the City of Burbank
- Concerns over potential interference with the Airport Layout Plan for the Hollywood Burbank Airport and the level of detail of the Construction Transportation Plan

Summaries of and responses to all correspondence received are included in Appendix G, Comments Received After the Publication of the Final EIS of this ROD.

In issuing this ROD, the Authority has considered all substantive comments received on the Final EIS, as well as the comments previously received on the Draft EIS.

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8 CORRECTIONS TO FINAL EIS

As a part of the California High-Speed Rail Authority's review of the Burbank to Los Angeles Project Section Final EIR/EIS, several minor corrections and clarifications were identified. Corrections are identified in Appendix B of this document. The corrections and clarifications are not considered significant new information and do not change the analysis or conclusions of the EIS. These corrections and clarifications address items already covered in the Final EIS. These clarifications do not trigger the need to prepare a supplement, per the Council on Environmental Quality NEPA regulations (40 C.F.R. 1502.9(c)(1)). The errata described within Appendix B of this ROD are herewith corrected in the Final EIS and associated technical reports for the Burbank to Los Angeles Project Section of the California High-Speed Rail System.

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9 DECISION

The Authority finds that the Selected Alternative (the HSR Build Alternative) best fulfills the Purpose and Need and objectives for the project while balancing impacts on the natural and human environment. The specific limits of the Selected Alternative are from the southern edge of San Fernando Boulevard at Lockheed Drive north of the underground Burbank Airport Station at the northern terminus to the north edge of U.S. Route 101 (between Alameda Street and Ramirez Street) at a modified LAUS at the southern terminus. In reaching this decision, the Authority considered the physical and operational characteristics and potential environmental consequences associated with the HSR Build Alternative. The Authority, as lead agency, consulted with the cooperating agencies and considered the Draft and Final EIS, including the analysis of the No Project Alternative, the HSR Build Alternative, and all public and agency comments received during the review periods in identifying the Selected Alternative. The cooperating agencies may issue their own decision documents, as appropriate, consistent with their statutory and regulatory responsibilities.

9.1 Section 106

Section 106 of the National Historic Preservation Act (16 U.S.C. 470f) requires that any federal agency having direct or indirect jurisdiction over a proposed federal or federally assisted undertaking take into account the effect of the undertaking on any district, site, building, structure, or other object that is listed or eligible for listing on the National Register of Historic Places. FRA, the State Historic Preservation Officer, the Authority, and the Advisory Council on Historic Preservation executed a Programmatic Agreement (PA) on July 22, 2011. The STB determined that it has jurisdiction over the California HSR System under 49 U.S.C. § 10501(a)(2)(A) of the Interstate Commerce Act, as amended, and on January 18, 2018, the STB requested that it be added as an invited signatory to the PA to fulfill its obligations under Section 106. The PA sets forth numerous requirements intended to ensure appropriate treatment of historic resources during ground-disturbing activities associated with project construction. The PA also provides protocols for how and when formal eligibility determinations will be made. Eligibility determinations will be made by the appropriate agency based on information presented in the appropriate, completed state site records forms. Moreover, the PA sets forth requirements for tribal monitoring of construction activities to help ensure protection of cultural resources that may be encountered. Adherence to the terms of the PA will fulfill all obligations under Section 106.

In accordance with the PA, a memorandum of agreement (MOA) for the treatment of adverse effects on historic properties in the Burbank to Los Angeles Project Section of the California HSR System was executed by the SHPO and the Authority on October 25, 2021.

The MOA summarizes the results of the Section 106 process and the treatment measures agreed to among the project's consulting and concurring parties. Those consulting parties participating in the preparation of the MOA are as follows:

- Fernandeño Tataviam Band of Mission Indians
- Gabrieleño Band of Mission Indians—Kizh Nation
- Gabrielino/Tongva Nation
- Los Angeles Conservancy
- Southern California Association of Governments
- City of Los Angeles Office of Historic Resources
- California Department of Transportation District
- Los Angeles County Department of Regional Planning
- USACE
- STB
- FRA
- Advisory Council on Historic Preservation
- SHPO

The assessment of adverse effects required under Section 106 of the National Historic Preservation Act was documented in the Finding of Effect Report that was concurred upon by SHPO on June 25, 2020; see Concurrence Letter in Appendix C to this ROD.

9.2 Section 4(f)

Projects that are undertaken by an operating administration of the U.S. Department of Transportation or that may receive federal funding and/or discretionary approvals from such an operating administration must demonstrate compliance with Section 4(f) of the Department of Transportation Act of 1966. Section 4(f) protects publicly owned lands that are parks, recreational areas, and wildlife refuges. Section 4(f) also protects historic sites (including archaeological resources) of national, state, or local significance that are on public or private land.

Under the NEPA Assignment MOU, the Authority has been delegated the power to make determinations under Section 4(f). The NEPA Assignment MOU stipulates that the Authority must consult with FRA prior to making any constructive use determination, but otherwise delegates all responsibilities under Section 4(f) to the Authority. As further detailed below, there is no constructive use determination associated with the Burbank to Los Angeles Project Section.

As described in Chapter 4 of the Draft EIS, Section 4(f) properties were considered throughout the planning and alternatives development and analysis process to avoid and minimize impacts on resources protected by Section 4(f). During this process, the Selected Alternative was designed to avoid direct adverse effects on parks, recreation areas, and historic resources. The Final EIS contains the Authority's evaluation of whether the Burbank to Los Angeles Build Alternative would result in any of the following "uses" of properties protected under Section 4(f):

- Permanent use (which encompasses permanent easements or temporary easements that exceed the limits for temporary occupancy)
- Temporary occupancy
- Constructive use

Impacts were then evaluated to see if the criteria for a *de minimis* impact determination were met and appropriate coordination with officials having jurisdiction over each resource was conducted. A total of 51 Section 4(f) properties were identified as within the RSA. The Authority has determined that the Selected Alternative will have a permanent use of the San Fernando Railroad Bike Path (Planned), *de minimis* impacts on the San Fernando Bike Path (Planned Phase 3), the Rio de Los Angeles State Park, the Albion Riverside Park, and a temporary occupancy of the planned Chandler Bikeway extension. Additionally, the Selected Alternative will result in a permanent use of the following National Register of Historic Places-listed or eligible historic sites eligible for protection under Section 4(f): the Arroyo Seco Parkway Historic District, the Broadway (Buena Vista) Viaduct, the Spring Street Viaduct, and the Main Street Bridge. Finally, the Authority has determined that the Selected Alternative will have a *de minimis* impact to the Los Angeles River Channel (presumed eligible for listing in the National Register of Historic Places). The Authority issued its draft Section 4(f) Evaluation in with the Draft EIS, and the Authority included the final Section 4(f) Evaluation in the Final EIS. The analysis and information in the Section 4(f) Evaluation included with the Final EIS is incorporated herein by reference.

9.2.1 Measures to Minimize Harm/Mitigation

The Authority developed measures to minimize harm to the San Fernando Railroad Bike Path (Planned), the Arroyo Seco Parkway Historic District, the Broadway (Buena Vista) Viaduct, the Spring Street Viaduct, and the Main Street Bridge during project planning to avoid or minimize impacts, as well as mitigation and enhancement measures to compensate for unavoidable project impacts. Table 2 lists the measures identified by the Authority to minimize harm, as required by 49 U.S.C. 303(c)(2). These measures are now incorporated into the Selected Alternative. The Authority is continuing ongoing coordination, as appropriate, with the officials with jurisdiction over the Section 4(f) properties. During the Authority's consideration of its decision and during final design, the Authority, in consultation with the officials with jurisdiction, may identify and implement additional measures to further reduce potential impacts on the San Fernando Railroad Bike Path (Planned), the Arroyo Seco Parkway Historic District, the Broadway (Buena Vista) Viaduct, the Spring Street Viaduct, and the Main Street Bridge.

Table 2 Measures to Minimize Harm for Public Parks and Recreation Resources Evaluated under Section 4(f)

Impacts	Measures to Minimize Harm
Impact Avoidance and Minimization Features	
Long-Term Access Impacts to Parks, Recreation, and Open Space during Project Operation	**PK-IAMF#1: Parks, Recreation, and Open Space** Prior to Construction, the Contractor will prepare and submit to the Authority a technical memorandum that identifies project design features to be implemented to minimize impacts on parks, recreation and open space. Typical design measures to avoid or minimize impacts to parks and recreation may include: • Provide safe and attractive access for present travel modes (e.g., motorists, bicyclists, pedestrians—as applicable) to existing park and recreation facilities. Design guideway, system, and station features in such a way as to enhance the surrounding local communities. Provide easy crossings of the guideway which allows for community use under the guideway or at station areas.
Short-Term Access Impacts to Parks, Recreation, and Open Space during Project Construction	**TR-IAMF#2: Construction Transportation Plan** The design-build contractor will prepare a detailed Construction Transportation Plan (CTP) for the purpose of minimizing the impact of construction and construction traffic on adjoining and nearby roadways in close consultation with the local jurisdiction and/or property owners having authority over the site. The Authority must review and approve the CTP before the Contractor commences any construction activities. This plan would address, in detail, the activities to be carried out in each construction phase, with the requirement of maintaining traffic flow during peak travel periods. Such activities include, but are not limited to, the routing and scheduling of materials deliveries, materials staging and storage areas, construction employee arrival and departure schedules, employee parking locations, and temporary road closures, if any. The CTP would provide traffic controls pursuant to the *California Manual on Uniform Traffic Control Devices* sections on temporary traffic controls (Caltrans 2012) and would include a traffic control plan that includes, at a minimum, the following elements: • Temporary signage to alert drivers and pedestrians to the construction zone. • Flag persons or other methods of traffic control. • Traffic speed limitations in the construction zone. • Temporary road closures and provisions for alternative access during the closure. • Detour provisions for temporary road closures—alternating one-way traffic would be considered as an alternative to temporary closures where practicable and where it would result in better traffic flow than would a detour. • Identified routes for construction traffic. • Provisions for safe pedestrian and bicycle passage or convenient detour.

Impacts	Measures to Minimize Harm
	• Provisions to minimize access disruption to residents, businesses, customers, delivery vehicles, and buses to the extent practicable—where road closures are required during construction, limit to the hours that are least disruptive to access for the adjacent land uses. • Provisions for 24-hour access by emergency vehicles. • Safe vehicular and pedestrian access to local businesses and residences during construction. The plan would provide for scheduled transit access where construction would otherwise impede such access. Where an existing bus stop is within the work zone, the design-builder would provide a temporary bus stop at a safe and convenient location away from where construction is occurring in close coordination with the transit operator. Adequate measures would be taken to separate students and parents walking to and from the temporary bus stop from the construction zone. • Advance notification to the local school district of construction activities and rigorously maintained traffic control at all school bus loading zones, to provide for the safety of schoolchildren. Review existing or planned Safe Routes to Schools with school districts and emergency responders to incorporate roadway modifications that maintain existing traffic patterns and fulfill response route and access needs during project construction and HSR operations. • Identification and assessment of the potential safety risks of project construction to children, especially in areas where the project is located near homes, schools, day care centers, and parks. • Promotion of child safety within and near the project area. For example, crossing guards could be provided in areas where construction activities are located near schools, day care centers, and parks. CTPs would consider and account for the potential for overlapping construction projects. **TR-IAMF#4: Maintenance of Pedestrian Access** The Contractor will prepare specific construction management plans to address maintenance of pedestrian access during the construction period. Actions that limit pedestrian access would include, but not be limited to, sidewalk closures, bridge closures, crosswalk closures or pedestrian rerouting at intersections, placement of construction-related material within pedestrian pathways or sidewalks, and other actions that may affect the mobility or safety of pedestrians during the construction period. If sidewalks are maintained along the construction site frontage, provide covered walkways and fencing. The plan objective will be to maintain pedestrian access where feasible (i.e., meeting design, safety, Americans with Disabilities Act (ADA) requirements). This measure will be addressed in the CTP. **TR-IAMF#5: Maintenance of Bicycle Access** The Contractor will prepare specific construction management plans to address maintenance of bicycle access during the construction period. Actions that limit bicycle access would include, but not be limited to, bike lane closures or narrowing, closure or narrowing of streets that are designated bike routes, bridge closures, placement of construction-related materials within designated bike lanes or along bike routes, and other actions that may affect the mobility or safety of bicyclists during the construction period. Maintain bicycle access where feasible (i.e., meeting design, safety, ADA requirements). This measure will be addressed in the CTP.

Impacts	Measures to Minimize Harm
Short-Term Fugitive Dust Emissions from Project Construction at Parks and Recreational Resources	**AQ-IAMF#1: Fugitive Dust Emissions** During construction, the Contractor will employ the following measures to minimize and control fugitive dust emissions. The Contractor will prepare a fugitive dust control plan for each distinct construction segment. At a minimum, the plan will describe how each measure would be employed and identify an individual responsible for ensuring implementation. At a minimum, the plan will address the following components unless alternative measures are approved by the applicable air quality management district. • Cover all vehicle loads transported on public roads to limit visible dust emissions, and maintain at least 6 inches of freeboard space from the top of the container or truck bed. • Clean all trucks and equipment before exiting the construction site using an appropriate cleaning station that does not allow runoff to leave the site or mud to be carried on tires off the site. • Water exposed surfaces and unpaved roads at a minimum three times daily with adequate volume to result in wetting of the top 1 inch of soil but avoiding overland flow. Rain events may result in adequate wetting of top 1 inch of soil thereby alleviating the need to manually apply water. • Limit vehicle travel speed on unpaved roads to 15 miles per hour (mph). • Suspend any dust-generating activities when average wind speed exceeds 25 mph. • Stabilize all disturbed areas, including storage piles that are not being used on a daily basis for construction purposes, by using water, a chemical stabilizer/suppressant, hydro mulch or by covering with a tarp or other suitable cover or vegetative ground cover, to control fugitive dust emissions effectively. In areas adjacent to organic farms, the Authority would use non-chemical means of dust suppression. • Stabilize all on-site unpaved roads and off-site unpaved access roads, using water or a chemical stabilizer/suppressant, to effectively control fugitive dust emissions. In areas adjacent to organic farms, the Authority would use non-chemical means of dust suppression. • Carry out watering or presoaking for all land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and demolition activities. • For buildings up to 6 stories in height, wet all exterior surfaces of buildings during demolition. • Limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at a minimum of once daily, using a vacuum type sweeper. • After the addition of materials to or the removal of materials from surface or outdoor storage piles, apply sufficient water or a chemical stabilizer/suppressant. • Require the construction contractor to post a publicly visible sign on the construction site with the telephone number and person to contact at the Authority for any dust or other air quality complaints. The person will be required to take corrective action within 48 hours. The phone number for the local air district must also be visible to ensure compliance with applicable regulations. • Provisions in the dust control plan will allow school administrators and/or their designated representative(s) to notify the Authority if construction-related air emission levels generated by the project are adversely impacting the learning environment. All notices will be investigated by the Authority and corrective action will be taken within 48 hours.

Impacts	Measures to Minimize Harm
Short-Term Noise and Vibration Impacts from Project Construction at Parks and Recreational Resources	**N&V-IAMF#1: Noise and Vibration** Prior to construction, the contractor will prepare and submit to the Authority a noise and vibration technical memorandum documenting how the FTA and FRA guidelines for minimizing construction noise and vibration impacts will be employed when work is being conducted within 1,000 feet of sensitive receptors. Typical construction practices contained in the FTA and FRA guidelines for minimizing construction noise and vibration impacts include the following: • Construct noise barriers, such as temporary walls or piles on excavated material, between noisy activities and noise-sensitive resources. • Route truck traffic away from residential streets when possible. • Construct walled enclosures around especially noisy activities or around clusters of noise equipment. • Combine noisy operations so that they occur in the same period. • Phase demolition, earthmoving, and ground-impacting operations so as not to occur in the same time period. Avoid impact pile driving where possible in vibration-sensitive areas.
Long-Term Visual Changes at Parks and Recreational Resources	**AVQ-IAMF#1: Aesthetic Options** Prior to construction the Contractor will document, through issue of a technical memorandum, how the Authority's aesthetic guidelines have been employed to minimize visual impacts. The Authority seeks to balance providing a consistent, project-wide aesthetic with the local context for the numerous high-speed rail non-station structures across the state. Examples of aesthetic options would be provided to local jurisdictions that can be applied to non-standard structures in the high-speed rail system. Refer to Aesthetic Options for Non-Station Structures, 2017. **AVQ-IAMF#2: Aesthetic Review Process** Prior to construction, the Contractor will document that the Authority's aesthetic review process has been followed to guide the development of non-station area structures. Documentation will be through issuance of a technical memorandum to the Authority. The Authority would identify key non-station structures recommended for aesthetic treatment, consult with local jurisdictions on how best to involve the community in the process, solicit input from local jurisdictions on their aesthetic preferences, and evaluate aesthetic preferences for potential cost, schedule and operational impacts. The Authority would also evaluate compatibility with project-wide aesthetic goals, include recommended aesthetic approaches in the construction procurement documents, and work with the contractor and local jurisdictions to review designs and local aesthetic preferences and incorporate them into final design and construction. Refer to Aesthetic Options for Non-Station Structures, 2017.
Potential Disturbance of Cultural Resources during Project Construction	**CUL-IAMF#1: Geospatial Data Layer and Archaeological Sensitivity Map** Prior to Construction (any ground disturbing activities) and staging of materials and equipment, the Contractor's archaeologist or geoarchaeologist will prepare a geospatial data layer identifying the locations of all known archaeological resources and built historic resources that require avoidance or protection, and areas of archaeological sensitivity that require monitoring within the APE. The Contractor's archaeologist, who meets the Secretary of the Interior's Professional Qualifications Standards provided in 36 C.F.R. 61, is to use, as appropriate, a combination of the following: known locations of archaeological sites and built historic properties, tribal consultation, landforms, depositional processes, distance to water, mapping provided in the Archaeological Treatment Plan, or historic mapping. This mapping is to be updated as the design progresses if it results in an expansion of the area of ground disturbance/APE, including temporary construction easements and new laydown and access areas. This mapping would be used to develop an archaeological monitoring plan to be prepared by the

Impacts	Measures to Minimize Harm
	Contractor's archaeologist, and upon approval by the Authority, implemented by the Contractor's archaeologist. When design is sufficiently advanced, a geospatial data layer would be produced by the Contractor overlaying the locations of all known archaeological resources and built historic resources within the APE, for which avoidance measures are necessary, and all archaeologically sensitive areas, for which monitoring is required. **CUL-IAMF#2: WEAP Training Session** Prior to Construction (any ground disturbing activity) construction contractor personnel who work on site would attend a WEAP training session provided by the Contractor and/or property owner(s). The WEAP would include cultural resources awareness training performed by the Contractor's archaeologist who meets the Secretary of the Interior's Professional Qualification Standards provided in 36 C.F.R. 61. The Contractor would develop instructional materials and a fact sheet for distribution to the construction crews, and submit the materials, as well as qualifications of the personnel providing the training, to the Authority for approval at least 15 days prior to being permitted on-site access. The training would address measures required to avoid or protect built historic resources, educate crews on artifacts and archaeological features they may encounter and the mandatory procedures to follow should potential cultural resources be exposed during construction. Translation services will be provided by the Contractor for non-English speaking participants. The training sessions will be given prior to the initiation of any ground disturbance activities and repeated on an annual basis. Additionally, new construction crewmembers will attend an initial WEAP training session prior to working on site. On completion of the WEAP training, construction crews would sign a form stating that they attended the training, understood the information presented, and would comply with the WEAP requirements. The Contractor's archaeologist would submit the signed WEAP training forms to the Mitigation Manager on a monthly basis. On an annual basis, the Contractor would provide the Authority with a letter indicating that regular WEAP training has been implemented and would provide at least one PowerPoint annually of the WEAP training. On a monthly basis, the Contractor's archaeologist would provide updates and synopsis of the training to workers during the daily safety ("tailgate") meeting. Construction crews would be informed during the WEAP training that, to the extent possible, travel within the marked project site would be restricted to established roadbeds. **CUL-IAMF#3: Pre-Construction Cultural Resource Surveys** Prior to Construction (any ground disturbing activities in areas not yet surveyed) and the staging of materials and equipment, the Contractor will conduct pre-construction cultural resource surveys. Resulting from lack of legal access, much of the construction footprint may not have been surveyed. Once parcels are accessible the Contractor would have archaeologists who meet the Secretary of the Interior professional qualification standards survey and complete reporting in appropriate document for archaeology, in accordance with documentation requirements stipulated in the Programmatic Agreement. Identified resources will be evaluated for the National Register of Historic Places (NRHP) and the California Register of Historical Resources (CRHR). The qualified archaeologist would assess the potential to affect to historic properties (NRHP) by applying the effects criteria in 36 C.F.R. 800.5(a)(1), and the potential of significant impacts to historical resources (CRHR) by applying the criteria in California Environmental Quality Act (CEQA) Guidelines 15064.5(b). Should the Authority determine, in consultation with the State Historic Preservation Office (SHPO), that any newly identified historic properties or historical resources would be adversely affected, the Archaeological Treatment Plan would be amended to document mitigation measures agreed upon by the MOA signatories. The schedule of these surveys would be dependent on the timing of obtaining legal access to the properties and may be driven by the need to complete construction-related activities, e.g., geotechnical borings, laydown yards, etc. Prior to

Impacts	Measures to Minimize Harm
	beginning surveys, updated records searches may be required by the Authority, depending on the length of the passage of time, to validate that accurate information was obtained regarding previous inventory and evaluation efforts. The Contractor's archaeologist, in consultation with the Authority, would determine if an updated records search is required. If an updated records search is necessary, the search will be performed by the Contractor's archaeologist. **CUL-IAMF#4: Relocation of Project Features when Possible** Changing the rail alignment to avoid newly discovered sites is likely infeasible; however, access areas and laydown sites may be relocated should their proposed location be found to be on archaeological sites or have the potential to affect historic built resources in the vicinity. The contractor would delineate all avoidance and protection measures for identified archaeological and built resources on construction drawings. **CUL-IAMF#5: Archaeological Monitoring Plan and Implementation** Prior to construction the Contractor's professionally qualified archaeologist, as defined in the Programmatic Agreement, would prepare a monitoring plan based on the results of geospatial data layer and archaeological sensitivity map. The plan is to be reviewed and approved by the Authority prior to any ground-disturbing activities. During Construction (any ground disturbing activities) or staging of materials or equipment, the Contractor would be responsible for implementing the monitoring plan and providing archaeological and tribal monitoring of ground-disturbing construction activities with a potential to affect archaeological remains in areas identified as archaeologically sensitive in the Archaeological Treatment Plan. The Contractor will obtain Authority approval of all persons providing archaeological or tribal monitoring. **CUL-IAMF#6: Pre-Construction Conditions Assessment, Plan for Protection of Historic Built Resources, and Repair of Inadvertent Damage** Prior to Construction (any ground disturbing activities that are within 1,000 feet of a historic built property) the Contractor may be required to assess the condition of construction-adjacent historic properties, and prepare a Plan for the Protection of Historic Built Resources and Repair of Inadvertent Damage. The MOA and Built Environment Treatment Plan (BETP) would stipulate for which properties the plan is to be prepared. MOA signatories and consulting parties may comment on the adequacy of the assessments. Protection measures would be developed in consultation with the landowner or land-owning agencies as well as the SHPO and the MOA signatories and consulting parties, as required by the Programmatic Agreement. As the design progresses, additional properties may be identified by the Authority as requiring this plan. The plan will record existing conditions in order to (1) establish a baseline against which to compare the property's post-project condition, (2) to identify structural deficiencies that make the property vulnerable to project construction related damage, such as vibration, and (3) to identify stabilization or other measures required to avoid or minimize inadvertent adverse effects. The plan would be further described in the BETP and be prepared by an interdisciplinary team, including (but not limited to) as appropriate, an architectural historian, architect, photographer, structural engineer, and acoustical engineer. Ambient conditions would be used to identify buildings that are sensitive receptors to construction-related vibration and require vibration monitoring during construction activities. Additional protective measures may be required if the property is vacant during construction. The plan content will be outlined in the BETP and is to be completed and approved by the Authority, with protective measures implemented before construction begins within 1,000 feet of the subject building. The plan will describe the protocols for documenting inadvertent damage (should it occur), as well as notification, coordination, and reporting to the SHPO, MOA signatories, and the owner of the historic property. The plan will direct that inadvertent damage to historic properties will be repaired in accordance with the

Impacts	Measures to Minimize Harm
	Secretary of the Interior's (SOI) Standards for the Treatment of Historic Properties (U.S. Department of the Interior, 1995). The plan will be developed in coordination with the Authority, and will be submitted to the SHPO for review and approval. Protective plans would be required for buildings that would be moved as part of the project mitigation, including stabilization before, during, and after relocation; protection during temporary storage; and relocation to a new site, followed by rehabilitation. **CUL-IAMF#7: Built Environment Monitoring Plan** Prior to Construction (any ground disturbing activities within 1,000 feet of a historic property or resource) the Contractor will prepare a Built Environment Monitoring Plan (BEMP). Draft and final BEMP's would be prepared describing the properties that would require monitoring, the type of activities or resources that would require full-time monitoring or spot checks, the required number of monitors for each construction activity, and the parameters that would influence the level of effort for monitoring. Maximum vibration level thresholds may be established in the Plan for Protection of Historic Resources and Repair of Inadvertent Damage the monitoring of which would be included in this monitoring plan. The BETP would outline the process for corrective action should the protection measures prove ineffective. Consultation procedures would also be defined in the BETP. The Contractor will develop both the draft and final plans in coordination with the Authority.
Disruption to Parks, Recreation, and Open Space During Operation	**EJ-IAMF#5 Community-Inclusive Process to Reroute Bike Paths in EJ Communities** As described in PR-MM#4, Replacement of Property Acquired from Existing or Planned Bicycle Routes, during the right-of-way acquisition process, the Authority will consult with the public agency with jurisdiction over any existing or planned bicycle routes regarding the specific conditions of acquisition and replacement of the land that will be acquired. To avoid or minimize adverse impacts to EJ communities from the relocation of planned or existing bike paths, the Authority will seek input from impacted EJ communities on the relocation of these bike paths.
Mitigation Measures	
Short-Term Access Impacts and Closures from Project Construction at Parks or Recreational Resources	**PR-MM#1: Temporary Restricted Access to Park Facilities During Construction** Prior to construction (any ground-disturbing activity impacting trails), the contractor will prepare a technical memorandum documenting how connections to the unaffected trail portions and nearby roadways are maintained during construction. The contractor would provide alternative access via a temporary detour of the trail using existing roadways or other public rights-of-way. The contractor would provide detour signage and lighting and would provide that the alternative routes meet public safety requirements. The technical memorandum will be submitted to the Authority for review and approval. **PR-MM#3: Temporary Closures and Detours of Existing Trails and Bicycle Lanes** • **Trail and Bicycle Lane Facilities Plan—**During final design, the Authority's project engineer would require the design/build contractor to develop a Trail and Bicycle Lane Facilities Plan addressing the short-term project impacts to existing trails and bicycle lanes within the construction limits of the project. That plan would address: – Identifying trails and bicycle lanes that would be closed temporarily and detoured during construction – Preparing a public awareness and notification plan – Temporarily closing trails and bicycle lanes during construction – Developing and implementing detours for temporarily closed trails and bicycle lanes – Phasing of temporary trail and bicycle lane closures to allow for effective detours to maintain connectivity of these facilities around the construction areas

Impacts	Measures to Minimize Harm
	– Coordinating the trail and bicycle lane closures and detours with the local jurisdictions with authority over those facilities – Criteria for identifying detour routes and facilities – Information signing for closures and detours – Requirements for compliance with the Americans with Disabilities Act during construction – Maintaining signing for closures and detours throughout the closure period and replacing lost or damaged signing – Restoring trails and bicycle lanes to their original or better condition at the completion of project construction • **Temporary Closures of Trails and Bicycle Lanes—**Prior to any temporary closures of trails and bicycle lanes, the Authority's project engineer would require the design/build contractor to coordinate with the directors of the appropriate jurisdictions' public works and/or parks departments, or their representatives, to review the location of and need for each temporary trail or bicycle lane closure. The Authority's Project Engineer would require the design/build contractor to develop detours for each closure in consultation with the public works and/or parks department directors or their representatives. Prior to and during construction activities that would require the temporary closure of a trail or bicycle lane, the Authority's project engineer would require the design/build contractor to comply with and implement the procedures in the Trail and Bicycle Lane Facilities Plan, described above, for the affected trails and bicycle lanes. • **Signing for Trail and Bicycle Lane Detours and Closures—**The Authority's project engineer would require the design/build contractor to develop detour signs, in consultation with the appropriate jurisdictions' public works and/or parks departments, notifying trail and bike lane users of the upcoming temporary facility closure and directing the trail and bicycle lane users to the temporary detour routes with estimated timeframes. The project design-build contractor would provide appropriate directional and informational signage prior to each closure and far enough in advance of the closure so trail and bicycle lane users would not have to backtrack to get to the detour routes. • **Contact Information at Trail and Bicycle Lane Detours—**The Authority's project engineer would require the design/build contractor to provide detour signing that includes contact information for the Authority's project engineer and the design/build contractor, and that informs trail users to contact the project engineer and/or the design/build contractor with questions or concerns regarding upcoming or active temporary trail and bicycle lane closures. • **Restoration of Impacted Trail and Bicycle Lane Segments—**The Authority's project engineer would require the design/build contractor to return trail and bike path segments closed temporarily during construction to their original, or better, condition after completion of construction, prior to their return to the control of the applicable public works or parks department. After project construction, the Authority's project engineer would require the design/build contractor to document that access to and connectivity of the affected trails and bicycle lanes were restored. • **Compliance with the Trails and Bicycle Lane Facilities Plan—**Compliance with the Trails and Bicycle Lane Facilities Plan would be documented in the environmental commitments record with text, photographs, maps, and correspondence, as appropriate.

Impacts	Measures to Minimize Harm
Temporary Uses of Parks and Recreational Resources during Project Construction	**PR-MM#5: Temporary Use of Land from Park, Recreation, or School Play Areas During Construction:** • **Temporary Impact Areas—**During final design, the Authority's Project Engineer would evaluate all proposed temporary impact areas in parks, recreational resources, and school play areas and would identify opportunities to further reduce the sizes of those temporary impact areas. All temporary impact areas in parks, recreational resources, and school play areas shown on the project plans and specifications would include notes that the design/build contractor cannot increase the size of any of those areas without consultation with and approval by the project engineer. • **Temporary Impact Areas—**During final design**,** the Authority's project engineer would consult with the affected jurisdictions and property owners to discuss the temporary impact areas needed for construction of the High-Speed Rail (HSR) Build Alternative and to determine the appropriate level of compensation for the use of land from park, recreation, or school play areas for the established temporary impact areas. It is anticipated that the compensation would be payments for the temporary use of land from those resources for the period of time that land is used for temporary impact areas during project construction. • **Access Restrictions at Temporary Impact Areas—**The Authority's project engineer would require the design/build contractor to fence and gate all land in parks, recreation facilities, and school play areas used for temporary impact areas. The temporary impact areas would be appropriately signed to restrict access to those areas by park and recreational resource patrons and users of school play areas. The Authority's project engineer would require the design/build contractor to maintain the fencing throughout the time period each temporary impact area is used and to remove the fencing only after all construction activity in an area is completed, the temporary impact area is no longer needed, and the land is ready to be returned to the property owner. • **Signing of Fenced Temporary Impact Areas—**The Authority's project engineer would require the design/build contractor to provide signing at each temporary impact area explaining why the area is fenced and access to the temporary impact area is restricted, the anticipated completion date of the use of the land for the temporary impact area, and contact information (for both the Authority's project engineer and the design/build contractor) for the public to solicit further information regarding the temporary impact area and the project. • **Modifications to Recreation Uses—**In the event a temporary impact area requires the temporary use of land at a park, recreational resource, or school play area that is used for recreation purposes, the Authority's project engineer would consult with the property owner/operator on: (1) whether the property owner/operator wants those recreation uses replaced temporarily elsewhere on the property, and (2) if temporary replacement of those recreation uses is desired, modifications that could be made to the remaining recreation area on the property to temporarily replace the recreation uses displaced by the temporary impact area. Any modifications to recreation areas outside the limits of a temporary impact area would be constructed/implemented prior to fencing and use of the temporary impact area. • **Return of Land Used by Temporary Impact Areas to the Property Owners—**The Authority's project engineer would require the design/build contractor to return the land used for each temporary impact area to the owner in its original or better condition when construction in an area has been completed and the temporary impact area is no longer needed. The Authority's project engineer would require the design/build contractor to coordinate the restoration of the affected land with the property owner and the project engineer.

Impacts	Measures to Minimize Harm
Long-Term Access Impacts on Parks and Recreational Resources	**PR-MM#2: Providing Park Access** Prior to construction (any ground-disturbing activity affecting park access), the contractor will prepare a technical memorandum documenting how the contractor would ensure that connections to the unaffected park portions or nearby roadways are maintained after construction. If a proposed linear park closure restricts connectivity, the contractor would provide permanent access via using existing roadways or other public rights-of-way. The technical memoranda will be submitted to the Authority for review and approval.
Permanent Acquisition of Property from Existing or Planned Bicycle Routes	**PR-MM#4: Replacement of Property Acquired from Existing or Planned Bicycle Routes** During the right-of-way acquisition process, the Authority will consult with the public agency with jurisdiction over any existing or planned bicycle routes regarding the specific conditions of acquisition and replacement of for the land that will be acquired. Where property that contains existing or planned bicycle paths required for HSR improvements involves the establishment of a permanent easement or permanent conversion to rail right-of-way from lands owned by the Los Angeles County Metropolitan Transportation Authority (Metro), the Authority will consult with the officials with jurisdiction to identify an alternative route for the continuation of the lost use and functionality of the resource, including maintaining connectivity. The identification of the alternative route must be determined to be feasible for the intended use by the respective Public Works Department, or Parks and Recreation Department or other equivalent authority within the affected City prior to the establishment of the permanent easement or permanent conversion of the Metro-owned lands.
Visual Disruption from Construction Activities near Parks and Recreational Resources	**AVR-MM#1: Minimize Visual Disruption from Construction Activities** Prior to construction (any ground disturbing activity) the Contractor will prepare a technical memorandum identifying how the project will minimize construction-related visual/aesthetic disruption and include the following activities: • Minimize pre-construction clearing to that necessary for construction. • Limit the removal of buildings to those that would conflict with project components. • When possible, preserve existing vegetation, particularly vegetation along the edge of construction areas that may help screen views. • After construction, regrade areas disturbed by construction, staging, and storage to original contours and revegetate with plant material similar in numbers and types to that that was removed, based upon local jurisdictional requirements. If no local jurisdictional requirements exist, replace removed vegetation at a 1:1 replacement ratio for shrubs and small trees, and a 2:1 replacement ratio for mature trees. For example, if the contractor removes 10 mature trees in an area, replant 20 younger trees that within 5 to 15 years (depending upon the growth rates of the trees) would be of a height and spread to provide visual screening similar to the visual screening provided by the trees that were removed for construction. Replaced shrubs will be a minimum 5 gallon and replaced trees will be a minimum 24” box and minimum 8’ in height. • To the extent feasible, do not locate construction staging sites within the immediate foreground distance (0 to 500 feet) of existing residential neighborhoods, recreational areas, or other land uses that include highly-sensitivity viewers. Where such siting is unavoidable, screen staging sites from viewers using appropriate solid screening materials such as temporary fencing and walls. Paint over or remove any graffiti or visual defacement of temporary fencing and walls within five business days of it occurring. The technical memorandum will be submitted to the Authority for review and approval.

Impacts	Measures to Minimize Harm
Visual Changes from Sonora Avenue Grade Separation near Griffith Manor Park	**AVR-MM#3: Incorporate Design Aesthetic Preferences into Final Design and Construction of Non-Station Structures** Prior to construction (any ground disturbing activity) the Contractor will work with the Authority and local jurisdictions to incorporate the Authority-approved aesthetic preferences for non-station structures into final design and construction. Refer to Aesthetic Options for Non-Stations Structures, 2017. A technical memorandum will be submitted to the Authority to document compliance.
Temporary Noise and Vibration Impacts from Project Construction	**N&V-MM#1: Construction Noise Mitigation Measures:** Prior to construction (any ground disturbing activities), the contractor will prepare a noise-monitoring program for Authority approval. The noise-monitoring program will describe how during construction the contractor will monitor construction noise to verify compliance with the noise limits (An 8-hour Leq, dBA of 80 during the day and 70 at night for residential land use, 85 for both day and night for commercial land use, and 90 for both day and night for industrial land use). The contractor would be given the flexibility to meet the FRA construction noise limits in the most efficient and cost-effective manner. This can be done by either prohibiting certain noise-generating activities during nighttime hours or providing additional noise control measures to meet the noise limits. In addition, the noise-monitoring program will describe the actions required of the contractor to meet required noise limits. These actions will include the following nighttime and daytime noise control mitigation measures, as necessary: • Install a temporary construction site noise barrier near a noise source. • Avoid nighttime construction in residential neighborhoods. • Locate stationary construction equipment as far as possible from noise-sensitive sites. • Reroute construction truck traffic along roadways that will cause the least disturbance to residents. • During nighttime work, use smart back-up alarms, which automatically adjust the alarm level based on the background noise level, or switch off back-up alarms and replace with spotters. • Use low-noise-emission equipment. • Implement noise-deadening measures for truck loading and operations. • Monitor and maintain equipment to meet noise limits. • Line or cover storage bins, conveyors, and chutes with sound-deadening material. • Use acoustic enclosures, shields, or shrouds for equipment and facilities. • Use high-grade engine exhaust silencers and engine-casing sound insulation. • Prohibit aboveground jackhammering and impact pile driving during nighttime hours. • Minimize the use of generators to power equipment. • Limit use of public address systems. • Grade surface irregularities on construction sites. • Use moveable noise barriers at the source of the construction activity. • Limit or avoid certain noisy activities during nighttime hours. • To mitigate noise related to pile driving, the use of an auger to install the piles instead of a pile driver would reduce noise levels substantially. If pile driving is necessary, limit the time of day that the activity can occur. • The Authority will establish and maintain in operation until completion of construction a toll-free “hotline” regarding the project section construction activities. The Authority will arrange for all incoming messages to be logged (with summaries of the contents of each message) and for a designated Authority representative to respond to hotline messages within 24 hours (excluding weekends and holidays). The Authority will make a reasonable good-faith effort to address all concerns and answer all questions, and will include on the log its responses to all callers. The Authority will make the log

Impacts	Measures to Minimize Harm
	of the incoming messages and the Authority's responsive actions publicly available on its website. The contractor will provide the Authority with an annual report by January 31 of the following year documenting how it implemented the noise-monitoring program.
Potential Disturbance of Currently Unidentified Archaeological and Built Environment Resources	**CUL-MM#1: Mitigate Adverse Effects to Archaeological Resources Identified During Phased Identification. Comply with the Stipulations Regarding the Treatment of Archaeological and Historic Built Resources in the Programmatic Agreement (PA) and Memorandum of Agreement (MOA)** Once parcels are accessible and surveys have been completed, including consultation as stipulated in the MOA, additional archaeological resources may be identified. For newly identified eligible properties that would be adversely affected, the following process would be followed, which would be presented in detail in the Archaeological Treatment Plan (ATP): • The Authority would consult with the MOA signatories and concurring parties to determine the preferred treatment of the properties/resources and appropriate mitigation measures. • For California Register of Historical Resources (CRHR)-eligible archaeological resources, the Authority will determine if these resources can feasibly be preserved in place, or if data recovery is necessary. The methods of preservation in place will be considered in the order of priority provided in CEQA Guidelines § 15126.4(b)(3). If data recovery is the only feasible treatment the Authority will adopt a data recovery plan as required under CEQA Guidelines § 15126.4(b)(3)(C). • Should data recovery be necessary, the Contractor's Principal Investigator (PI), in consultation with the MOA signatories and consulting parties, would prepare a data recovery plan, for approval from the Authority and in consultation with the MOA signatories. Upon approval, the Contractor's PI would implement the plan. • For archaeological resources the Authority will also determine if the resource is a unique archaeological site under CEQA. If the resource is not a historical resource but is an archaeological site the resource will be treated as required in California Public Resources Code 21083.2 by following protection, data recovery, and/or other appropriate steps outlined in the ATP. The review and approval requirements for these documents would be outlined in the ATP. **CUL-MM#2: Halt Work in the Event of an Archaeological Discovery and Comply with the Programmatic Agreement (PA), Memorandum of Agreement (MOA), Archaeological Treatment Plan (ATP), and all State and Federal Laws, as applicable** During construction (any ground disturbing activities, including clearing and grubbing) should there be an unanticipated discovery, the Contractor will follow the procedures for unanticipated discoveries as stipulated in the PA, MOA, and associated ATP. The procedures must also be consistent with the following: the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation (48 FR 44716-42), as amended (National Park Service); and Guidelines for the Implementation of CEQA, as amended (Title 14 CCR Chapter 3, Article 9, Sections 15120-15132). Should the discovery include human remains, the Contractor, the Authority, and the FRA will comply with federal and state regulations and guidelines regarding the treatment of human remains, including relevant sections of Native American Graves Protection and Repatriation Act (NAGPRA) (§3(c)(d)); California Health and Safety Code, Section 8010 et seq.; and CPRC Section 5097.98; and consult with the Native American Heritage Commission, tribal groups, and the State Historic Preservation Officer (SHPO). In the event of an unanticipated archaeological discovery, the contractor would cease work in the immediate vicinity of the find, based on the direction of the archaeological monitor or the apparent location of cultural resources if no monitor is present. If no

Impacts	Measures to Minimize Harm
	qualified archaeologist is present, no work can commence until it is approved by the qualified archaeologist in accordance with the MOA, ATP, and monitoring plan. The contractor's qualified archaeologist would assess the potential significance of the find and make recommendations for further evaluation and treatment as necessary. **CUL-MM#3: Other Mitigation for Effects to Pre-Contact Archaeological Sites** Due to limited access to private properties during the environmental review phase of this project, the Authority's ability to fully identify and evaluate archaeological resources within the APE has, correspondingly, also been limited. Thus, most of the project APE has not been subject to archaeological field inventories. As pedestrian field surveys are a necessary component of the archaeological resource identification and evaluation effort, the commitment to complete the field surveys, prior to ground disturbing activities associated with the project, are codified in the MOA that has been executed as a condition of this Final EIR/EIS. Access to previously-inaccessible properties to complete the archaeological resource identification effort is expected to be available after the Record of Decision, during the design-build phase of the project. However, due to the design constraints associated with constructing a high-speed train, the ability to shift the alignment to avoid any newly-identified archaeological resources at this late phase of the project delivery process is substantially limited and/or unlikely, as the alignment is already established. As such, impacts/effects to as-yet-unidentified significant archaeological resources as a result of this project are anticipated; however, the nature and quantity of such effects remains unknown until completion of the archaeological field identification and evaluation effort, and after all ground-disturbing construction activities are complete. Protocols for the identification, evaluation, treatment, and data-recovery mitigation of as-yet-unidentified archaeological resources are addressed in the MOA and Archaeological Treatment Plan (ATP). Efforts to develop meaningful mitigation measures for effects to as-yet-unidentified Native American archaeological resources that cannot be avoided would be negotiated with the tribal Consulting Parties. Measures that are negotiated among the MOA signatories and tribal Consulting Parties would be the responsibility of the Authority to implement.
Adverse Effects (Diminished Integrity of Setting) at the Main Street Bridge (Bridge #53C1010)	**CUL-MM#7: Prepare Interpretive or Educational Materials** The Authority-prepared MOA and Built Environment Treatment Plan (BETP) would identify historic properties and historical resources that would be subject to historic interpretation or preparation of educational materials. Interpretive and educational materials would address the significance of the properties that would be affected by the project. Interpretive or educational materials could include, but are not limited to: brochures, videos, websites, study guides, teaching guides, articles or reports for general publication, commemorative plaques, or exhibits. The agreed-upon method of interpretation would be specified in the BETP for each property, resulting from consultation with the State Historic Preservation Officer (SHPO), MOA signatories and concurring parties. The contractor would be responsible for assembling the appropriate interdisciplinary team to fulfill the mitigation. The required professionals and their qualifications would be specified in the BETP. In the preparation of the interpretive or educational materials, the contractor's team would utilize previous research included in the environmental technical documents, images, narrative history, drawings, or other material produced for the mitigation described above. The interpretive or educational materials should be made available to the public in physical or digital formats, at local libraries, historical societies, or public buildings, as specified in the BETP.

Impacts	Measures to Minimize Harm
Inadvertent Damage to Main Street Bridge (Bridge #53C1010) during Project Construction	**CUL-MM#8: Repair of Inadvertent Damage** The Authority-prepared Memorandum of Agreement (MOA) and Built Environment Treatment Plan (BETP) would identify properties subject to the preparation of plans for the repair of inadvertent damage, plans to be developed prior to the start of construction in the immediate proximity of the historic properties; the HSR standard impact avoidance and minimization measures require the Contractor to prepare these plans. Should any of the properties or resources be damaged as a result of construction activities, the contractor would repair them in accordance with the approved plan and with the Secretary of the Interior's (SOI) Standards for Rehabilitation. Inadvertent damage is any damage that results in a significant impact to a historical resource within the meaning of CEQA Guidelines Section 15064.5(b)(2) or adverse effects to historic properties within the meaning of 36 C.F.R. 800.5(a)(1). All repairs would be reviewed and approved by the Authority prior to determining that the treatment has been adequately implemented. There may be instances where a property or resource that is damaged during construction would be better served by temporary stabilization and protection, with final repairs occurring post construction. This would be determined by the Authority, in consultation with the MOA signatories. Should this be the preferred approach, the contractor would have their interdisciplinary team prepare plans for the temporary work, for approval by the Authority and MOA signatories prior to construction commencing in the area of the damaged property. Any emergency stabilization deemed necessary by the contractor prior to plan approval must be reversible.
Direct Adverse Effects from Intrusion Protection Railing on Three Historic Bridges	**CUL-MM#12: Design of Intrusion Protection Railing** The Authority will involve the consulting parties in the design of the intrusion protection railing for three bridges – the Los Angeles River Bridge (Bridge# 53-0042R and 53-0042L) of the Arroyo Seco Parkway Historic District, the Broadway (Buena Vista) Viaduct (Bridge# 53C0545), and the Spring Street Viaduct (Bridge# 53C0859) – to avoid destruction of or damage to the historic properties and alterations that are not consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties, to the maximum extent feasible while still meeting the safety requirements of the HSR Build Alternative.
Direct Adverse Effect from Discontinuing the Historic Use of the Main Street Bridge for Transportation	**CUL-MM#13: Main Street Bridge Access Feasibility Study** The Authority will facilitate the development of a feasibility study to explore design options that would maintain the historic use of the Main Street Bridge to the maximum extent feasible while still meeting the safety requirements of the HSR Build Alternative.

ADA = Americans with Disabilities Act
APE = area of potential effects
Authority = California High-Speed Rail Authority
C.F.R. = Code of Federal Regulations
HSR = high-speed rail
MOA = Memorandum of Agreement

9.2.1.1 Section 4(f) Determination

Section 4(f) requires the selection of an alternative that avoids the use of a Section 4(f) property if that alternative is deemed feasible and prudent and the use does not qualify for a finding of *de minimis* impact. After making a Section 4(f) determination and identifying measures to minimize harm, if there is more than one alternative that results in the use of a Section 4(f) property, the Authority must also compare the alternatives to determine which alternative has the potential to cause the least overall harm in light of the preservationist purpose of the statute.

As described above and in Chapter 4 of the Final EIS, the Authority has made a *de minimis* determination under 49 U.S.C. 303(d) for the San Fernando Bike Path (Planned Phase 3). The Authority worked with the City of Burbank Parks and Recreation Department and Community Development Department, the agencies with jurisdiction over the San Fernando Bike Path

(Planned Phase 3), to develop mitigation measures and determine concurrence with the Authority's findings. The Authority received written concurrence with its *de minimis* determination about project effects on the San Fernando Bike Path (Planned Phase 3) from the City of Burbank Parks and Recreation Department on October 15, 2021, included as Appendix D of this ROD.

As described above and in Chapter 4 of the Final EIS, the Authority has made a *de minimis* determination under 49 U.S.C. 303(d) for the Rio de Los Angeles State Park. The Authority worked with the California Department of Parks and Recreation, the agency with jurisdiction over the Rio de Los Angeles State Park, to develop mitigation measures and determine concurrence with the Authority's findings. The Authority received written concurrence with its *de minimis* determination about project effects on the Rio de Los Angeles State Park from the California Department of Parks and Recreation on October 21, 2021, included as Appendix D of this ROD.

As described above and in Chapter 4 of the Final EIS, the Authority has made a *de minimis* determination under 49 U.S.C. 303(d) for Albion Riverside Park. The Authority worked with the City of Los Angeles Department of Recreation and Parks, the agency with jurisdiction over the Albion Riverside Park, to develop mitigation measures and determine concurrence with the Authority's findings. The Authority received written concurrence with its *de minimis* determination about project effects on the Albion Riverside Park from the City of Los Angeles Department of Recreation and Parks on September 22, 2021, included as Appendix D of this ROD.

As described above and in Chapter 4 of the Final EIS, the Authority has preliminarily determined that the Selected Alternative will meet the five conditions under 23 C.F.R. 774.13(d) for temporary occupancy in the location for the planned Chandler Bikeway extension. The temporary occupancy of the planned Chandler Bikeway extension would therefore not constitute a use. The Authority worked with the City of Burbank Parks and Recreation Department, the agency with jurisdiction over the planned Chandler Bikeway extension, to develop mitigation measures and determine concurrence with the Authority's findings. The Authority received written concurrence with this determination from the City of Burbank Parks and Recreation Department on October 15, 2021, included as Appendix D of this ROD.

Regarding the Selected Alternative and the San Fernando Railroad Bike Path (Planned), the Authority has made a preliminary permanent use determination under Section 4(f). As noted above, the Authority came to this determination after undertaking a rigorous evaluation to ultimately conclude that there are no feasible or prudent avoidance alternatives to the Selected Alternative. The No Project Alternative would fail to meet the Purpose and Need of the project and would not be considered prudent. The Shifted Alignment Alternative, as discussed in Section 4.7 of the EIS, would result in excessive construction costs and a combination of impacts that would be significant if taken cumulatively, and it would not be considered prudent. The Profile Variation Alternative, as discussed in Section 4.7 of the EIS, would be disruptive to existing railroad operations during the construction period, would result in excessive construction costs and a combination of impacts that would be significant if taken cumulatively, and would not be considered prudent. The Authority undertook all possible planning to minimize harm through the consideration of refinements to the Build Alternative and implementation of mitigation, minimization, and avoidance measures. Construction of the Selected Alternative will result in a permanent use of the San Fernando Railroad Bike Path (Planned). The ongoing coordination between the Authority and the City of Glendale will include discussion of potential feasible options to realign the proposed San Fernando Railroad Bike Path, and an alternative location for the planned bike path will be identified to determine if connectivity to other nearby bike trails can be maintained.

As described above and in Chapter 4 of the Final EIS, the Authority has made a *de minimis* determination under 49 U.S.C. 303(d) for the Los Angeles River Channel. The Authority worked with the SHPO, the agency with jurisdiction over the Los Angeles River Channel, to determine concurrence with the Authority's findings. The Authority received written concurrence with its finding of no adverse effect under Section 106 on the Los Angeles River Channel from the SHPO on June 25, 2020, included as Appendix C of this ROD. By concurring with the Authority's finding of no adverse effect under Section 106, the SHPO also concurred with the Authority's

determination that the project will incur a *de minimis* use under Section 4(f) for the Los Angeles River Channel.

Regarding the Selected Alternative and the Arroyo Seco Parkway Historic District, the Authority has made a permanent use determination under Section 4(f). As noted above, the Authority came to this determination after undertaking a rigorous evaluation to ultimately conclude that there are no feasible or prudent avoidance alternatives to the Selected Alternative. The No Project Alternative would fail to meet the purpose and need of the project and would not be considered prudent. The Shifted Alignment Alternative would require substantial right-of-way acquisitions and utility relocations, which would result in excessive construction costs and a combination of impacts that would be significant if taken cumulatively. As such, the Shifted Alignment Alternative would not be considered prudent. The Profile Variation Alternative would be disruptive to existing railroad operations during the construction period, would result in excessive construction costs, and would result in a combination of impacts that would be significant if taken cumulatively, and would not be considered prudent. The Authority undertook all possible planning to minimize harm through the consideration of refinements to the Build Alternative and implementation of mitigation, minimization, and avoidance measures. Construction of the Selected Alternative will result in a permanent use of the Arroyo Seco Parkway Historic District. During the ongoing coordination between the Authority and the SHPO, the Authority will involve the consulting parties in the design of the intrusion protection railing for historic bridges to avoid destruction of or damage to the historic property and alterations that are not consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties, to the maximum extent feasible, while still meeting the safety requirements of the Selected Alternative.

Regarding the Selected Alternative and the Broadway (Buena Vista) Viaduct, the Authority has made a permanent use determination under Section 4(f). As noted above, the Authority came to this determination after undertaking a rigorous evaluation to ultimately conclude that there are no feasible or prudent avoidance alternatives to the Selected Alternative. The No Project Alternative would fail to meet the purpose and need of the project and would not be considered prudent. The Shifted Alignment Alternative would require substantial right-of-way acquisitions and utility relocations, which would result in excessive construction costs, and would result in a combination of impacts that would be significant if taken cumulatively. As such, the Shifted Alignment Alternative would not be considered prudent. The Profile Variation Alternative would be disruptive to existing railroad operations during the construction period, would result in excessive construction costs and a combination of impacts that would be significant if taken cumulatively, and would not be considered prudent. The Authority undertook all possible planning to minimize harm through the consideration of refinements to the Build Alternative and implementation of mitigation, minimization, and avoidance measures. Construction of the Selected Alternative will result in a permanent use of the Broadway (Buena Vista) Viaduct. During the ongoing coordination between the Authority and the SHPO, the Authority will involve the consulting parties in the design of the intrusion protection railing for historic bridges to avoid destruction of or damage to the historic property and alterations that are not consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties, to the maximum extent feasible, while still meeting the safety requirements of the Selected Alternative.

Regarding the Selected Alternative and the Spring Street Viaduct, the Authority has made a permanent use determination under Section 4(f). As noted above, the Authority came to this determination after undertaking a rigorous evaluation to ultimately conclude that there are no feasible or prudent avoidance alternatives to the Selected Alternative. The No Project Alternative would fail to meet the purpose and need of the project, and would not be considered prudent. The Shifted Alignment Alternative would require substantial right-of-way acquisitions and utility relocations, which would result in excessive construction costs, and would result in a combination of impacts that would be significant if taken cumulatively. As such, the Shifted Alignment Alternative would not be considered prudent. The Profile Variation Alternative would be disruptive to existing railroad operations during the construction period, would result in excessive construction costs and a combination of impacts that would be significant if taken cumulatively, and would not be considered prudent. The Authority undertook all possible planning to minimize

harm through the consideration of refinements to the Build Alternative and implementation of mitigation, minimization, and avoidance measures. Construction of the Selected Alternative will result in a permanent use of the Spring Street Viaduct. During the ongoing coordination between the Authority and the SHPO, the Authority will involve the consulting parties in the design of the intrusion protection railing for historic bridges to avoid destruction of or damage to the historic property and alterations that are not consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties, to the maximum extent feasible, while still meeting the safety requirements of the Selected Alternative.

Regarding the Selected Alternative and the Main Street Bridge, the Authority has made a permanent use determination under Section 4(f). As noted above, the Authority came to this determination after undertaking a rigorous evaluation to ultimately conclude that there are no feasible or prudent avoidance alternatives to the Selected Alternative. The No Project Alternative would fail to meet the purpose and need of the project, and would not be considered prudent. The Shifted Alignment Alternative would require substantial right-of-way acquisitions and utility relocations, which would result in excessive construction costs; and would result in a combination of impacts that would be significant if taken cumulatively. As such, the Shifted Alignment Alternative would not be considered prudent. The Profile Variation Alternative would be disruptive to existing railroad operations during the construction period, would result in excessive construction costs and a combination of impacts that would be significant if taken cumulatively, and would not be considered prudent. The Authority undertook all possible planning to minimize harm through the consideration of refinements to the Build Alternative and implementation of mitigation, minimization, and avoidance measures. Construction of the Selected Alternative will result in a permanent use of the Main Street Bridge. During ongoing coordination between the Authority and the SHPO, the Authority will facilitate the development of a feasibility study to explore design options that would maintain the historic use of the Main Street Bridge to the maximum extent feasible while still meeting the safety requirements of the Selected Alternative.

9.3 General Conformity Determination

As part of the environmental review of the Burbank to Los Angeles Project Section, the Authority conducted and FRA approved a general conformity evaluation for air quality consistent with 40 C.F.R. Part 93 Subpart B. The Authority conducted the general conformity evaluation consistent with all regulatory criteria and procedures and in coordination with USEPA, SCAQMD, and CARB. As a result of this review, the FRA concluded, based on the fact that Project-generated emissions will either be offset (for construction phase) or will be less than zero (for operational phase), that the Project's emissions can be accommodated in the State Implementation Plan for the South Coast Air Basin. The FRA has determined that the project as designed will conform to the approved State Implementation Plan, based, in part, on:

- A commitment from the Authority that construction-phase NO_X emissions will be offset;
- SCAQMD will seek and implement the necessary emission reduction measures, using Authority funds;
- SCAQMD will serve in the role of administrator of the emissions reduction projects and verifier of the successful mitigation effort.

Therefore, the FRA concluded that the project, as designed, conforms to the purpose of the approved State Implementation Plan and is consistent with all applicable requirements. The Final General Conformity Determination is included with this ROD as Appendix E.

9.4 Section 7 Endangered Species Findings

The proposed action (construction and operation of the Selected Alternative) is in compliance with Section 7 of FESA. Because the project may have an effect on threatened or endangered species, the Authority prepared a BA for the project and consulted with USFWS, as required under Section 7 of FESA. The Authority developed and submitted a Draft BA for the Burbank to Los Angeles Project Section to USFWS in March 2020, which evaluated direct, indirect, and cumulative effects of the project on federally listed species and their designated habitat. Following

the receipt of comments from USWFS, a Final BA was submitted in November 2020, and additional coordination with USFWS related to noise effects was conducted in March 2021.

The BA concluded that the Burbank to Los Angeles Project Section would have No Effect on western yellow-billed cuckoo, southwestern willow flycatcher, and coastal California gnatcatcher, as well as on federally listed plant species. A finding of May Affect, But Not Likely to Adversely Affect was made for least Bell's vireo. USFWS concurred with this determination for least Bell's vireo on April 12, 2021**,** concluding the Section 7 consultation process.

Because the Selected Alternative does not encounter marine or anadromous fish habitat within the project footprint, the Selected Alternative will not adversely affect any marine or anadromous fish habitat. There is no Essential Fish Habitat in the Selected Alternative footprint. Therefore, the Authority was not required to consult with the NOAA Fisheries under the Magnuson-Stevens Fishery Conservation and Management Act.

9.5 Wetlands Finding

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

Aquatic resources in the project vicinity include the Los Angeles River, Verdugo Wash, Arroyo Seco, the Lockheed Channel, and the Burbank-Western Channel. USACE issued a Preliminary Jurisdictional Determination confirming the extent of mapped jurisdictional waters of the U.S. within the Burbank to Los Angeles Project Section in July 2018. The project will require authorization under Section 404 of the Clean Water Act. Project construction will result in direct and indirect impacts on nonwetland, concrete-lined aquatic resources under the jurisdiction of the USACE. No direct construction impacts on wetlands will occur under the HSR Build Alternative. During operation, wetlands and other aquatic resources may be subjected to indirect operational and maintenance impacts, including increased dust and the spread or introduction of nonnative plant species. However, the HSR Build Alternative will not be likely to alter existing conditions affecting wetlands and other aquatic resources. All practicable measures to minimize harm to wetlands have been incorporated into the project.

Based on USACE findings and the Authority's evaluation, the Authority determines that the project is consistent with Executive Order 11990 and Department of Transportation Order 5660.1A.

9.6 Floodplains Finding

Department of Transportation Order 5620.2 implements Executive Order 11988, Floodplain Management. These orders state that the federal lead agency may not approve an alternative involving a significant encroachment on floodplains unless the agency can make a finding that the proposed encroachment is the only practicable alternative and that the design of the proposed action will minimize potential harm to or within the floodplain. The major purposes of Executive Order 11988 are to avoid federal support for floodplain development; to prevent uneconomic, hazardous, or incompatible use of floodplains; to restore and preserve the natural and beneficial floodplain values; and to be consistent with the standards and criteria of the National Floodplain Insurance Program.

Construction of the HSR Build Alternative will place new structures within the 100-year floodplain, which will permanently alter floodplain elevations. However, with implementation of IAMFs, which will require flood protection measures that minimize effects to 100-year floodplain water surface elevations, as well as compliance with the requirements set forth in U.S. Executive Order 11988 and the Federal Emergency Management Agency regulations, no permanent effects to designated floodplains from construction will occur. As indicated in Section 3.8, Hydrology and Water Resources, of the Final EIS, the Authority, as the federal lead agency under the NEPA Assignment MOU, concludes that the Preferred Alternative will not result in any substantial adverse impacts on natural and beneficial values of the floodplains, will not result in a substantial change in flood risks or damage, and will not have a substantial potential for interruption or

termination of emergency service and evacuation routes. Design of the Selected Alternative includes effective measures to avoid or minimize the potential for exposure of HSR passengers and employees to flooding, and new or additional exposure to flooding risks and hazards from the failure of a levee or dam will not occur. Based upon these findings, the Authority determines that the project is consistent with requirements of Executive Order 11988.

9.7 Environmental Justice Finding

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

The Burbank to Los Angeles Project Section will likely result in a limited set of adverse impacts on minority and/or low-income populations residing or conducting business in the project corridor. Mitigation measures will be implemented to reduce effects to levels below those considered disproportionately high and adverse. Therefore, the Authority has determined that the Selected Alternative will not result in disproportionately high and adverse environmental effects on low-income and/or minority populations.

The low-income and/or minority populations in the study area will benefit from the transit improvements the Burbank to Los Angeles Project Section will provide, including improved regional accessibility, reduced vehicle trips on freeways, improvements to active transportation infrastructure, safety improvements to both pedestrians and bicyclists along the existing rail corridor, a reduction in statewide air quality and GHG emissions, and improved access and safety through grade separation of current at-grade crossings. Moreover, these benefits will be equal to the benefits to the general public.

The Authority has been conducting targeted outreach activities for low-income and/or minority residents and businesses across the state and within the Burbank to Los Angeles Project Section corridor since 2007. Minority and/or low-income populations have been engaged in project planning activities (e.g., neighborhood outreach events held in minority and/or low-income neighborhoods). Significantly, members of minority and/or low-income populations have not voiced concerns substantially unlike comments from the general public. The Authority has received comments from environmental justice groups stating:

- Residential displacements will be a major problem due to the lack of affordable housing in the area.
- Outreach needs to be done in languages that reflect the surrounding community.
- The railroad serves as a physical barrier that splits communities.
- Southern California Regional Rail Authority Metrolink service has not kept all the mitigation promises it made when building the CMF (e.g., landscaping to minimize visual impacts, reduced horns, and a pedestrian bridge are top priorities).
- The HSR Build Alternative will limit the community's access to the Los Angeles River and Rio de Los Angeles State Park.
- The communities within the RSA are already burdened with much of the area's existing and planned infrastructure.
- The Authority needs to coordinate with other projects, especially Metro's Link US and Regional Connector projects, to minimize impacts.

- Gentrification is likely as a result of the HSR Build Alternative, especially around the station areas.

During the preparation of the Draft EIS, in response to concerns from the Glendale Atwater Village community, the proposed Chevy Chase Drive Grade Separation was removed in favor of closing Chevy Chase Drive and adding a pedestrian overcrossing. Additionally, in response to public comments on Albion Park, design refinements were made to reduce impacts on Albion Park to the extent feasible.

In response to public comments on the Draft EIS, design refinements were made to the Main Street Grade Separation to reduce impacts to the local community to the extent feasible. These changes include increasing the grade of the Main Street overpass on the east side of the grade separation, which would allow Main Street to return to grade sooner. This change has generally resulted in reduced displacement impacts, including a reduction of one single-family residential displacement and four commercial displacements that were previously identified in the Draft EIS. The design of this grade separation was also revised to address the concerns raised by stakeholders and the public related to access to local businesses and truck traffic. The revised design will maintain the connection between Lamar Street and Main Street, similar to the existing circulation network for trucks. Therefore, no increase in truck trips or impacts related to truck access on Albion Street or the surrounding neighborhood and Albion Riverside Park will occur as a result of the roadway reconfigurations associated with this grade separation.

Additionally, the following IAMFs have been identified and included in the Final EIS for potential EJ impacts:

- EJ-IAMF#1: Construction EJ Ombudsman/Business Spotlighting
- EJ-IAMF#2: EJ Community-Inclusive Process for Development of Aesthetic Treatments
- EJ-IAMF#3: Equity Noise Analysis
- EJ-IAMF#4: EJ Relocation/Displacement Assistance
- EJ-IAMF#5: Community-Inclusive Process to reroute Bike Paths in EJ Communities

When considering the IAMFs, proposed mitigation measures, and benefits of the HSR Build Alternative, the Authority has determined that the HSR Build Alternative will not result in disproportionately high and adverse environmental effects on low-income and/or minority populations.

10 CONCLUSION

The Authority, as the federal lead agency, and as authorized by the NEPA Assignment MOU, has reached a decision that most closely aligns with its statutory mission and the responsibilities assigned to it by FRA pursuant to NEPA Assignment, considering economic, environmental, technical, and other factors and based on the information contained in the Final EIS and the project record. For the Burbank to Los Angeles Project Section, the Authority approves the HSR Build Alternative, with the specific limits extending from the southern edge of San Fernando Boulevard at Lockheed Drive to the north of the underground Burbank Airport Station at the northern terminus to the north edge of U.S. Route 101 (between Alameda Street and Ramirez Street) at a modified LAUS at the southern terminus. The Authority has selected this alternative because it: (1) best satisfies the Purpose, Need, and Objectives for the proposed action; and (2) minimizes impacts on the natural and human environment by utilizing an existing transportation corridor where practicable and incorporating mitigation measures. Accordingly, the HSR Build Alternative from the southern edge of San Fernando Boulevard at Lockheed Drive at the northern terminus to the north edge of U.S. Route 101 (between Alameda Street and Ramirez Street) at the southern terminus has been selected and approved for project implementation.

Brian P. Kelly	March 7, 2022
Chief Executive Officer California High-Speed Rail Authority	Date

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APPENDIX A: MITIGATION MONITORING AND ENFORCEMENT PLAN

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California High-Speed Rail Authority

Burbank to Los Angeles Project Section

Final Mitigation Monitoring and Enforcement Plan

March 2022

CALIFORNIA High-Speed Rail Authority

The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being or have been carried out by the State of California pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated July 23, 2019, and executed by the Federal Railroad Administration and the State of California.

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California High-Speed Rail Project

Burbank to Los Angeles Project Section

Final Mitigation Monitoring and Enforcement Plan

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1 INTRODUCTION

The California High-Speed Rail Authority (Authority), as the state lead agency and as the federal lead agency pursuant to the National Environmental Policy Act (NEPA) Assignment Memorandum of Understanding (July 23, 2019), prepared a Final Environmental Impact Report/Environmental Impact Statement (Final EIR/EIS) for the Burbank to Los Angeles Project Section of the California High-Speed Rail (HSR) Project. The Final EIR/EIS satisfies the requirements of the California Environmental Quality Act (CEQA) and NEPA and is the basis for the Authority's decision. In its decision, the Authority selected the Preferred Alternative (HSR Build Alternative).

This Mitigation Monitoring and Enforcement Plan (MMEP)[1] has been prepared for the Preferred Alternative. Table 1 of the MMEP describes mitigation measures from the *Burbank to Los Angeles Project Section Final EIR/EIS* (Authority 2021) that would mitigate adverse environmental impacts of the Preferred Alternative. These measures were developed by the Authority in consultation with appropriate agencies, as well as input from the public, to meet the requirements of CEQA and NEPA. The mitigation measures in Table 1 are conditions of approval that the Authority is required to comply with as it implements the Preferred Alternative.

The Preferred Alternative incorporates impact avoidance and minimization measures (IAMF), including best management practices (BMPs) identified in the Final EIR/EIS and described in detail in the technical reports that support the environmental document. As a result of incorporating these IAMFs, the Preferred Alternative will avoid potential adverse environmental impacts in several resource areas, including transportation, air quality and global climate change; public utilities and energy; hydrology and water resources; geology, soils, seismicity, and paleontological resources; hazardous materials and wastes; safety and security; station planning, land use, and development; agricultural farmland and forest land; cultural resources; and regional growth. In addition, the regulatory requirements, including permitting and coordination with regulatory agencies, for many project-related activities provide additional assurance that potential adverse environmental impacts will be avoided or minimized. Four cooperating agencies are part of the NEPA review process: the U.S. Army Corps of Engineers, the Federal Transit Administration, the Surface Transportation Board, and the Federal Aviation Administration. As part of the CEQA process, the responsible agencies include the California Department of Fish and Wildlife, California Department of Transportation, California Public Utilities Commission, California State Lands Commission, State Water Resources Control Board, and the Los Angeles County Flood Control Board. Like the mitigation measures listed in Table 1, the project IAMFs and compliance with regulatory requirements are a condition of project approval and must be implemented by the Authority during design, construction, and operation of the Preferred Alternative. The IAMFs that are part of the Preferred Alternative are listed in Table 2, and they are described in Appendix 2-B, Impact Avoidance and Minimization Features, of the Final EIR/EIS.

The laws and orders the project is subject to are described for the following resource areas in more detail in the corresponding chapters of the Final EIR/EIS.

- Transportation – Section 3.2.2
- Air Quality and Global Climate Change – Section 3.3.2
- Noise and Vibration – Section 3.4.2
- Electromagnetic Fields and Electromagnetic Interference – Section 3.5.2
- Public Utilities and Energy – Section 3.6.2
- Biological and Aquatic Resources– Section 3.7.2
- Hydrology and Water Resources – Section 3.8.2
- Geology, Soils, Seismicity, and Paleontological Resources – Section 3.9.2
- Hazardous Materials and Wastes – Section 3.10.2
- Safety and Security – Section 3.11.2
- Socioeconomics and Communities – Section 3.12.2

[1] The MMEP is consistent with CEQA requirements for mitigation monitoring as set forth in Section 15097 of the CEQA Guidelines (Title 14 California Code of Regulations, Division 6, Chapter 3). Where mitigation is for NEPA purposes only or CEQA purposes only, it is identified accordingly.

- Station Planning, Land Use, and Development – Section 3.13.2
- Agricultural Farmland and Forest Land – Section 3.14.2
- Parks, Recreation, and Open Space – Section 3.15.2
- Aesthetics and Visual Quality – Section 3.16.2
- Cultural Resources – Section 3.17.2
- Regional Growth – Section 3.18.2
- Cumulative Impacts – Section 3.19.2

The MMEP adheres to the Council on Environmental Quality's (CEQ) regulations (40 Code of Federal Regulations Section 1505[2]) and Federal Railroad Administration Procedures for Considering Environmental Impacts (64 Federal Register 28545, May 26, 1999) and was prepared based on the CEQ finalized guidance entitled *Appropriate Use of Mitigation and Monitoring and Clarifying the Appropriate Use of Mitigated Findings of No Significant Impact* (CEQ 2011). The CEQ guidance assists NEPA lead agencies to develop mitigation programs that provide effective documentation, implementation, and monitoring of mitigation commitments.

[2] The Council on Environmental Quality issued new regulations on July 14, 2020, effective September 14, 2020, updating the NEPA implementing procedures at 40 C.F.R. 1500. However, this project initiated NEPA before the effective date and is not subject to the new regulations, relying on the 1978 regulations as they existed prior to September 14, 2020. All subsequent citations to Council on Environmental Quality regulations in this environmental document refer to the 1978 regulations, pursuant to 40 C.F.R. 1506.13 (2020) and the preamble at 85 Fed. Reg. 43340.

2 MITIGATION MONITORING AND ENFORCEMENT PLAN

The environmental effects of the Preferred Alternative will result in impacts considered significant under CEQA and in impacts under NEPA. Mitigation measures that will reduce or eliminate potential adverse environmental impacts are described in Chapter 3 of Volume 1 of the Final EIR/EIS. The specific provisions contained in this MMEP are presented as tables and include mitigation measures identified in the Final EIR/EIS, organized by environmental issue and topical areas addressed in the Final EIR/EIS. In collaboration with the appropriate agencies, the Authority may refine the means by which it will implement a mitigation measure, as long as the alternative means would ensure compliance during implementation. This MMEP describes implementation and monitoring procedural guidance, responsibilities, and timing for each mitigation measure identified in the Final EIR/EIS. Components include:

- **Impact Number and Impact Text:** Provides the impact number and description of the impact requiring mitigation as identified in the Final EIR/EIS.
- **Mitigation Measures:** Provides the number, title, and text of the mitigation measure as identified in the Final EIR/EIS.
- **Phase:** Provides the phase during which the mitigation measure will be implemented (pre-construction, during construction, post-construction, or during operation).
- **Implementation Action/Text/Mechanism:** Identifies the actions required to implement the measures, including any required agreements and/or conditions.
- **Reporting Schedule:** Not all mitigation actions will take place at the same time. Depending upon the measure, it may be undertaken prior to construction, during construction, or during project operations. Measures may also be undertaken in conjunction with different construction packages or at such time as project operations reach a certain level. This column of the tables identifies the stage of the project during which the mitigation action will be taken and when reporting is to take place, if reporting is required.
- **Implementing Party/Reporting Party:** Identifies the entity that will be responsible for directly implementing the mitigation measures, monitoring, and reporting. Implementation can be the responsibility of the Authority or its Design-Build Contractor (Contractor). Monitoring will generally be the responsibility of the Contractor, with oversight provided by the Authority during construction. Long-term mitigation monitoring responsibilities will be the responsibility of the Authority.

2.1 Roles and Responsibilities

As the lead agency and proponent of this project, the Authority will implement the mitigation measures through its own actions, those of its Contractors, and actions taken in cooperation with other agencies and entities. The Authority is ultimately accountable for the overall administration of the MMEP and for assisting relevant individuals and parties in their oversight and reporting responsibilities. The responsibilities of mitigation implementation, monitoring, and reporting extended to several entities as discussed above; however, the Authority will bear the primary responsibility for verifying that the mitigation measures are implemented. The Authority defines the mitigation measures required for the project. When project work is undertaken by the Authority's contractor, the Contractor shall implement the mitigation measures that are pertinent to their scope of work. The Contractor shall monitor construction activities to ensure that the mitigation measures are properly implemented and accurately report their activity and results to the Authority. The Authority will periodically check the Contractor's activity, reports, and effectiveness of mitigation activities.

- **Authority:** While the Authority retains responsibility for the implementation and reporting on mitigation measures and IAMFs as specified in this MMEP, activities may be carried out by an Authority representative or an Authority-approved contractor. Authority responsibilities may also include certain measures outside of the scope of the Contractor, such as future studies or operations-phase implementation. In addition, oversight of implementation and reporting may be provided by Authority contractor or representatives as lead agency representatives to facilitate regulatory oversight agency coordination and compliance during implementation and reporting.

- **Contractor:** The Contractor (or the environmental team provided by the Contractor) will be responsible for implementing or monitoring mitigation measures and IAMFs as specified in this MMEP.
- **Mitigation Manager:** The Contractor's representative responsible for overseeing their environmental team's implementation and reporting of environmental commitments reports the status of each mitigation measure to Authority in accordance with this MMEP.
- **Biological Monitor(s):** The Contractor-provided Biological Monitor(s) will be approved by and report directly to the Contractor's Biologist. The Project Biological Monitor(s) will be present onsite within a reasonable monitoring distance during all ground-disturbing activities that have the potential to affect biological resources as directed by the Project Biologist and will be the principal agent(s) in the direct implementation of the MMEP and compliance assurance.
- **Cultural Resources Compliance Manager/Principal Investigator:** This position must be an Archaeologist who meets relevant Secretary of the Interior qualifications for an archaeologist. The Cultural Resources Compliance Manager/Principal Investigator is responsible for implementing mitigation measures in compliance with the terms and conditions outlined in the MMEP and treatment plans, and coordinating the status of archaeological mitigation with the Authority in accordance with this MMEP, the Authority's Programmatic Agreement with the California SHPO, and the Burbank to Los Angeles Memorandum of Agreement.
- **Cultural Resources Monitor(s):** The Contractor-provided Cultural Resources Monitor(s) will be approved by and report directly to the Cultural Resources Compliance Manager/Principal Investigator. This/these Monitor(s) will be present on site within a reasonable monitoring distance during ground-disturbing activities in areas indicated as culturally sensitive and will be the principal agent(s) in the direct implementation of the MMEP and compliance assurance as directed by the Cultural Resources Compliance Manager/Principal Investigator.
- **Paleontological Resources Specialist:** The Contractor-provided Paleontological Resources Specialist is responsible for implementing mitigation measures in compliance with the terms and conditions outlined in the MMEP, including preparation of the Paleontological Resources Management Plan and approval and direction of the Paleontological Resource Monitor(s).
- **Paleontological Resources Monitor(s):** The Contractor-provided Paleontological Resources Monitor(s) will be approved by and report directly to the Paleontological Resources Specialist. The Paleontological Resources Monitor(s) will be present on site within a reasonable monitoring distance during ground-disturbing activities in areas indicated as resource sensitive and will be the principal agent(s) in the direct implementation of the MMEP and compliance assurance as directed by the Paleontological Resources Specialist.

3 ENVIRONMENTAL MITIGATION MANAGEMENT APPLICATION SYSTEM

The Authority will implement an Environmental Mitigation Management Application system consisting of strategic planning, policies, and procedures, organizational structure, staffing and responsibilities, milestones, schedule, and resources devoted to achieving the Authority's environmental commitments. The Environmental Mitigation Management Application systems will also include a component that tracks the implementation of mitigation measures (as well as environmental commitments, BMPs, and IAMFs) and can produce reports on compliance. The Authority will receive periodic reports on compliance and may request additional reports as necessary to ensure that the MMEP is fully implemented. This system will rely on data provided by the contractor, regional consultants, and others to produce status reports regarding construction status, permitting activities, monitoring, inspections, and other compliance activities.

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Table 1 Burbank to Los Angeles Project Section Mitigation Monitoring and Enforcement Plan

Mitigation Measure	Title	Mitigation Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Text
Transportation										
TRAN-MM#1	Intersection Improvements for Construction Impacts	The following improvements are available for consideration to address construction-related traffic delay impacts under NEPA for the project. No mitigation is required under CEQA. ▪ Sunland Boulevard at San Fernando Road Minor—Change the westbound approach to one left-turn only lane and one through/right lane through restriping. ▪ Sunland Boulevard at San Fernando Road—Provide southbound exclusive left-turn lane with protected phasing. Remove split phasing for northbound and southbound movements. Switch northbound left-turn lane to permissive phasing. Restripe the eastbound approach to add a second eastbound left-turn lane. ▪ Vineland Avenue at Vanowen Street—Restripe eastbound and westbound approaches. ▪ Strathern Street/Clybourn Avenue at San Fernando Road—Restripe eastbound approach and slightly restripe the striped median to provide a second through lane (two through lanes and one shared through-right lane). ▪ Hollywood Way Southbound at San Fernando Road—Modify northbound approach from one left-turn and one right-turn lane to one shared left-right lane and one right-turn lane. ▪ Hollywood Way at Victory Boulevard—Restripe the northbound approach, including removal of the southbound through lane, to provide two right-turn lanes and two left-turn lanes. Increase signal cycle length from 90 to 120 seconds ▪ Buena Vista Street at San Fernando Boulevard—Increase signal cycle length from 90 to 120 seconds and optimize splits. ▪ Buena Vista Street at Thornton Avenue—Restripe the southbound approach, assuming the existing curb lane functions as a right-turn lane at this approach. ▪ Buena Vista Street at Vanowen Street—Change northbound left-turn signal phasing from protected to permissive. ▪ Buena Vista Street at Victory Boulevard—Restripe the eastbound and westbound approaches to provide a second left-turn lane. Add a right-turn overlap for the southbound right-turn movement. The southbound (Burbank Boulevard) approach already has two through lanes and one right-turn lane. ▪ Burbank Boulevard at San Fernando Boulevard—Restripe and re-designate lanes to provide two left-turn lanes in the southbound (Burbank Boulevard) direction, two dedicated right-turn lanes and two through lanes in the westbound	Pre-construction	Design	Prior to final design	Authority/ Contractor	Authority/ Contractor	Intersection and roadway segment improvements to address traffic delay impacts	MOU with Cities of Burbank and Los Angeles, as necessary/contract with contractor	Impact TR #1: Signalized Intersection Delay Increases during Construction Impact S&S #11: Need for Expansion of Existing Fire, Rescue, and Emergency Services Facilities

Mitigation Measure	Title	Mitigation Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Text
		(San Fernando Boulevard) direction, and protected-permissive left-turn phasing at the eastbound approach. ▪ Burbank Boulevard at Victory Boulevard—Restripe the eastbound (Victory Boulevard) approach to provide two through lanes and one right-turn lane. Restripe the westbound (Victory Boulevard) approach to provide three left-turn lanes and two through lanes. Restripe the northbound (Burbank Boulevard) approach to provide two left-turn lanes and two right-turn lanes. These designations assume that all approach and receiving movements on the north leg (Burbank Boulevard) would be closed off due to construction. Increase the signal cycle length to 120 seconds. ▪ Magnolia Boulevard at 1st Street—Restripe the westbound (1st Street) approach to provide two left-turn lanes, two through lanes, and one shared through-right lane. Restripe the eastbound (1st street) approach by decreasing the width of the two receiving lanes to provide a second right-turn lane. Increase the signal cycle length to 120 seconds. ▪ Magnolia Boulevard at Victory Boulevard—Restripe the eastbound approach (by narrowing the receiving lane widths), changing the right-turn lane to a shared through-right lane, and removing an exclusive through lane and adding a second left-turn lane. Restripe the northbound approach to provide a dual left-turn lane, one through lane, and a shared through-right lane. Increase the signal cycle length from 90 to 120 seconds. ▪ Olive Avenue at 1st Street—The westbound (1st Street) and northbound (Olive Avenue) approaches leave sufficient room for the existing curb lanes to act as right-turn lanes. Maintain a right-turn overlap phase on the eastbound approach (1st Street) as in the existing condition. Add right-turn overlap phases on the westbound (1st Street), southbound (Olive Avenue), and reconfigured northbound approaches. ▪ Olive Avenue at Victory Boulevard—Restripe the eastbound (Victory Boulevard) approach to convert one of the through lanes to a left-turn lane with lead-lag phasing and to convert the right-turn lane to a shared through-right lane. Restripe the westbound (Victory Boulevard) approach to convert the right-turn lane to a shared through-right lane. Implement a right-turn overlap phase on the southbound (Olive Avenue) approaches. Increase the signal cycle length to 120 seconds. ▪ San Fernando Road at Chevy Chase Drive—Change the westbound through/right-turn lane to a right-only lane, add one westbound right-turn only lane, change the eastbound left-turn lane and the westbound left-turn lane to protected phasing, and add westbound right-turn overlap phase.							

Mitigation Measure	Title	Mitigation Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Text
		▪ Hollywood Way at I-5 Southbound Ramps—Signalize the intersection. ▪ Sotello Street at Main Street—Signalize the intersection.								
TRAN-MM#2	Intersection Improvements for Operational Impacts	The following improvements are available for consideration to address operation-related traffic delay impacts under NEPA for the 2029 opening year. No mitigation is required under CEQA. ▪ Sunland Boulevard at San Fernando Road Minor—Widen westbound approach from westbound left-turn through lane and westbound right-turn pocket to westbound left-turn and westbound right through lanes. Optimize cycle length and splits. ▪ Sunland Boulevard at San Fernando Road—Provide exclusive southbound lane with protected-permitted phasing and westbound right-turn lane with overlap phasing. Provide protected-permitted phasing for northbound left-turn lane. Optimize cycle length and splits. ▪ Hollywood Way at I-5 Southbound Ramps—Signalize the intersection. ▪ SR 170 Southbound Ramp at Victory Boulevard—Signalize the intersection, provide northbound and southbound right-turn protected phasing. ▪ Hollywood Way at Cohasset Street E—Signalize the intersection. ▪ Broadway at Cesar E. Chavez Avenue—Add one southbound left-turn lane; no widening but some parking would be removed. ▪ Garey Street – US-101 Southbound On-/Off-Ramps at Commercial Street—Change westbound through/right-turn lane to a right-turn only lane; add one westbound right-turn only lane. ▪ US-101 Northbound Off-Ramp at 4th Street—Add one northbound left-turn lane. ▪ Sotello Street at Main Street—Signalize the intersection. ▪ Center Street at Commercial Street—Signalize the intersection. ▪ The signalized intersections listed below would meet the impact thresholds by 2040, but the impact thresholds may or may not be met at earlier dates. The following improvements are available for consideration to address operation-related traffic delay impacts under NEPA that could occur when the delay and LOS reach a level where the impact thresholds are exceeded (between 2029 and 2040). No mitigation is required under CEQA. ▪ State Street at Marengo Street—Add one westbound turn lane and remove parking.	Pre-construction	Design	Prior to final design	Authority/ Contractor	Authority/ Contractor	Intersection and roadway segment improvements to address traffic delay impacts	MOU with Cities of Burbank and Los Angeles, as necessary/ contract with contractor	Impact TR #7: Signalized Intersection Delay Increases during Operation Impact S&S #11: Need for Expansion of Existing Fire, Rescue, and Emergency Services Facilities

Mitigation Measure	Title	Mitigation Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Text
		▪ Hollywood Way at Thornton Avenue—Optimize cycle length and splits. ▪ Grand Avenue at Cesar E. Chavez Avenue—Change the eastbound right-turn only lane to a through/right-turn lane, add one receiving lane on Cesar E. Chavez, remove parking, and restripe. ▪ Figueroa Street at Temple Street—Change the southbound right-turn only lane to a through/right-turn lane, and restripe the ramp south of the intersection to provide two receiving lanes. The unsignalized intersections listed below would meet the traffic signal warrants by the year 2040, but the warrant criteria may or may not be met at earlier dates. The following improvements are available for consideration to address operation-related traffic delay impacts under NEPA that could occur when the warrant is met (between 2029 and 2040). No mitigation is required under CEQA. ▪ Main Street at College Street—Signalize the intersection. ▪ Elmyra Street at Main Street—Signalize the intersection. ▪ Alameda Street at Main Street-Ord Street—Signalize the intersection. ▪ Pleasant Avenue at I-10 eastbound on-/off-ramps/Kearny Street—Signalize the intersection.								
Air Quality and Global Climate Change										
AQ-MM#1	Offset Project Construction Emissions through an SCAQMD Emission Offsets Programs	The project's construction emissions that cannot be reduced by IAMFs and any other mitigation measures would be offset through a South Coast Air Quality Management District (SCAQMD) rule or contractual agreement by funding equivalent emissions reductions that achieve reductions in the same years as construction emissions occur, thus offsetting project-related air quality impacts in real time. The project will implement measures and best practices to minimize emissions from project construction. After implementation of these measures, emission levels that still exceed thresholds will be offset to the extent necessary to satisfy General Conformity. The Authority's Sustainability Policy has a goal to achieve net zero emissions from construction. As this project section advances towards construction, the Authority will work with SCAQMD to assess the estimated emissions, availability of offsets, and cost for achieving the Authority's Sustainability Policy goal to the extent possible. The SCAQMD and the Authority Due to the uncertainty of available emission reduction credits from the SCAQMD, the air quality impact would remain significant and unavoidable.	Construction	Reporting/ funding	Yearly	Authority/ Contractor	Authority/ Contractor	Offset project construction criteria air pollutant emissions through funding	Authority to coordinate purchase of offsets with SCAQMD per contractor reports	Impact AQ #1: Regional Air Quality Impacts during Construction Impact AQ #2: Compliance with Air Quality Plans Impact AQ #5: Localized Air Quality Impacts during Construction of Rail Alignment and Train Stations Impact AQ #6: Localized Air Quality Impacts on School Children and Other Sensitive Receptors during Construction Cumulative Construction Impacts

Mitigation Measure	Title	Mitigation Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Text
AQ-MM#2	Construction Emissions Reduction - Requirements for use of Zero Emission(ZE) and/or Near Zero Emission(NZE) Vehicles and Off-Road Equipment	This mitigation measure would reduce the impact of construction emissions from project-related on-road vehicles and off-road equipment. All remaining emissions after implementation of this measure would be offset with emission credits required under Mitigation Measure AQ-MM#1. The Authority and all project construction contractors will require that a minimum of 25 percent, with a goal of 100 percent, of all light-duty on-road vehicles (e.g., passenger cars, light-duty trucks) associated with the project (e.g., on-site vehicles, contractor vehicles) use zero-emission (ZE) or near-zero emission (NZE) technology. The Authority and all project construction contractors will have the goal that a minimum of 25 percent of all heavy-duty on-road vehicles (e.g., for hauling, material delivery and soil import/export) associated with the project use ZE or NZE technology. The Authority and all project construction contractors will have the goal that a minimum of 10 percent of off-road construction equipment use ZE or NZE vehicles. If local or state regulations mandate a faster transition to using ZE and/or NZE vehicles at the time of construction, the more stringent regulations will be applied. For example, Executive Order (EO) N-79-20, issued by California Governor Newsom on September 23, 2020, currently states the following: • Light duty and passenger car sales be 100 percent ZEV by 2035 • Full transition to ZEV short haul/drayage trucks by 2035 • Full transition to ZEV heavy-duty long-haul trucks, where feasible, by 2045 • Full transition to ZE off-road equipment by 2035, where feasible. The project will have a goal of surpassing the requirements of these or other future regulations as a mitigation measure.	Construction	Monitoring/reporting	Yearly	Authority/ Contractor	Authority/ Contractor	Offset construction emissions with Zero Emission and/or Near Zero Emission Vehicles and Off-Road Equipment	Contract requirements and specifications	Impact AQ #1: Regional Air Quality Impacts during Construction Impact AQ #2: Compliance with Air Quality Plans Impact AQ #5: Localized Air Quality Impacts during Construction of Rail Alignment and Train Stations Impact AQ #6: Localized Air Quality Impacts on School Children and Other Sensitive Receptors during Construction
Noise and Vibration										
N&V-MM#1	Construction Noise Mitigation Measures	Prior to construction (any ground-disturbing activities), the contractor shall prepare a noise-monitoring program for Authority approval. The noise-monitoring program shall describe how during construction the contractor will monitor construction noise to verify compliance with the noise limits (An 8-hour Leq, dBA of 80 during the day and 70 at night for residential land use, 85 for both day and night for commercial land use, and 90 for both day	Pre-construction/ construction	Design/yearly reporting	Prior to construction/ weekly monitoring and yearly reporting	Authority/ Contractor	Contractor	Placement of sound barriers and construction equipment to mitigate construction noise and	Contract requirements and specifications	Impact N&V #1: Temporary Exposure of Sensitive Receivers to Construction Noise

Mitigation Measure	Title	Mitigation Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Text
		and night for industrial land use). The contractor would be given the flexibility to meet the FRA construction noise limits in the most efficient and cost-effective manner. This can be done by either prohibiting certain noise-generating activities during nighttime hours or providing additional noise control measures to meet the noise limits. In addition, the noise-monitoring program will describe the actions required of the contractor to meet required noise limits. These actions will include the following nighttime and daytime noise control mitigation measures, as necessary: ▪ Install a temporary construction site sound barrier near a noise source. ▪ Avoid nighttime construction in residential neighborhoods. ▪ Locate stationary construction equipment as far as possible from noise-sensitive sites. ▪ Reroute construction truck traffic along roadways that will cause the least disturbance to residents. ▪ During nighttime work, use smart back-up alarms, which automatically adjust the alarm level based on the background noise level, or switch off back-up alarms and replace with spotters. ▪ Use low-noise-emission equipment. ▪ Implement noise-deadening measures for truck loading and operations. ▪ Monitor and maintain equipment to meet noise limits. ▪ Line or cover storage bins, conveyors, and chutes with sound-deadening material. ▪ Use acoustic enclosures, shields, or shrouds for equipment and facilities. ▪ Use high-grade engine exhaust silencers and engine-casing sound insulation. ▪ Prohibit aboveground jackhammering and impact pile driving during nighttime hours. ▪ Minimize the use of generators to power equipment. ▪ Limit use of public address systems. ▪ Grade surface irregularities on construction sites. ▪ Use moveable sound barriers at the source of the construction activity. ▪ Limit or avoid certain noisy activities during nighttime hours. ▪ To mitigate noise related to pile driving, the use of an auger to install the piles instead of a pile driver would reduce noise levels substantially. If pile driving is necessary, limit the time of day that the activity can occur. ▪ The Authority will establish and maintain in operation until completion of construction a toll-free “hotline” regarding the						weekly monitoring construction noise		

Mitigation Measure	Title	Mitigation Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Text
		HSR Build Alternative construction activities. The Authority shall arrange for all incoming messages to be logged (with summaries of the contents of each message) and for a designated Authority representative to respond to hotline messages within 24 hours (excluding weekends and holidays). The Authority shall make a reasonable good-faith effort to address all concerns and answer all questions, and shall include on the log its responses to all callers. The Authority shall make the log of the incoming messages and the Authority's responsive actions publicly available on its website. The contractor shall provide the Authority with an annual report by January 31 of the following year documenting how it implemented the noise-monitoring program.								
N&V-MM#2	Construction Vibration Mitigation Measures	Prior to construction involving impact pile driving within 80 feet of any building, the contractor shall provide the Authority with a vibration technical memorandum documenting how project pile driving criteria will be met. Upon approval of the technical memorandum by the Authority, and where a noise-sensitive receiver is present, the contractor shall comply with the vibration reduction methods described in that memorandum. Potential construction vibration building damage is only anticipated from impact pile driving at very close distances from buildings. If pile driving occurs more than 25 to 50 feet from buildings, or if alternative methods such as push piling or auger piling are used, damage from construction vibration is not expected to occur. When a construction scenario has been established, pre-construction surveys will be conducted by the contractor at locations within 50 feet of pile driving to document the existing condition of buildings in case damage is reported during or after construction. The contractor will arrange for the repair of damaged buildings or will pay compensation to the property owner.	Pre-construction/ construction/ post-construction	Reporting/ funding	Pre-construction surveys to establish baseline/ weekly monitoring during construction/ post-construction repairs, as needed	Authority/ Contractor	Authority/ Contractor	Pre-construction surveys to establish baseline/ ongoing weekly monitoring during construction/ post-construction assessments and repairs building damage as needed	Contract requirements and specifications	Impact N&V #2: Temporary Exposure of Sensitive Receivers to Construction Vibration
N&V-MM#3	Implement California High-Speed Rail Project Noise Mitigation Guidelines	The Authority has developed Noise Mitigation Guidelines for the statewide HSR system that sets forth three categories of mitigation measures to reduce or offset severe noise impacts from HSR operations: sound barriers, sound insulation, and noise easements. The Guidelines also set forth an implementation approach that considers multiple factors for determining the reasonableness of sound barriers as mitigation for severe noise impacts, including structural and seismic safety, cost, number of affected receptors, and effectiveness. Sound barrier mitigation would be designed to reduce the noise level from HSR operations from severe to moderate according to the provisions of the FRA (FRA 2012). **Sound Barriers** Prior to operation of the HSR project, the Authority will install sound barriers where they can achieve between 5 and 15	Pre-construction/ post-construction	Design	Prior to final design/ prior to operation/ monthly reporting during operation	Authority/ Contractor	Authority/ Contractor	Implement sound barriers as needed or acquire easements on properties severely affected by noise	Contract requirements and specifications/ California High-Speed Rail Project Noise Mitigation Guidelines	Impact N&V #4: Project Noise Impacts

Mitigation Measure	Title	Mitigation Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Text
		decibels (dB) of noise reduction, depending on their height and location relative to the tracks. The primary requirements for an effective sound barrier are that the barrier must: (1) be high enough and long enough to break the line of sight between the sound source and the receiver; (2) be of an impervious material with a minimum surface density of 4 pounds per square foot; and (3) not have any gaps or holes between the panels or at the bottom. Because many materials meet these requirements, aesthetics, durability, cost, and maintenance considerations usually determine the selection of materials for sound barriers. Depending on the situation, sound barriers can become visually intrusive. Typically, the sound barrier's style is selected with input from the local jurisdiction to reduce the visual effect of barriers on adjacent lands uses (refer to Aesthetic Options for Non-Station Structures [Authority 2017b]). For example, sound barriers could be solid or transparent, and made of various colors, materials, and surface treatments. Recommended sound barriers must meet the following criteria: ▪ Achieve a minimum of 5 decibels (dB) of noise reduction. ▪ The minimum number of affected sites should be at least 10. ▪ The length should be at least 800 feet. ▪ Must be cost-effective, defined as mitigation not exceeding $95,000 per benefited receptor. The maximum sound barrier height would be 14 feet for at-grade sections; however, all sound barriers would be designed to be as low as possible to achieve a substantial noise reduction. Berm and berm/wall combinations are the preferred types of sound barriers where space and other environmental constraints permit. On aerial structures, the maximum sound barrier height would also be 14 feet, but barrier material would be limited by engineering weight restrictions for barriers on the structure. Sound barriers on the aerial structure will still be designed to be as low as possible to achieve a substantial noise reduction. Sound barriers on both aerial structures and at-grade structures could consist of solid, semitransparent, or transparent materials as defined in the Aesthetic Options for Non-Station Structures (Authority 2017b).							

Mitigation Measure	Title	Mitigation Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Text
		Table 3.4-21 [of the Final EIR/EIS] shows the reasonableness of each feasible sound barrier along with its height, approximate length, number of benefited receivers, total construction cost, number of unmitigated severe impacts, and number of residual impacts (with mitigation). Consistent with Caltrans guidelines, sound barriers were determined to be feasible because the barrier is capable of providing a noise level reduction of 5 dBA or more, and sound barriers were determined to be reasonable because the cost to construct the barrier would not exceed the cost allowance per benefited receiver approved by the Authority. Figure 3.4 10 shows the sound barrier locations. Table 3.4 22 [of the Final EIR/EIS] shows the residual severe impacts based on each land use in each category that were not evaluated with a sound barrier because they are in areas that do not meet the minimum number of 10 severely impacted receivers and the minimum barrier length of 800 feet. **Building Sound Insulation** If sound barriers are not proposed for receptors with severe impacts, or if proposed sound barriers do not reduce sound levels to below a severe impact level, the Authority will consider building sound insulation as a potential additional mitigation measure on a case-by-case basis. Sound insulation of residences and institutional buildings to improve the outdoor-to-indoor noise reduction is a mitigation measure that can be provided when the use of sound barriers is not feasible in providing a reasonable level (5 to 7 dB) of noise reduction. Although this approach has no effect on noise in exterior areas, it may be the best choice for sites where sound barriers are not feasible or desirable and for buildings where indoor sensitivity is of most concern. Substantial improvements in building sound insulation (on the order of 5 to 10 dB) can often be achieved by adding an extra layer of glazing to windows, by sealing holes in exterior surfaces that act as sound leaks, and by providing forced ventilation and air conditioning so that windows do not need to be opened. The considered sound insulation would also be required to provide a reduction of at least 5 dBA. **Noise Easements** If a substantial noise reduction cannot be achieved through installation of sound barriers or building sound insulation, the Authority will consider acquiring a noise easement on properties with a severe impact on a case-by-case basis. This approach is usually taken only in isolated cases where other mitigation options are infeasible, impractical, or too costly. If all mitigation efforts are found to be not effective or reasonable and feasible, property acquisitions may occur.							

Mitigation Measure	Title	Mitigation Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Text
N&V-MM#4	Vehicle Noise Specification	In the procurement of an HSR vehicle technology, the Authority will request bidders to provide information regarding technology development, if any, that might allow trainsets to be procured that would be more quiet than the European Technical Specification for Interoperability Standard. The analysis in this EIR/EIS does not assume for its quantitative calculations of post-mitigation impacts that trainsets will be able to comply with the USEPA standard (40 C.F.R. Part 201.12/13), if applicable, cited earlier in this chapter, due to lack of currently available compliant technology.	Post-construction	HSR vehicle purchasing	HSR operation	Authority	Authority	HSR vehicle noise specification	Contract requirements and specifications	Impact N&V #4: Project Noise Impacts Impact N&V #5: Vibration Impacts from Project Operation
N&V-MM#5	Special Trackwork	Prior to construction, the contractor shall provide the Authority with an HSR operation noise technical report for review and approval. The report shall address the minimization/elimination of rail gaps at turnouts. Because the impacts of HSR wheels over rail gaps at turnouts increases HSR noise by approximately 6 dB over typical operations, turnouts can be a major source of noise impact. If the turnouts cannot be moved from sensitive areas, the noise technical report will recommend the use special types of trackwork that eliminate the gap. The Authority will require the project design to follow the recommendations in the approved noise impact report.	Pre-construction	Design	Prior to construction	Authority/ Contractor	Authority/ Contractor	Provide operation noise technical report to determine If special trackwork is required	Contract requirements and specifications	Impact N&V #4: Project Noise Impacts Impact N&V #5: Vibration Impacts from Project Operation
N&V-MM#6	Additional Noise and Vibration Analysis Following Final Design	Prior to construction, the contactor shall provide the Authority with an HSR operation noise technical report for review and approval. If final design or final vehicle specifications result in changes to the assumptions underlying the noise technical report, the Authority shall prepare necessary environmental documentation, as required by CEQA and NEPA, to reassess noise impacts and mitigation. Table 3.4-23 [of the Final EIR/EIS] shows potential vibration mitigation procedures.	Pre-construction	Design	Prior to construction/ final vehicle specification	Authority (vehicle)/ Contractor	Authority (vehicle)/ Contractor	Reassessment of noise and vibration impacts and recommended mitigation following final design	Submit assessment and supplemental environmental documentation	Impact N&V #4: Project Noise Impacts Impact N&V #5: Vibration Impacts from Project Operation
Electromagnetic Interference and Electromagnetic Fields										
EMI/EMF-MM#1	Protect Sensitive Equipment	The Authority would contact entities where sensitive equipment is located to evaluate the potential impacts of both HSR project-related EMF RF and low-frequency EMI on medical equipment before completion of final design. Where necessary to avoid interference, the final design would include suitable design provisions, which may include establishing magnetic field shielding walls around sensitive equipment or installing RF filters into sensitive equipment. HSR-related EMI may affect highly susceptible, unshielded sensitive RF equipment, such as older MRI systems and other measuring devices common to medical and research laboratories. Most of the devices manufactured today have adequate shielding from all potential EMI sources; however, the potential exists for older devices to be affected and require shielding. A shielded enclosure is very effective at preventing external EMI. Metallic materials are used for shielding (specifically high-	Pre-construction	Design	Prior to completion of final design	Authority/ Contractor	Authority/ Contractor	Protect nearby equipment sensitive to EMF/EMI	Contract requirements and specifications	Impact EMI/EMF #1: Temporary Impacts from Use of Heavy Construction Equipment Impact EMI/EMF #3: Temporary Impacts from Operation of Electrical Equipment Impact EMI/EMF #6: Interference with Sensitive Equipment

Mitigation Measure	Title	Mitigation Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Text
		conductivity metals for high-frequency interference, such as from HSR operation), and high-permeability metals are used for low-frequency interference. Often either the housing of the affected device is coated with a conductive layer or the housing itself is made conductive. In some situations, it may be necessary to significantly reduce EMI for a suite of devices by creating a shielded room or rooms. Attenuation (i.e., the effectiveness of EMI shielding) is the difference between an electromagnetic signal's intensity before and after shielding. Attenuation is the ratio between field strength with and without the presence of a protective medium, measured in decibels. This decibel range changes on a logarithmic scale, so an attenuation rating of 50 decibels indicates a shielding strength 10 times that of 40 decibels. In general, a shielding range between 60 and 90 decibels may be considered a high level of protection, while 90 to 120 decibels is exceptional.								
Public Utilities and Energy										
PUE-MM#1	Water Supply Analysis for Construction	The Authority would prepare an updated water supply analysis for the HSR Build alternative that identifies the detailed water supply needs for the construction of the Burbank to Los Angeles Project Section. While the Burbank to Los Angeles Section includes connections to the water supply infrastructure in the area, the project may not rely entirely on the existing and planned local water supply allocations, particularly in the event of a dry year. Based on the results of the water supply analysis, the Authority will coordinate with the water agencies to determine if allocations for additional water supply are needed for project construction. In the event that additional water supply is needed from the local groundwater or the State Water Project, the Authority shall pay the water agencies its fair share of the State Water Project fees (per acre-foot of their allocations), which are used for constructing the State Water Project conservation facilities. In addition, the Authority's contractor will be required to use best management practices during construction to reduce the need for water. These efforts will include using non-potable water during construction, to the extent feasible. Water used for tunnel construction and water coming out of tunnel construction areas will be recycled/reused for construction purposes and will be treated to reduce turbidity. This water used during construction for lubrication and cooling purposes would be used several times, thus reducing demand from municipal water sources.	Pre-construction	Design	Prior to final Design	Authority/ Contractor	Authority/ Contractor	Conduct water supply analysis for construction of the HSR Build Alternative	Contract requirements and specifications	Impact PU&E #4: Effects from Water Demand during Construction
PUE-MM#2	Water Demand Analysis for LADWP Supplies at LAUS for Operation	The Authority would prepare an updated water demand analysis in coordination with LADWP for the HSR Build Alternative that identifies the detailed water supply needs for the operation of the Burbank to Los Angeles Project Section at LAUS. This would be consistent with California Water Code Sections 10910-10915, which requires water supply planning. While the Burbank to Los	Pre-construction	Design	Prior to final Design	Authority/ Contractor	Authority/ Contractor	Conduct water supply analysis for operation of the HSR Build Alternative	Contract requirements and specifications	Impact PU&E #11: Operational Water Demand

Mitigation Measure	Title	Mitigation Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Text
		Angeles Section includes connections to the water supply infrastructure in the area, the project may not rely entirely on the existing and planned local water supply allocations, particularly in the event of a dry year. Based on the results of the water demand analysis, the Authority will coordinate with LADWP to determine if allocations for additional water supply are needed for project operation at LAUS. In the event that additional water supply is needed from the local groundwater or the State Water Project, the Authority shall pay LADWP its fair share of the State Water Project fees (per acre-foot of their allocations), which are used for constructing and operating the State Water Project conservation facilities.								
Biological and Aquatic Resources										
BIO-MM#1	Conduct Presence/Absence Pre-construction Surveys for Special-Status Plant Species and Special-Status Plant Communities	Prior to any ground-disturbing activity, the project biologist will conduct presence/absence botanical field surveys for special-status plant species and special-status plant sensitive natural communities in all potentially suitable habitats within a Work Area. The surveys shall be consistent with Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities (CDFW 2018) and Guidelines for Conducting and Report Botanical Inventories for Federally Listed, Proposed and Candidate Plants (USFWS 2001). The project biologist will flag and record in GIS the locations of any observed special-status plant species and special-status plant sensitive natural communities.	Pre-construction	Surveying/ monitoring/ reporting	Report findings at least 30 days prior to ground disturbance	Authority/ Contractor/ Project Biologist	Authority/ Contractor/ Project Biologist	Conduct protocol-level surveys for special-status plant species and communities/ report findings	Condition of design-build contract/ condition of regulatory permits	Impact BIO #1: Construction Effects on Special-Status Plant Species
BIO-MM#2	Prepare and Implement Plan for Salvage and Relocation of Special-Status Plant Species	Prior to any ground-disturbing activity, the project biologist will collect seeds and plant materials and stockpile and segregate the top 4 inches of topsoil from locations within the work area where species listed as threatened or endangered under the FESA, threatened, endangered, or candidate for listing under CESA, state-designated “Rare” species, and California Rare Plant Rank 1B and 2 species were observed during surveys for use on off-site locations. Suitable sites to receive salvaged material include Authority mitigation sites, refuges, reserves, federal or state lands, and public/private mitigation banks. If relocation or propagation is required by authorizations issued under the FESA and/or CESA, the project biologist will prepare a plant species salvage plan to address monitoring, salvage, relocation, and/or seed banking of federal or state-listed plant species The plan will include provisions that address the techniques, locations, and procedures required for the collection, storage, and relocation of seed or plant material, and collection, stockpiling, and redistribution of topsoil and associated seed. The plan will also include requirements related to outcomes such as percentage of absolute cover of highly invasive species, as defined by the California Invasive Plant Council (less than	Pre-construction/ construction/ post-construction	Surveying/ monitoring/ reporting	In accordance with agency permit requirements	Authority/ Contractor/ Project Biologist	Authority/ Contractor/ Project Biologist	Prepare and implement monitoring, salvage, relocation, and propagation of special-status plant species/ report findings	Condition of design-build contract/ condition of regulatory permits	Impact BIO #1: Construction Effects on Special-Status Plant Species

Mitigation Measure	Title	Mitigation Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Text
		documented baseline conditions), maintenance, monitoring, implementation, and the annual reporting. The plan will reflect conditions required under regulatory authorizations issued for federal or state-listed species. The project biologist will submit the plan to the Authority for review and approval.								
BIO-MM#14	Conduct Pre-construction Surveys and Delineate Active Nest Exclusion Areas for Breeding Birds	Prior to any ground-disturbing activity, including vegetation removal, scheduled to occur during the bird breeding season (February 1 to September 1), the project biologist will conduct visual pre-construction surveys within the work area for nesting birds and active nests (nests with eggs or young) of nonraptor species listed under the MBTA or the Fish and Game Code. In the event that active bird nests are observed during the pre-construction survey, the project biologist will delineate no-work buffers. No-work buffers will be set at a distance of 75 feet, unless a larger buffer is required pursuant to regulatory authorizations issued under the FESA and/or CESA. No-work buffers will be maintained until nestlings have fledged and are no longer reliant on the nest or parental care for survival or the project biologist determines that the nest has been abandoned. In circumstances where it is not feasible to maintain the standard no-work buffer, the no-work buffer may be reduced, provided that the project biologist monitors the active nest during the construction activity to ensure that the nesting birds do not become agitated. Additional measures that may be used when no-work buffers are reduced include visual screens and sound barriers.	Pre-construction/ construction	Surveying/ monitoring/ reporting	Weekly or as established by regulatory compliance agencies	Authority/ Contractor/ Project Biologist	Authority/ Contractor/ Project Biologist	Visual pre-construction surveys in suitable habitats for nesting birds/ establish no-work buffers/ monitor active bird nests/ report findings	Condition of design-build contract/ condition of regulatory permits	Impact BIO #2: Construction Effects on Special-Status Wildlife Species Impact BIO #8: Operations Effects on Special-Status Wildlife (nesting birds and roosting bats)
BIO-MM#15	Conduct Pre-construction Surveys and Monitoring for Raptors	If construction or other vegetation removal activities are scheduled to occur during the breeding season for raptors (January 1 to September 1), no more than 14 days before the start of the activities, the project biologist will conduct pre-construction surveys for nesting raptors in areas where suitable habitat is present. Specifically, such surveys will be conducted in habitat areas within the project footprint and, where access is available, within 500 feet of the boundary of the project footprint. If breeding raptors with active nests are found, the project biologist will delineate a 500-foot buffer (or as modified by regulatory authorizations for species listed under the FESA and/or CESA) around the nest to be maintained until the young have fledged from the nest and are no longer reliant on the nest or parental care for survival or until such time as the project biologist determines that the nest has been abandoned. Nest buffers may be adjusted if the project biologist determines that smaller buffers would be sufficient to avoid impacts on nesting raptors.	Pre-construction/ construction	Surveying/ monitoring/ reporting	Weekly or as established by regulatory compliance agencies	Authority/ Contractor/ Project Biologist	Authority/ Contractor/ Project Biologist	Pre-construction surveys in suitable habitats for nesting raptors/ establish no-work buffers/ monitor active raptor nests/ report findings	Condition of design-build contract/ condition of regulatory permits	Impact BIO #2: Construction Effects on Special-Status Wildlife Species Impact BIO #8: Operations Effects on Special-Status Wildlife (nesting birds and roosting bats)
BIO-MM#25	Conduct Pre-construction Surveys for Special-Status Bat Species	No earlier than 30 days prior to the start of ground-disturbing activities in a work area, the project biologist will conduct a visual and acoustic survey (over the course of 1 day and 1 evening at a minimum) for roosting bats in the work area and extending 500 feet from the boundary of the work area, where access is	Pre-construction	Surveying/ monitoring/ reporting	Weekly or as established by regulatory compliance agencies	Authority/ Contractor/ Project Biologist	Authority/ Contractor/ Project Biologist	Conduct visual and acoustic pre-construction survey for roosting bats/	Condition of design-build contract/ condition of regulatory permits	Impact BIO #2: Construction Effects on Special-Status Wildlife Species Impact BIO #8: Operations Effects on Special-Status Wildlife (nesting birds

Mitigation Measure	Title	Mitigation Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Text
		available. Such surveys will be conducted only in those areas in which bridges, abandoned structures, culverts, trees with large cavities, or dense foliage are present within a half mile of the boundary of the work area.						report findings		and roosting bats)
BIO-MM#26	Implement Bat Avoidance and Relocation Measures	Prior to any ground-disturbing activity, the project biologist shall survey for active hibernacula or maternity roosts. If active hibernacula or maternity roosts are identified in the work area or 500 feet extending from the work area during pre-construction surveys, they will be avoided to the extent feasible. If avoidance of hibernacula is not feasible, the project biologist will prepare a relocation plan to remove the hibernacula and provide for construction of an alternative bat roost outside of the work area with CDFW guidance. Compensation would include the installation of nearby suitable alternative roosting structures if displacements are long-term or permanent. The alternative roosting structure, if required, would be constructed in accordance with CDFW guidance and would be designed to be comparable in size and quality to the impacted habitat. The project biologist will implement the relocation plan before the commencement of any ground-disturbing activities that will occur within 500 feet of the hibernacula. Removal of roosts will be guided by accepted exclusion and deterrent techniques.	Pre-construction/ Construction	Surveying/ monitoring/ reporting	Weekly or as established by regulatory compliance agencies	Authority/ Contractor/ Project Biologist	Authority/ Contractor/ Project Biologist	Avoid active or hibernation roosts, if feasible/ if necessary, prepare and implement relocation plan for bat roosts/ report findings	Condition of design-build contract/ condition of regulatory permits	Impact BIO #2: Construction Effects on Special-Status Wildlife Species Impact BIO #8: Operations Effects on Special-Status Wildlife (nesting birds and roosting bats)
BIO-MM#27	Implement Bat Exclusion and Deterrence Measures	If nonbreeding or nonhibernating individuals or groups of bats are found roosting within the work area, the project biologist will facilitate the eviction of the bats by either opening the roosting area to change the lighting and airflow conditions or installing one-way doors or other appropriate methods. To the extent feasible, the Authority will leave the roost undisturbed by project activities for a minimum of 1 week after implementing exclusion and/or eviction activities. Steps will not be taken to evict bats from active maternity or hibernacula; instead such features may be relocated pursuant to a relocation plan.	Pre-construction/ construction	Surveying/ monitoring/ reporting	Weekly or as established by regulatory compliance agencies	Authority/ Contractor/ Project Biologist	Authority/ Contractor/ Project Biologist	Safely evict bats from roosts except for established maternity roosts and occupied hibernation roosts/ report findings	Condition of design-build contract/ condition of regulatory permits	Impact BIO #2: Construction Effects on Special-Status Wildlife Species Impact BIO #8: Operations Effects on Special-Status Wildlife (nesting birds and roosting bats)
BIO-MM#34	Monitor Construction Activities within Aquatic Resources	The project biologist will monitor construction activities that occur within or adjacent to aquatic resources, including activities associated with the installation of protective barriers (e.g., silt fencing, sandbags, fencing), installation and/or removal of creek material to accommodate crossings, construction of access roads, and removal of vegetation. As part of this effort, the project biologist will document compliance with applicable avoidance and minimization measures, including measures set forth in applicable regulatory authorizations issued under the California Fish and Game Code, CWA, and/or the Porter-Cologne Water Quality Control Act.	Construction/ post-construction	Surveying/ monitoring/ reporting	Weekly or as established by regulatory compliance agencies	Authority/ Contractor/ Project Biologist	Authority/ Contractor/ Project Biologist	Conduct monitoring of construction activities in and adjacent to jurisdictional waters/ report findings	Condition of design-build contract/ condition of regulatory permits	Impact BIO #4: Construction Effects on Wetlands and Other Aquatic Resources Impact BIO #10: Operations Effects on Wetlands and Other Aquatic Resources

Mitigation Measure	Title	Mitigation Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Text
BIO-MM#35	Implement Transplantation and Compensatory Mitigation Measures for Protected Trees	Prior to ground-disturbing activities, the project biologist will conduct surveys in the work area to identify protected trees. The project biologist will establish environmentally sensitive areas (ESA) around protected trees with the potential to be affected by construction activities, but that do not require removal. The ESAs will extend outward 5 feet from the drip lines of such protected trees. The Authority will provide compensatory mitigation for impacts on protected trees, including impacts associated with removing or trimming a protected tree. Compensation will be based on requirements set out in applicable local government ordinances, policies, and regulations. Compensatory mitigation may include, but is not limited to, the following: ▪ Transplantation of protected trees to areas outside of the work area ▪ Replacement of protected trees at an offsite location, based on the number of protected trees affected, at a ratio not to exceed 3:1 for native trees or 1:1 for ornamental trees, unless higher ratios are required by local government ordinances or regulations ▪ Contribution to a tree-planting fund	Pre-construction/ construction/ post-construction	Surveying/ monitoring/ restoration/ reporting	Monthly or as established by regulatory compliance agencies	Authority/ Contractor/ Project Biologist	Authority/ Contractor/ Project Biologist	Conduct protected trees surveys/ compensate for impacts and effects to protected tree resources/ prepare and implement a monitoring and maintenance program to monitor transplanted trees/ report findings	Condition of design-build contract	Impact BIO #6: Construction Effects on Protected Trees
BIO-MM#37	Minimize Effects to Wildlife Movement Corridors during Construction	To the extent feasible, the Authority will avoid placing fencing, either temporarily or permanently, within known wildlife movement corridors in those portions of the alignment where the tracks are elevated (e.g., viaducts, bridges). The Authority will avoid conducting ground-disturbing activities in wildlife movement corridors during nighttime hours, to the extent feasible, and will shield nighttime lighting to avoid illuminating wildlife movement corridors in circumstances where avoidance of such activities is not feasible.	Pre-construction/ construction	Final design/ surveying/ monitoring/ reporting	Yearly or at other appropriate intervals	Authority/ Contractor/ Project Biologist	Authority/ Contractor/ Project Biologist	Avoid placement of fencing adjacent to wildlife movement corridors/report findings	Condition of Design-Build Contract Construction	Impact BIO #5: Construction Effects on Wildlife Movement
BIO-MM#47	Prepare and Implement a Compensatory Mitigation Plan (CMP) for Impacts on Aquatic Resources	The Authority will prepare and implement a Compensatory Mitigation Plan (CMP) that identifies mitigation to address temporary and permanent loss, including functions and values, of aquatic resources as defined as waters of the U.S. under the federal Clean Water Act (CWA) and/or waters of the state under the Porter-Cologne Act. Compensatory mitigation may involve the restoration, establishment, enhancement, and/or preservation of aquatic resources through one or more of the following methods: ▪ Purchase of credits from an agency-approved mitigation bank. ▪ Preservation of aquatic resources through acquisition of property. ▪ Establishment, restoration, or enhancement of aquatic resources.	Pre-construction/ construction/ post-construction	Design/ final design/ surveying/ compensatory mitigation/ reporting	Yearly or as established by regulatory compliance agencies	Authority/ Contractor/ Project Biologist	Authority/ Contractor/ Project Biologist	Prepare and implement CMP for temporary and permanent impact on aquatic resources/ report findings	Condition of design-build contract/ condition of regulatory permits	Impact BIO#4: Construction Effects on Wetlands and Other Aquatic Resources

Mitigation Measure	Title	Mitigation Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Text
		▪ In lieu fee contribution determined through consultation with the applicable regulatory agencies. The following ratios will be used for compensatory mitigation unless a higher ratio is required pursuant to regulatory authorizations issued under Section 404 of the CWA and/or the Porter-Cologne Act: ▪ Vernal pools: 2:1. ▪ Seasonal wetlands: between 1.1:1 and 1.5:1 based on impact type, function and values lost. ▪ 1:1 offsite for permanent impacts. ▪ 1:1 onsite and 0.1:1 to 0.5:1 offsite for temporary impacts. For mitigation involving establishment, restoration, enhancement, or preservation of aquatic resources by the Authority, the CMP will contain the following information: ▪ Objectives. A description of the resource types and amounts that will be provided, the type of compensation (i.e., restoration, establishment, enhancement, and/or preservation), and the manner in which the resource functions of the compensatory mitigation project will address the needs of the watershed or ecoregion. ▪ Site selection. A description of the factors considered during the term sustainability of the resource. ▪ Adaptive management plan. A management strategy to address changes in site conditions or other components of the compensatory mitigation project. ▪ Financial assurances. A description of financial assurances that will be provided to ensure that the compensatory mitigation will be successful. In circumstances where the Authority intends to fulfill compensatory mitigation obligations by securing credits from approved mitigation banks or in-lieu fee programs, the CMP need only include the name of the specific mitigation bank or in-lieu fee program to be used and the method for calculating credits.							
BIO-MM#55	Prepare and Implement a Weed Control Plan	Prior to any ground-disturbing activity during the construction phase, the project biologist will develop a weed control plan (WCP), subject to review and approval by the Authority. The purpose of the WCP is to establish approaches to minimize and avoid the spread of invasive weeds during ground-disturbing activities during construction and operations and maintenance. The WCP will include, at a minimum, the following: ▪ A requirement to delineate ESAs in the field prior to weed control activities. ▪ A schedule for weed surveys to be conducted in coordination with the Biological Resources Management Plan.	Pre-construction/ construction/ post-construction	Design/ final design/ compensatory mitigation/ reporting	Yearly or as established by regulatory compliance agencies	Authority/ Contractor/ Project Biologist	Authority/ Contractor/ Project Biologist	Prepare and implement WCP minimize and avoid the spread of invasive weeds/ report findings	Condition of design-build contract/ condition of regulatory permits	Impact BIO #1: Construction Effects on Special-Status Plant Species Impact BIO #3 Construction Effects on Special-Status Natural Communities Impact BIO #7: Operations Effects on Special-Status Plant Species Impact BIO #9: Operations Effects on Special-Status Natural Communities

Mitigation Measure	Title	Mitigation Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Text
		▪ Success criteria for invasive weed control. The success criteria would be linked to the Biological Resources Management Plan standards for on-site work during ground-disturbing activities. In particular, the criteria would establish limits on the introduction and spread of invasive species, as defined by the California Invasive Plant Council, to less than or equal to the pre-disturbance conditions in the area temporarily affected by ground-disturbing activities. If invasive species cover is found to exceed pre-disturbance conditions by greater than 10 percent or is 10 percent greater than levels at a similar, nearby reference site, a control effort will be implemented. If the target, or other success criteria identified in the WCP, has not been met by the end of the WCP monitoring and implementation period, the Authority will continue the monitoring and control efforts, and remedial actions will be identified and implemented until the success criteria are met. ▪ Identification of weed control treatments, including permitted herbicides and manual and mechanical removal methods. ▪ Timeframes for weed control treatment for each plant species. ▪ Identification of fire prevention measures.								
BIO-MM#56	Conduct Monitoring of Construction Activities	During any initial ground disturbing activity, the Project Biologist will be present in the Work Area to verify compliance with avoidance and minimization measures.	Construction	Monitoring/ reporting	Weekly or as established by regulatory compliance agencies	Authority/ Contractor/ Project Biologist	Authority/ Contractor/ Project Biologist	Project Biologist will be present in Work Area to verify compliance with avoidance and minimization measures	Condition of design-build contract/ condition of regulatory permits	Impact BIO #2: Construction Effects on Special-Status Wildlife Species
BIO-MM#61	Establish and Implement a Compliance Reporting Program	The project biologist will prepare monthly and annual reports documenting compliance with all IAMFs, mitigation measures, and requirements set forth in regulatory agency authorizations. The Authority will review and approve all compliance reports prior to submittal to the regulatory agencies. Reports will be prepared in compliance with the content requirements outlined in the regulatory agency authorizations. Pre-activity survey reports will be submitted within 15 days of completing the surveys and will include: ▪ Location(s) of where pre-activity surveys were completed, including latitude and longitude, Assessor Parcel Number, and HSR parcel number. ▪ Written description of the surveyed area. A figure of each surveyed location will be provided that depicts the surveyed area and survey buffers over an aerial image. ▪ Date, time, and weather conditions observed at each location.	Pre-construction/ construction	Monitoring/daily reporting	Daily, monthly, and annually	Authority/ Contractor/ Project Biologist	Authority/ Contractor/ Project Biologist	Establish and implement compliance reporting program/ report findings	Condition of design-build contract/ condition of regulatory permits	Impact BIO #2: Construction Effects on Special-Status Wildlife Species Impact BIO #4: Construction Effects on Wetlands and Other Aquatic Resources Impact

Mitigation Measure	Title	Mitigation Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Text
		▪ Personnel who conducted the pre-activity surveys. ▪ Verification of the accuracy of the Authority's habitat mapping at each location, provided in writing and on a figure. ▪ Observations made during the survey, including the type and locations (written and GIS) of any sensitive resources detected. ▪ Identification of relevant measures from the Biological Resources Management Plan to be implemented as a result of the survey observations. Daily compliance reports will be submitted to the Authority via Environmental Mitigation Management and Assessment (EMMA) within 24 hours of each monitoring day. Noncompliance events will be reported to the Authority the day of the occurrence. Daily compliance reports will include: ▪ Date, time, and weather conditions observed at each location where monitoring occurred. ▪ Personnel who conducted compliance monitoring. ▪ Project activities monitored, including construction equipment in use. ▪ Compliance conditions implemented successfully. ▪ Noncompliance events observed. Daily compliance reports will also be included in the monthly compliance reports, which will be submitted to the Authority by the 10th of each month and will include: ▪ Summary of construction activities and locations during the reporting month, including any noncompliance events and their resolution, work stoppages, and take of threatened or endangered species. ▪ Summary of anticipated project activities and work areas for the upcoming month. ▪ Tracking of impacts on suitable habitats for each threatened and endangered species identified in USFWS and CDFW authorizations, including: – An accounting of the number of acres of habitats for which the Authority provides compensatory mitigation that has been disturbed during the reporting month, and – An accounting of the cumulative total number of acres of threatened and endangered species habitat that has been disturbed during the project period. ▪ Up-to-date GIS layers, associated metadata, and photo documentation used to track acreages disturbed. ▪ Copies of all pre-activity survey reports, daily compliance reports, and noncompliance/work stoppage reports for the reporting month.							

Mitigation Measure	Title	Mitigation Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Text
		Annual reports will be submitted to the Authority by January 20 and will include: ▪ Summary of all monthly compliance reports for the reporting year. ▪ A general description of the status of the project, including projected completion dates. ▪ All available information about project-related incidental take of threatened and endangered species. ▪ Information about other project impacts on the threatened and endangered species. ▪ A summary of findings from pre-construction surveys (e.g., number of times a threatened or endangered species or a den, burrow, or nest was encountered, location, if avoidance was achieved, if not, what other measures were implemented). ▪ Written description of disturbances to threatened and endangered species habitat within work areas, both for the preceding 12 months and in total since issuance of regulatory authorizations by USFWS and CDFW, and updated maps of all land disturbances and updated maps of identified habitat features suitable for threatened and endangered species within the project area. In addition to the compliance reporting requirements outlined above, the following items will be provided for compliance documentation purposes: ▪ If agency personnel visit the project footprint in accordance with BIO-IAMF#2, the project biologist will prepare a memorandum within 1 day of the visit that memorializes the issues raised during the field meeting. This memorandum will be submitted to the Authority via EMMA. Any issues regarding regulatory compliance raised by agency personnel will be reported to the Authority and the contractor. ▪ Compliance reporting will be submitted to the Authority via EMMA in accordance with the report schedule. The project biologist will prepare and submit compliance reports that document the following: – Compliance with BIO-IAMF#6: Monofilament Restrictions – Compliance with BIO-IAMF#7: Prevent Entrapment in Construction Materials and Excavations – Compliance with BIO-IAMF#8: Delineate Equipment Staging Areas and Traffic Routes – Compliance with BIO-IAMF#10: Clean Construction Equipment – Compliance with BIO-IAMF#12: Design the Project to be Bird Safe								

Mitigation Measure	Title	Mitigation Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Text
		– Compliance with BIO-IAMF#9: Dispose of Construction Spoils and Waste – BMP field manual implementation and any recommended changes to construction site housekeeping practices outlined in BIO-IAMF#11: Maintain Construction Sites ▪ Work stoppages and measures taken under BIO-MM#63: Work Stoppage (see below) will be documented in a memorandum prepared by the project biologist and submitted to the Authority within two business days of the work stoppage.								
BIO-MM#62	Prepare Plan for Dewatering and Water Diversions	Prior to initiating any construction activity that occurs within open or flowing water, the Authority will prepare a dewatering plan, which will be subject to the review and approval by the applicable regulatory agencies. The plan will incorporate measures to minimize turbidity and siltation, such as the use of silt fences, fiber rolls, and/or temporary sediment basins or settling ponds. The project biologist will monitor the dewatering and/or water diversion sites, including collection of water quality data, as applicable. Prior to the dewatering or diverting of water from a site, the project biologist will conduct pre-activity surveys to determine the presence or absence of special-status species within the affected waterbody. In the event that special-status species are detected during pre-activity surveys, the project biologist will relocate the species (unless the species is fully protected under state law), consistent with any regulatory authorizations applicable to the species.	Pre-construction/ construction	Design/ final design/ monitoring/ reporting	Weekly or as established by regulatory compliance agencies	Authority/ Contractor/ Project Biologist	Authority/ Contractor/ Project Biologist	Prepare and implement dewatering and waste diversion plan/ report findings	Condition of design-build contract/ condition of regulatory permits	Impact BIO #4: Construction Effects on Wetlands and Other Aquatic Resources Impact BIO #10: Operations Effects on Wetlands and Other Aquatic Resources Impact HWR #3: Temporary Construction Impacts to Surface Water Quality
BIO-MM#63	Work Stoppage	In the event that any special-status wildlife species is found in a work area, the project biologist will have the authority to halt work to prevent the death or injury to the species. Any such work stoppage will be limited to the area necessary to protect the species and work may be resumed once the project biologist determines that the individuals of the species have moved out of harm's way or the project biologist has relocated them out of the work area. If any fully protected or FESA/CESA-listed species are observed within the work area at any time, work will not occur in the occupied area until appropriate measures to avoid or reduce take of any listed wildlife species are established through consultation with the USFWS and/or CDFW. Any such work stoppages and the measures taken to facilitate the removal of the species, if any, will be documented in a memorandum prepared by the project biologist and submitted to the Authority within 2 business days of the work stoppage.	Construction	Monitoring/ reporting	Weekly or as established by regulatory compliance agencies	Authority/ Contractor/ Project Biologist	Authority/ Contractor/ Project Biologist	Halt work to relocate special-status wildlife species (if possible)/report findings	Condition of design-build contract/ condition of regulatory permits	Impact BIO #2: Construction Effects on Special-Status Wildlife Species

Mitigation Measure	Title	Mitigation Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Text
BIO-MM#79	Conduct Pre-Construction Protocol-Level Surveys and Construction Monitoring for Least Bell's Vireo	Protocol surveys will be conducted for least Bell's vireo during the breeding season at least 2 years prior to the commencement of HSR project activities within a 500-foot buffer of the HSR footprint at the following locations: (1) the Verdugo Wash Bridge Replacement area, (2) the Metrolink Central Maintenance Facility, and (3) rail alignment work between I-5 and SR 2 (including areas adjacent to Rio de Los Angeles State Park). Protocol surveys will be repeated within 1 year prior to the commencement of vegetation clearing and construction activities in these locations to ensure that survey information for the HSR project remains up to date. The protocol surveys will be conducted by a qualified designated biologist(s) in accordance with the most recent USFWS guidelines. All survey results will be submitted to the USFWS Carlsbad Fish and Wildlife Office. Weekly surveys and monitoring of suitable least Bell's vireo habitat within 500 feet of the HSR footprint will be conducted by the designated biologist(s) if construction activities are occurring in these areas during the vireo breeding season (March 15 to September 15).	Pre-construction	Monitoring/ reporting	Weekly or as established by regulatory compliance agencies	Authority/ Contractor/ Project Biologist	Authority/ Contractor/ Project Biologist	Pre-construction surveys of Least Bell's Vireo habitat/ establish, and maintain no-work buffer/ report findings	Condition of design-build contract/ condition of regulatory permits	Impact BIO #2: Construction Effects on Special-Status Wildlife Species
BIO-MM#80	Implement Impact Avoidance and Minimization Measures for Occupied Least Bell's Vireo Habitat	The following measures will be implemented to avoid and minimize HSR project impacts on suitable least Bell's vireo habitat occurring within a 500-foot buffer of the HSR footprint at (1) the Verdugo Wash Bridge Replacement area, (2) the Metrolink Central Maintenance Facility, and (3) rail alignment work between I-5 and SR 2 (including areas adjacent to Rio de Los Angeles State Park): ▪ HSR construction activities will be limited to daylight hours during the vireo breeding season. ▪ For any work proposed within 500 feet of vireo occupied habitat during the vireo breeding season, the occupied habitat shall be clearly delineated and no work shall occur within occupied habitat without the USFWS' written approval. In addition, onsite noise-reduction/attenuation techniques shall be incorporated, as appropriate, to avoid impacts on least Bell's vireo from elevated construction noise levels during the breeding season. Noise monitoring will be implemented by the designated biologist(s) during the breeding season to ensure that elevated construction noise levels are appropriately attenuated at the edge of vireo occupied habitat to a level that is not expected to adversely affect nesting bird behavior (i.e., not to exceed an hourly average of 3 dBA above existing ambient levels at the edge of vireo occupied habitat). If specific HSR project construction noise levels would exceed this threshold within 500 feet of occupied least Bell's vireo habitat during the vireo breeding season, the USFWS Carlsbad Fish and Wildlife Office will be contacted for guidance on additional noise-	Pre-construction/ construction	Surveying/ monitoring/ reporting	Weekly or as established by regulatory compliance agencies	Authority/ Contractor/ Project Biologist	Authority/ Contractor/ Project Biologist	Pre-construction surveys of Crotch bumblebee habitat/establish and maintain no-work buffer/ report findings	Condition of design-build contract/ condition of regulatory permits	Impact BIO #2: Construction Effects on Special-Status Wildlife Species Impact BIO #8: Operations Effects on Special-Status Wildlife (nesting birds and roosting bats)

Mitigation Measure	Title	Mitigation Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Text
		reduction measures and written approval, which must be received before such activities are performed.								
Hydrology and Water Resources										
HWR-MM#1	Below-Grade Section Constructability and Hydrogeological Monitoring	The Authority would implement the following mitigation measures to reduce hydrogeological impacts associated with construction of the below grade sections: ▪ Excavation of the below grade sections would include continuous probing to assess the ground and groundwater conditions. ▪ Pre-excavation grouting would be used to control groundwater inflows and provide face stability where applicable. ▪ Should areas of abnormally high flow be encountered, drilling would stop and methods reevaluated to minimize potential impacts to surface water features and groundwater aquifers. ▪ All below-grade sections would be waterproofed. The lining of the below-grade section would be designed to withstand construction, ground, seismic, and hydrostatic loads. ▪ The lining of the below grade sections would be inspected regularly throughout the construction phase to monitor for potential leaks. Should leaks be found, the lining would be repaired. Groundwater infiltration would be treated and disposed of in accordance with state and local regulations. ▪ If it is determined that the below-grade sections will be below the groundwater table, a groundwater monitoring plan would be prepared and implemented. Monitoring may include measurements of water levels in wells, inflows into the below-grade sections, probe-hole flow, and portal discharges. Monitoring of groundwater, if impacted, would continue until the groundwater system has normalized to pre-construction conditions. ▪ The Authority would develop a plan to inspect the below-grade sections after seismic events to assess and seal leaks exceeding set inflow criteria.	Construction	Reporting and monitoring	Weekly	Contractor/ local districts	Contractor	Construction/ weekly reporting	Reporting contract requirements/ specifications	Impact HWR #5: Temporary Impacts on Groundwater Volume, Quality, and Recharge during Construction
Hazardous Materials and Wastes										
HMW-MM#1	Limit Use of Extremely Hazardous Materials near Schools during Construction	Prior to construction, the Contractor will prepare a memorandum establishing BMPs regarding hazardous materials best management practices related to construction activity for approval by the Authority. The memorandum and a signed agreement as well as the CMP will confirm that the Contractor will not handle or store an extremely hazardous substance (as defined in California Public Resources Code § 21151.4) or a mixture containing extremely hazardous substances in a quantity equal to or greater than the state threshold quantity specified pursuant to subdivision (j) of Section 25532 of the Health and	Pre-construction/ construction	Reporting and monitoring	Memorandum approved 30 days prior to start of construction. During construction, submit weekly reports or reporting	Contractor Hazardous Materials Monitor	Contractor	Hazardous materials memorandum/ weekly reporting	Hazardous materials memorandum	Impact HMW #5: Emit Hazardous Emissions or Handle of Hazardous or Acutely Hazardous Materials, Substances, or Waste within 0.25 Mile of a School during Construction

Mitigation Measure	Title	Mitigation Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Text
		Safety Code within 0.25 mile of a school. The memorandum, signed agreement, and Construction Management Plan will acknowledge that, prior to construction activities, signage would be installed to delimit all work areas within 0.25 mile of a school, informing all personnel associated with construction of the Project not to bring extremely hazardous substances into the area. The Contractor would be required to monitor all use of extremely hazardous substances as delineated in the CMP. This construction mitigation measure for hazardous materials and wastes is consistent with California Public Resources Code Section 21151.4. The memorandum, signed agreement, and CMP will be submitted to the Authority prior to any construction.			requirements as established by the approved memorandum					
Safety and Security										
S&S-MM#1	Monitor Response of Local Fire, Rescue, and Emergency Service Providers to Incidents at Stations and Provide a Fair Share Cost of Service	During operation of the HSR system, the Authority would monitor the response of the local fire rescue and emergency service providers to incidents at the HSR stations and provide a fair share of cost of service. During the first 3 years of operation and maintenance, the Authority shall begin monitoring response of local fire, rescue, and emergency service providers to incidents at stations and provide a fair share of cost of service. Monitoring should begin 1 year prior to planned opening of an HSR station. Service levels consist of the monthly volume of calls for fire and police protection, as well as county-, city- or fire protection district-funded emergency medical technician/ambulance calls that occur in the station site service areas. Prior to operation of the stations for HSR service, the Authority would enter into an agreement with the public service providers of fire, police, and emergency services to fund the Authority's fair share of services above the average baseline service demand level for the station service areas (as established during the monitoring period). The fair share would be based on projected passenger use for the first year of operations, with a growth factor for the first 5 years of operation. This cost-sharing agreement would include provisions for ongoing monitoring and future negotiated amendments as the stations are expanded or passenger use increases. Such amendments would be made on a regular basis for the first 5 years of station operation, as would be provided in the agreement. To make sure that services are made available, impact fees would not constitute the sole funding mechanism, although impact fees may be used to fund capital improvements or fixtures (e.g., police substation, additional fire vehicle, on-site defibrillators) necessary to service delivery. After the first 5 years of operation, the Authority would enter into a new or revised agreement with the public service providers of fire, police, and emergency services to fund the Authority's fair share of services. The fair share would take into account the volume of ridership, past record and trends in service demand at the stations, new	Construction/ post-construction/ operation	Monitor/ Fair Share Agreement	Annually	Authority	Authority	Monitoring of service levels during construction and operation to determine baseline service demands, Fair share agreement	Authority to fund through fair share of services agreement	Impact S&S #11: Need for Expansion of Existing Fire, Rescue, and Emergency Services Facilities

Mitigation Measure	Title	Mitigation Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Text
		local revenues derived from station area development, and any services that the Authority may be providing at the station.								
Parks, Recreation, and Open Space										
PR-MM#1	Temporary Restricted Access to Park Facilities During Construction	Prior to construction (any ground-disturbing activity impacting trails), the contractor will prepare a technical memorandum documenting how connections to the unaffected trail portions and nearby roadways will be maintained during construction. The contractor will provide alternative access via a temporary detour of the trail using existing roadways or other public rights-of-way. The contractor will be required to provide detour signage and lighting and will provide that the alternative routes meet public safety requirements. The technical memorandum will be submitted to the California High-Speed Rail Authority (Authority) for review and approval.	Pre-construction/ construction	Technical memorandum; compliance reporting	Weekly	Contractor	Contractor	Technical memorandum prior to construction/ weekly reporting	Condition of design-build contract	Impact PK #1: Temporary Impact Areas, Temporary Access Restrictions, Temporary Facility Closures, or Temporary Detours during Construction
PR-MM#2	Providing Park Access	Prior to construction (any ground-disturbing activity affecting park access), the contractor will prepare a technical memorandum documenting how the contractor will ensure that connections to the unaffected park portions or nearby roadways will be maintained after construction. If a proposed linear park closure restricts connectivity, the contractor would provide permanent access via existing roadways or other public rights-of-way. The technical memoranda will be submitted to the Authority for review and approval.	Pre-construction/ construction/ post-construction/ operation	Technical memorandum/ compliance reporting	Weekly or at other appropriate interval	Contractor	Contractor	Technical memorandum prior to construction/ weekly reporting, or at other appropriate interval	Condition of design-build contract	Impact PK #5: Changes to Park or Recreation Facility Use or Character Due to Operation
PR-MM#3	Temporary Closures and Detours of Existing Trails and Bicycle Lanes	▪ Trail and Bicycle Lane Facilities Plan—During final design, the Authority's project engineer will require the design/build contractor to develop a Trail and Bicycle Lane Facilities Plan addressing the short term project impacts on existing trails and bicycle lanes within the construction limits of the project. That plan will address: – Identifying trails and bicycle lanes that will be closed temporarily and detoured during construction – Preparing a public awareness and notification plan – Temporarily closing trails and bicycle lanes during construction – Developing and implementing detours for temporarily closed trails and bicycle lanes – Phasing of temporary trail and bicycle lane closures to allow for effective detours to maintain connectivity of these facilities around the construction areas – Coordinating the trail and bicycle lane closures and detours with the local jurisdictions with authority over those facilities – Criteria for identifying detour routes and facilities – Information signing for closures and detours – Requirements for compliance with the Americans with Disabilities Act during construction	Pre-construction/ construction	Design/ reporting/ funding	Prior to final design	Authority	Authority	Before final design	Condition of design-build contract/ Authority to provide compensation	Impact PK #1: Temporary Impact Areas, Temporary Access Restrictions, Temporary Facility Closures, or Temporary Detours during Construction

Mitigation Measure	Title	Mitigation Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Text
		– Maintaining signing for closures and detours throughout the closure period and replacing lost or damaged signing – Restoring trails and bicycle lanes to their original or better condition at the completion of project construction ▪ Temporary Closures of Trails and Bicycle Lanes—Prior to any temporary closures of trails and bicycle lanes, the Authority's project engineer will require the design/build contractor to coordinate with the directors of the appropriate jurisdictions' public works and/or parks departments, or their representatives, to review the location of and need for each temporary trail or bicycle lane closure. The Authority's Project Engineer will require the design/build contractor to develop detours for each closure in consultation with the public works and/or parks department directors or their representatives. Prior to and during construction activities that will require the temporary closure of a trail or bicycle lane, the Authority's project engineer will require the design/build contractor to comply with and implement the procedures in the Trail and Bicycle Lane Facilities Plan, described above, for the affected trails and bicycle lanes. ▪ Signing for Trail and Bicycle Lane Detours and Closures—The Authority's project engineer will require the design/build contractor to develop detour signs, in consultation with the appropriate jurisdictions' public works and/or parks departments, notifying trail and bike lane users of the upcoming temporary facility closure and directing the trail and bicycle lane users to the temporary detour routes with estimated timeframes. Appropriate directional and informational signage will be provided by the project design/build contractor prior to each closure and far enough in advance of the closure so trail and bicycle lane users will not have to backtrack to get to the detour routes. ▪ Contact Information at Trail and Bicycle Lane Detours—The Authority's project engineer will require the design/build contractor to provide detour signing that includes contact information for the Authority's project engineer and the design/build contractor, and that informs trail users to contact the project engineer and/or the design/build contractor with questions or concerns regarding upcoming or active temporary trail and bicycle lane closures. ▪ Restoration of Impacted Trail and Bicycle Lane Segments—The Authority's project engineer will require the design/build contractor to return trail and bike path segments closed temporarily during construction to their original, or better, condition after completion of construction, prior to their return to the control of the applicable public works or parks department. After project construction, the Authority's project								

Mitigation Measure	Title	Mitigation Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Text
		engineer will require the design/build contractor to document that access to and connectivity of the affected trails and bicycle lanes were restored. ▪ Compliance with the Trails and Bicycle Lane Facilities Plan—Compliance with the Trails and Bicycle Lane Facilities Plan will be documented in the environmental commitments record with text, photographs, maps, and correspondence, as appropriate.								
PR-MM#4	Replacement of Property Acquired from Existing or Planned Bicycle Routes	During the right-of-way acquisition process, the Authority will consult with the public agency with jurisdiction over any existing or planned bicycle routes regarding the specific conditions of acquisition and replacement of the land that will be acquired. Where property that contains existing or planned bicycle paths required for HSR improvements involves the establishment of a permanent easement or permanent conversion to rail right-of-way from lands owned by the Metro, the Authority will consult with the officials with jurisdiction to identify an alternative route for the continuation of the lost use and functionality of the resource, including maintaining connectivity. The identification of the alternative route must be determined to be feasible for the intended use by the respective Public Works Department, or Parks and Recreation Department or other equivalent authority within the affected city prior to the establishment of the permanent easement or permanent conversion of the Metro-owned lands.	Pre-construction	Final design/ consultation	Prior to final design	Authority	Authority	Authority to provide compensation or land or both per Public Resources Code Division 5, Chapter 2.5, Section 5401 of the California Park Preservation Act	Authority to provide compensation as required	Impact PK #3: Permanent Easements or Acquisition of Property from Parks, Recreation, and School Play Area Resources Due to Construction Impact PK #4: Changes to Planned Parks and Recreational Resources Due to Construction Impact PK #5: Changes to Park or Recreation Facility Use or Character Due to Operation
PR-MM#5	Temporary Use of Land from Park, Recreation, or School Play Areas during Construction	▪ **Temporary Impact Areas**—During final design, the California High-Speed Rail Authority's (Authority) Project Engineer will evaluate all proposed temporary impact areas in parks, recreational resources, and school play areas and will identify opportunities to further reduce the sizes of those temporary impact areas. All temporary impact areas in parks, recreational resources, and school play areas shown on the project plans and specifications will include notes that the design/build contractor cannot increase the size of any of those areas without consultation with and approval by the project engineer and appropriate subsequent environmental review. ▪ **Compensation for Temporary Impact Areas**—During final design, the Authority's project engineer will consult with the affected jurisdictions and property owners to discuss the temporary impact areas needed for construction of the High-Speed Rail (HSR) Build Alternative and to determine the appropriate level of compensation for the use of land from park, recreation, or school play areas for the established temporary impact areas. It is anticipated that the compensation would be payments for the temporary use of land from those resources for the period of time that land is used for temporary impact areas during project	Pre-construction/ construction	Final design/ consultation	Prior to final design/ monthly reporting	Authority/ Contractor	Authority/ Contractor	Before final design/ monthly	Authority to consult as required/ monthly reporting	Impact PK #1: Temporary Impact Areas, Temporary Access Restrictions, Temporary Facility Closures, or Temporary Detours during Construction

Mitigation Measure	Title	Mitigation Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Text
		construction. ▪ **Access Restrictions at Temporary Impact Areas**—The Authority's project engineer will require the design/build contractor to fence and gate all land in parks, recreation facilities, and school play areas used for temporary impact areas. The temporary impact areas will be appropriately signed to restrict access to those areas by park and recreational resource patrons and users of school play areas. The Authority's project engineer will require the design/build contractor to maintain the fencing throughout the time period each temporary impact area is used and to remove the fencing only after all construction activity in an area is completed, the temporary impact area is no longer needed, and the land is ready to be returned to the property owner. ▪ **Signing of Fenced Temporary Impact Areas**—The Authority's project engineer will require the design/build contractor to provide signing at each temporary impact area explaining why the area is fenced and access to the temporary impact area is restricted, the anticipated completion date of the use of the land for the temporary impact area, and contact information (for both the Authority's project engineer and the design/build contractor) for the public to solicit further information regarding the temporary impact area and the project. ▪ **Modifications to Recreation Uses**—In the event a temporary impact area requires the temporary use of land at a park, recreational resource, or school play area that is used for recreation purposes, the Authority's project engineer will consult with the property owner/operator on: (1) whether the property owner/operator wants those recreation uses replaced temporarily elsewhere on the property, and (2) if temporary replacement of those recreation uses is desired, modifications that could be made to the remaining recreation area on the property to temporarily replace the recreation uses displaced by the temporary impact area. Any modifications to recreation areas outside the limits of a temporary impact area will be constructed/implemented prior to fencing and use of the temporary impact area. ▪ **Return of Land Used by Temporary Impact Areas to the Property Owners**—The Authority's project engineer will require the design/build contractor to return the land used for each temporary impact area to the owner in its original or better condition when construction in an area has been completed and the temporary impact area is no longer needed. The Authority's project engineer will require the design/build contractor to coordinate the restoration of the affected land with the property owner and the project							

Mitigation Measure	Title	Mitigation Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Text
		engineer.								
Aesthetics and Visual Resources										
AVQ-MM#1	Minimize Visual Disruption from Construction Activities	Prior to construction (any ground-disturbing activity), the contractor shall prepare a technical memorandum identifying how the project will minimize construction-related visual/aesthetic disruption and include the following activities: ▪ Minimize pre-construction clearing to that necessary for construction. ▪ Limit the removal of buildings to those that would conflict with project components. ▪ When possible, preserve existing vegetation, particularly vegetation along the edge of construction areas that may help screen views. ▪ After construction, regrade areas disturbed by construction, staging, and storage to original contours and revegetate with plant material similar in numbers and types to that that was removed, based upon local jurisdictional requirements. If no local jurisdictional requirements exist, replace removed vegetation at a 1:1 replacement ratio for shrubs and small trees, and a 2:1 replacement ratio for mature trees. For example, if the contractor removes 10 mature trees in an area, replant 20 younger trees that within 5 to 15 years (depending upon the growth rates of the trees) would be of a height and spread to provide visual screening similar to the visual screening provided by the trees that were removed for construction. Replaced shrubs shall be a minimum 5 gallons and replaced trees shall be a minimum 24-inch box and minimum 8 feet in height. ▪ To the extent feasible, do not locate construction staging sites within the immediate foreground distance (0 to 500 feet) of existing residential neighborhoods, recreational areas, or other land uses that include high-sensitivity viewers. Where such siting is unavoidable, screen staging sites from viewers using appropriate solid screening materials such as temporary fencing and walls. Paint over or remove any graffiti or visual defacement of temporary fencing and walls within 5 business days of it occurring. The technical memorandum will be submitted to the Authority for review and approval.	Pre-construction/ construction/ post-construction	Prepare technical memorandum	Prior to construction	Contractor	Contractor	Prior to construction	Contract requirements and specifications	Impact AVQ #1: Visual Disturbance during Construction
AVQ-MM#2	Minimize Light Disturbance during Construction	Prior to construction (any ground-disturbing activity requiring nighttime construction), the Contractor shall prepare a technical memorandum verifying how they will shield nighttime construction lighting and direct it downward in such a manner to minimize the light that falls outside the construction site boundaries. The technical memorandum shall be submitted to the Authority for review and approval.	Pre-construction/ construction	Prepare technical memorandum	Prior to construction	Contractor	Contractor	Prior to construction	Contract requirements and specifications	Impact AVQ #2: Nighttime Lighting during Construction

Mitigation Measure	Title	Mitigation Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Text
AVQ-MM#3	Incorporate Design Aesthetic Preferences into Final Design and Construction of Non-Station Structures	Prior to construction (any ground disturbing activity), the Contractor shall work with the Authority and local jurisdictions to incorporate the Authority-approved aesthetic preferences for non-station structures into final design and construction. A technical memorandum will be submitted to the Authority to document compliance.	Pre-construction/ construction	Compliance report	Prior to construction	Contractor	Contractor	Prior to construction	Contract requirements and specifications	Impact AVQ #1: Visual Disturbance during Construction Impact AVQ #3: Visual Quality in the Burbank to Los Angeles Project Section
AVQ-MM#4	Provide Vegetation Screening along At-Grade and Elevated Guideway Adjacent to Residential Areas	Prior to operation and maintenance of HSR, the Contractor will plant trees (minimum 24-inch box and 8 feet in height) along the edges of the HSR rights-of-way in locations adjacent to residential areas to visually screen the elevated guideway and the residential area. The species of trees to be installed will be selected based on their mature size and shape, growth rate, hardiness, and drought tolerance. No species on the Invasive Species Council of California's list will be planted. Upon maturity, the crowns of trees used will be tall enough to partially, or fully, to screen views of the elevated guideway from adjacent at-grade areas. Upon maturity, trees will allow ground-level views under the crowns (with pruning if necessary) and will not interfere with the 15-foot clearance requirement for the guideway. The trees will be maintained. Irrigation systems will be installed within the tree planting areas. The Contractor shall prepare a technical memorandum within 90 days of completing any construction section or segment documenting the species of trees that were incorporated into the edges of the HSR right-of-way adjacent to residential uses. The technical memorandum will be submitted to the Authority to document compliance.	Construction/ post-construction	Plant trees/ compliance report	Prior to operation planting trees/ 90 days of completing any construction section or segment documenting the species of trees that were incorporated into design	Contractor	Contractor	Prior to operation, planting trees/ 90 days of completing any construction section or segment documenting the species of trees that were incorporated into design	Contract requirements, specifications; landscaping, and maintenance will be provided by the Contractor for its scope of work until completion of the work at which time the Authority shall assume responsibility for landscaping or assign the responsibility to other third parties	Impact AVQ #3: Visual Quality in the Burbank to Los Angeles Project Section
AVQ-MM#6	Screen Traction Power Distribution Stations and Radio Communication Towers	Within 90 days of completing traction power substation or radio tower construction, the Contractor will screen from public view the traction power substations (at approximately 30-mile intervals along the HSR guideway), including radio towers where required, through the use of landscaping or solid walls/fences. This will consist of context-appropriate landscaping of a type and scale that does not draw attention to the station or feature. Plant species will be selected based on their mature size and shape, growth rate, hardiness, and drought tolerance. Planted shrubs shall be a minimum 5 gallon and trees shall be a minimum 24" box and 8' in height. No species on the Invasive Species Council of California's list will be planted. The landscaping will be continuously maintained and appropriate irrigation systems will be installed within the landscaped areas. Walls will be constructed of cinder-block, or similar material, and will be painted a neutral color to blend in with the surrounding context. If a chain-link or cyclone fence is used, it will include slats in the fencing. Any graffiti or visual defacement or damage of fencing and walls will be painted over or repaired within a reasonable period as agreed between the Authority and local jurisdiction. None of the	Post-construction/ operations	Plant vegetation/ reporting	Prior to operation and maintenance planting trees/ monthly reporting	Contractor	Authority	Prior to operation and maintenance planting trees/ monthly reporting	Authority to implement appropriate landscape and maintenance plan	Impact AVQ #3: Visual Quality in the Burbank to Los Angeles Project Section

Mitigation Measure	Title	Mitigation Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Text
		mitigation measure options is expected to result in secondary effects. The mitigation measures are typical of visual treatments applied on linear transportation facilities; they have been defined to be specific in range and implementable according to context, and designed in coordination with local jurisdictions. The Contractor shall prepare a technical memorandum documenting how the requirements in this measure were implemented. The technical memorandum will be submitted to the Authority to document compliance.								
AVQ-MM#7	Provide Sound Barrier Treatments	Prior to Construction (any ground-disturbing activity), the Contractor shall design a range of sound barrier treatments for visually sensitive areas, such as those areas where residential views of open landscaped areas would change or in urban areas where sound barriers would adversely affect the existing character and setting. The Contractor shall develop the treatments during the final design process and integrate them into the final project design. The treatments shall include, but are not limited to, the following: ▪ Sound barriers along elevated guideways that may incorporate transparent materials where sensitive views would be adversely affected by opaque sound barriers. ▪ Sound barriers made with nonreflective materials and of a neutral color. ▪ Surface design enhancements and vegetation appropriate to the visual context of the area shall be installed with the sound barriers. Vegetation shall be installed consistent with the provisions of project mitigation measure AVQ-MM#5. Surface enhancements shall be consistent with the design features developed for project mitigation measure AVQ-MM#3 and shall include architectural elements (e.g., stamped patterns, surface articulation, decorative texture treatment), as determined acceptable to the local jurisdiction. Surface coatings shall be used on wood and concrete sound barriers to facilitate cleaning and the removal of graffiti. The Contractor shall prepare a technical memorandum documenting implementation and submit it to the Authority to demonstrate compliance.	Pre-construction/ construction	Reporting	Monthly	Contractor	Contractor	Construction/ monthly	Contract requirements/ specifications	Impact AVQ #3: Visual Quality in the Burbank to Los Angeles Project Section

Mitigation Measure	Title	Mitigation Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Text
Cultural Resources										
CUL-MM#1	Mitigate Adverse Effects to Archaeological and Built Environment Resources Identified During Phased Identification. Comply with the Stipulations Regarding the Treatment of Archaeological and Historic Built Resources in the Programmatic Agreement (PA) and Memorandum of Agreement (MOA)	Once parcels are accessible and surveys have been completed, including consultation as stipulated in the MOA, additional archaeological resources may be identified. All built environment resources were adequately visible from the public right-of-way and will not likely require phased identification. For newly identified eligible properties that would be adversely affected, the following process would be followed, which is presented in detail in the BETP and ATP: ▪ The Authority would consult with the MOA signatories and concurring parties to determine the preferred treatment of the properties/resources and appropriate mitigation measures. ▪ For CRHR-eligible archaeological resources, the Authority would determine if these resources can feasibly be preserved in place or if data recovery is necessary. The methods of preservation in place would be considered in the order of priority provided in CEQA Guidelines § 15126.4(b)(3). If data recovery is the only feasible treatment, the Authority would adopt a Data Recovery Plan as required under CEQA Guidelines § 15126.4(b)(3)(C). ▪ Should data recovery be necessary, the Contractor's Principal Investigator, in consultation with the MOA signatories and consulting parties, would prepare a Data Recovery Plan for approval from the Authority, also in consultation with the MOA signatories. Upon approval, the Contractor's Principal Investigator would implement the plan. ▪ For archaeological resources, the Authority would also determine if the resource is a unique archaeological site under CEQA. If the resource is not a historical resource but is an archaeological site the resource would be treated as required in Cal. Public Res. Code 21083.2 by following protection, data recovery, and other appropriate steps outlined in the ATP. The review and approval requirements for these documents are outlined in the ATP.	Pre-construction/ construction	Reporting	Weekly	Contractor/ Authority	Contractor/ Authority	Pre-construction surveys and construction/ weekly reporting or as dictated by the ATP and the MOA	PA	Impact CUL #1: Construction Effects on Known Archaeological Resources Impact CUL #2: Construction Effects on Unknown Archaeological Resources
CUL-MM#2	Halt Work in the Event of an Archaeological Discovery and Comply with the Programmatic Agreement, Memorandum of Agreement, Archaeological Treatment Plan, and all State and Federal Laws, as applicable.	During construction (i.e., any ground-disturbing activities, including clearing and grubbing) should there be an unanticipated discovery, the Contractor shall follow the procedures for unanticipated discoveries as stipulated in the PA, MOA, and associated ATP. The procedures must also be consistent with the following: the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation (48 Federal Register 44716-42), as amended (National Park Service); and Guidelines for the Implementation of CEQA, as amended (Title 14 California Code of Regulations Chapter 3, Article 9, Sections 15120-15132). In the event of a discovery in California Department of Transportation (Caltrans) right-of-way, the Authority would notify appropriate Caltrans staff	Construction	Reporting	During construction	Contractor/ Authority	Contractor	Daily logs (during active monitoring)	ATP/MOA	Impact CUL #2: Construction Effects on Unknown Archaeological Resources

Mitigation Measure	Title	Mitigation Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Text
		in accordance with any provisions of the ATP. Should the discovery include human remains, the Contractor, the Authority, and the FRA shall comply with federal and state regulations and guidelines regarding the treatment of human remains, including relevant sections of Native American Graves Protection and Repatriation Act (§ 3(c)(d)); California Health and Safety Code, Section 8010 et seq.; and Cal. Public Res. Code Section 5097.98; and consult with the Native American Heritage Commission, tribal groups, and the SHPO. In the event of an unanticipated archaeological discovery, the contractor would cease work in the immediate vicinity of the find, based on the direction of the archaeological monitor or the apparent location of cultural resources if no monitor is present. If no qualified archaeologist is present, no work can commence until it is approved by the qualified archaeologist in accordance with the MOA, ATP, and monitoring plan. The Contractor's qualified archaeologist would assess the potential significance of the find and make recommendations for further evaluation and treatment as necessary. These steps may include evaluation for the CRHR and NRHP and necessary treatment to resolve significant effects if the resource is an historical resource or historic property. If, after documentation is reviewed by the Authority, and they determine it is a historic property, and the SHPO concurs that the resource is eligible for the NRHP, or the Authority determines it is eligible for the CRHR, preservation in place would be considered by the Authority in the order of priority provided in CEQA Guidelines § 15126.4(b)(3) and in consultation with the signatories and consulting parties to the MOA. If data recovery is the only feasible mitigation, the Contractor's qualified Principal Investigator would prepare a data recovery plan as required under CEQA Guidelines § 15126.4(b)(3)(C), the MOA, and ATP for the Authority's approval. If human remains are discovered on state-owned or private lands the contractor would contact the relevant county coroner to allow the coroner to determine if an investigation regarding the cause of death is required. If no investigation is required and the remains are of Native American origin, the Authority would contact the Native American Heritage Commission to identify the most likely descendant. The most likely descendant would be empowered to reinter the remains with appropriate dignity. If the most likely descendant fails to make a recommendation, the remains would be reinterred in a location not subject to further disturbance and the location would be recorded with the Native American Heritage Commission and relevant information center of the CHRIS. If human remains are part of an archaeological site, the Authority and contractor would, in consultation with the most likely descendant and other consulting parties, consider preservation								

Mitigation Measure	Title	Mitigation Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Text
		in place as the first option, in the order of priority called for in CEQA Guidelines Section 15126.4(b)(3). In consultation with the relevant Native American tribes, the Authority may conduct scientific analysis on the human remains if called for under a Data Recovery Plan and amenable to all consulting parties. The Authority would work with the most likely descendant to satisfy the requirements of Cal. Public Res. Code Section 5097.98. Performance tracking of this mitigation measure would be based on successful implementation and acceptance of the documentation by the SHPO and appropriate consulting parties.								
CUL-MM#3	Other Mitigation for Effects to Archaeological Sites	Due to limited access to private properties during the environmental review phase of this project, the Authority's ability to fully identify and evaluate archaeological resources within the APE has, correspondingly, also been limited. Thus, the majority of the project APE has not been subject to archaeological field inventories. As pedestrian field surveys are a necessary component of the archaeological resource identification and evaluation effort, the commitment to complete the field surveys, prior to ground-disturbing activities associated with the project, would be codified in the MOA that would be executed as a condition of this Final EIR/EIS. Access to previously inaccessible properties to complete the archaeological resource identification effort is expected to be available after the Record of Decision, during the design-build phase of the project. However, due to the design constraints associated with constructing an HSR system, the ability to shift the alignment to avoid any newly identified archaeological resources at this late phase of the project delivery process would be substantially limited and/or unlikely, because the alignment would already be established. As such, impacts/effects on as-yet-unidentified significant archaeological resources as a result of this project are anticipated; however, the nature and quantity of such effects remains unknown until completion of the archaeological field identification and evaluation effort. Protocols for the identification, evaluation, treatment, and data-recovery mitigation of as-yet-unidentified archaeological resources are addressed in the MOA and ATP. Efforts to develop meaningful mitigation measures for effects on as-yet-unidentified Native American archaeological resources or historic-era archaeological resources that cannot be avoided would be negotiated with the tribal consulting parties or other interested parties, as appropriate. Measures that are negotiated among the MOA signatories and tribal consulting parties would be the responsibility of the Authority to implement.	Pre-construction	Pre-construction surveys	Prior to ground-disturbing activities	Authority	Authority	Prior to ground-disturbing activities	ATP/MOA	Impact CUL #2: Construction Effects on Unknown Archaeological Resources

Mitigation Measure	Title	Mitigation Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Text
CUL-MM#7	Prepare Interpretive or Educational Materials	The Authority-prepared MOA and BETP would identify historic properties and historical resources that would be subject to historic interpretation or preparation of educational materials. Interpretive and educational materials would address the significance of the properties that would be affected by the project. Interpretive or educational materials could include, but are not limited to, brochures, videos, websites, study guides, teaching guides, articles or reports for general publication, commemorative plaques, or exhibits. The agreed-upon method of interpretation would be specified in the BETP for each property, resulting from consultation with the SHPO, MOA signatories, and concurring parties. The Contractor would be responsible for assembling the appropriate interdisciplinary team to fulfill the mitigation. The required professionals and their qualifications would be specified in the BETP. In the preparation of the interpretive or educational materials, the Contractor's team would use previous research included in the environmental technical documents, images, narrative history, drawings, or other material produced for the mitigation described above. The interpretive or educational materials should be made available to the public in physical or digital formats, at local libraries, historical societies, or public buildings, as specified in the BETP.	Post-construction	Reporting	Annual	Authority	Post-construction/ annual reporting	Authority, in consultation with SHPO and appropriate consulting parties	BETP, Photographic documentation, plan for repairs to historic properties	Impact CUL #3: Construction Effects on Historic Built Resources
CUL-MM#12	Design of Intrusion Protection Railing for Historic Bridges	A property-specific mitigation measure is proposed, requiring the Authority to work with consulting parties to develop a design for an intrusion-protection railing that would minimize the potential direct adverse effect to the maximum extent feasible. A new intrusion-protection railing would be built on the historic bridge decks above the HSR alignment to prevent people and objects from entering the right-of-way from the bridge. This would apply to three historic resources: the Arroyo Seco Parkway Historic District (specifically the Los Angeles River Bridge), the Broadway Viaduct, and the Spring Street Viaduct.	Pre-Construction	Pre-construction surveys	Prior to ground-disturbing activities	Authority	Authority	Prior to ground-disturbing activities	Meetings with departments/ agencies	Impact AVQ #1: Visual Disturbance during Construction Impact CUL #3: Construction Effects on Historic Built Resources
CUL-MM#13	Main Street Bridge Access Feasibility Study	A property-specific mitigation measure is proposed, stating that the Authority would facilitate the development of a feasibility study to explore design options that would maintain the historic use of the Main Street Bridge to the maximum extent feasible while still meeting the safety requirements of the HSR Build Alternative.	Pre-Construction	Pre-construction surveys	Prior to ground-disturbing activities	Authority	Authority	Prior to ground-disturbing activities	Meetings with departments/ agencies	Impact CUL #3: Construction Effects on Historic Built Resources
Cumulative Impacts										
CUM-TRAN-MM#1 (NEPA Only)	Consult with Agencies Regarding Construction Traffic Impacts	To reduce the potential overlapping traffic impacts on the same intersections and roadways from detours and closures, the Authority would consult with local city and county planning departments and other agencies with projects anticipated to be constructed concurrently with the Burbank to Los Angeles Section of the California HSR System. Consultation would entail notifying the departments/agencies regarding the anticipated HSR construction, detour, and closure schedules and would	Pre-Construction/ Construction	Notify and consult with departments/ agencies	Monthly	Contractor/ Authority	Contractor	Monthly, record keeping, and reporting	Meetings with departments/ agencies	Cumulative Construction Impacts to Transportation

Mitigation Measure	Title	Mitigation Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Text
		allow for adjustment of construction schedules for adjacent projects or projects near the HSR Build Alternative.								
CUM-N&V-MM#1	Consult with Agencies Regarding Construction Noise and Vibration Impacts	To reduce the potential overlapping noise- and vibration-generating construction activities in the same area, the Authority would consult with local city and county planning departments and other agencies with projects anticipated to be constructed concurrently with the Burbank to Los Angeles Section of the California HSR System. Consultation would entail notifying the departments/agencies regarding the anticipated HSR construction schedule and would allow for adjustment of construction schedules for adjacent projects or projects near the HSR Build Alternative.	Pre-Construction/ Construction	Notify and consult with departments/ agencies	Monthly	Contractor/ Authority	Contractor	Monthly, record keeping, and reporting	Meetings with departments/ agencies	Cumulative Construction Impacts to Noise and Vibration
CUM-S&C-MM#1 (NEPA Only)	Cumulative Construction Impacts on Communities	During construction of the HSR Build Alternative, consultation would occur with the project sponsors or other entities, including local or regional governments, to coordinate construction schedules and potential closures, detours, and other elements of construction in order to reduce impacts on surrounding communities. Such coordination would include planning for vehicular, pedestrian, and bicycle detours, performing community outreach to make residents and businesses aware of potential issues in advance, and allowing for public input and feedback in planning for construction.	Pre-Construction/ Construction	Notify and consult with departments/agencies	Prior to ground-disturbing activities and during construction	Contractor/Authority	Contractor	Prior to ground-disturbing activities	Meetings with departments/ agencies	Cumulative Construction Impacts to Population and Communities

APE	area of potential effects
ATP	Archaeological Treatment Plan
Authority	California High-Speed Rail Authority
BETP	built environment treatment plan
BMP	best management practice
C.F.R.	Code of Federal Regulations
Cal. Public Res. Code	California Public Resources Code
Caltrans	California Department of Transportation
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CHRIS	California Historical Resources Information System
CMP	Compensatory Mitigation Plan
CRHR	California Register of Historical Resources
CWA	Clean Water Act
dB	decibels
dBA	A-weighted decibels
EIR/EIS	Environmental Impact Report/Environmental Impact Statement
EMI	electromagnetic interference
EMMA	Environmental Mitigation Management and Assessment system
ESA	environmentally sensitive area
FESA	Federal Endangered Species Act
FRA	Federal Railroad Administration
GIS	geographic information system
HSR	high-speed rail
I	Interstate
IAMF	impact avoidance and minimization feature
LADWP	Los Angeles Department of Water and Power
LAUS	Los Angeles Union Station
L_{eq}	equivalent sound level
LOS	level-of-service
MBTA	Migratory Bird Treaty Act
Metro	Los Angeles County Metropolitan Transportation Authority
MOA	memorandum of agreement
MOU	memorandum of understanding
MRI	magnetic resonance imaging
NEPA	National Environmental Policy Act
NRHP	National Register of Historic Places
PA	Programmatic Agreement
RF	radio frequency
ROD	records of decision
RWQCB	Regional Water Quality Control Board
SCAQMD	South Coast Air Quality Management District
SHPO	State Historic Preservation Officer
SOQ	Statement of Qualification
SR	State Route
US-101	U.S. Route 101
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service

Table 2 Burbank to Los Angeles Project Section: Impact Avoidance and Minimization Features

IAMF	Title	IAMF Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Title
Air Quality and Global Climate Change										
AQ-IAMF#1	Fugitive Dust Emissions	During construction, the Contractor shall employ the following measures to minimize and control fugitive dust emissions. The Contractor shall prepare a fugitive dust control plan for each distinct construction segment. At a minimum, the plan shall describe how each measure would be employed and identify an individual responsible for ensuring implementation. At a minimum, the plan shall address the following components unless alternative measures are approved by the applicable air quality management district. ▪ Cover all vehicle loads transported on public roads to limit visible dust emissions, and maintain at least 6 inches of freeboard space from the top of the container or truck bed. ▪ Clean all trucks and equipment before exiting the construction site using an appropriate cleaning station that does not allow runoff to leave the site or mud to be carried on tires off the site. ▪ Water exposed surfaces and unpaved roads at a minimum three times daily with adequate volume to result in wetting of the top 1 inch of soil but avoiding overland flow. Rain events may result in adequate wetting of top 1 inch of soil thereby alleviating the need to manually apply water. ▪ Limit vehicle travel speed on unpaved roads to 15 miles per hour (mph). ▪ Suspend any dust-generating activities when average wind speed exceeds 25 mph. ▪ Stabilize all disturbed areas, including storage piles that are not being used on a daily basis for construction purposes, by using water, a chemical stabilizer/suppressant, hydro mulch or by covering with a tarp or other suitable cover or vegetative ground cover, to control fugitive dust emissions effectively. In areas adjacent to organic farms, the Authority would use non-chemical means of dust suppression. ▪ Stabilize all on-site unpaved roads and off-site unpaved access roads, using water or a chemical stabilizer/suppressant, to effectively control fugitive dust emissions. In areas adjacent to organic farms, the Authority would use non-chemical means of dust suppression. ▪ Carry out watering or presoaking for all land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and demolition activities.	Construction	Prepare plan/ Reporting	Weekly	Contractor	Contractor	Prepare a fugitive dust control plan	Condition of design-build contract	Impact AQ #1: Regional Air Quality Impacts during Construction Impact AQ #2: Compliance with Air Quality Plans Impact AQ #3: Greenhouse Gas Emissions during Construction Impact AQ #5: Localized Air Quality Impacts during Alignment Construction (NO_2 concentrations) Impact AQ #6: Localized Air Quality Impacts on School Children and Other Sensitive Receptors during Construction Impact BIO #1: Construction Effects on Special-Status Plant Species Impact BIO #2: Construction Effects on Special-Status Wildlife Species Impact BIO #3 Construction Effects on Special-Status Natural Communities Impact BIO #4: Construction Effects on Wetlands and Other Aquatic Resources Impact BIO #5: Construction Effects on Wildlife Movement Impact BIO #6: Construction Effects on Protected Trees Impact S&S #1: Accidents and Health Risks at Construction Sites Impact SOCIO #7: Temporary Disruption to Community Facilities from Construction Impact LU #1: Temporary Land Use Conversion and Incompatibility Impact PK #2: Air Quality, Noise, Vibration, and Visual Impacts during Construction Impact AVQ #1: Visual Disturbance during Construction

IAMF	Title	IAMF Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Title
		▪ For buildings up to 6 stories in height, wet all exterior surfaces of buildings during demolition. ▪ Limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at a minimum of once daily, using a vacuum type sweeper. ▪ After the addition of materials to or the removal of materials from surface or outdoor storage piles, apply sufficient water or a chemical stabilizer/suppressant. ▪ Require the construction contractor to post a publicly visible sign on the construction site with the telephone number and person to contact at the Authority for any dust or other air quality complaints. The person will be required to take corrective action within 48 hours. The phone number for the local air district must also be visible to ensure compliance with applicable regulations. ▪ Provisions in the dust control plan will allow school administrators and/or their designated representative(s) to notify the Authority if construction-related air emission levels generated by the project are adversely impacting the learning environment. All notices will be investigated by the Authority and corrective action will be taken within 48 hours.								
AQ-IAMF#2	Selection of Coatings	During construction, the Contractor shall use: ▪ Low-volatile organic compound (VOC) paint that contains less than 10 percent of VOC contents (VOC, 10%). ▪ Super-compliant or Clean Air paint that has a lower VOC content than that required by San Joaquin Valley Unified Air Pollution Control District Rule 4601, Eastern Kern Air Pollution Control District Rule 410, and Antelope Valley Air Quality Management District Rule 1113, when available. If not available, the Contractor shall document lack of availability, recommend alternative measure(s) to comply with Rule 4601, 410, and 1113, or disclose absence of measure(s) for full compliance and obtain concurrence from the Authority.	Construction	Low VOC-paint use	Monthly	Contractor	Contractor	Use of low-VOC paint during construction	Condition of design-build contract	Impact AQ #1: Regional Air Quality Impacts during Construction Impact AQ #2: Compliance with Air Quality Plans Impact AQ #3: Greenhouse Gas Emissions during Construction Impact AQ #5: Localized Air Quality Impacts during Alignment Construction (NO_2 concentrations) Impact AQ #6: Localized Air Quality Impacts on School Children and Other Sensitive Receptors during Construction Impact SOCIO #7: Temporary Disruption to Community Facilities from Construction Impact LU #1: Temporary Land Use Conversion and Incompatibility
AQ-IAMF#3	Renewable Diesel	During construction, the Contractor would use renewable diesel fuel to minimize and control exhaust emissions from all heavy-duty diesel-fueled construction diesel equipment and on-road diesel trucks. Renewable diesel must meet the most recent ASTM D975 specification for Ultra Low Sulfur Diesel and have a carbon intensity no greater than 50% of diesel with the lowest carbon intensity among petroleum fuels sold in California. The Contractor would provide the Authority with monthly and annual reports, through the Environmental	Construction	Renewable diesel fuel use	Monthly	Contractor	Contractor	Use of renewable diesel fuel during construction	Contract requirements and specifications	Impact AQ #1: Regional Air Quality Impacts during Construction Impact AQ #2: Compliance with Air Quality Plans Impact AQ #3: Greenhouse Gas Emissions during Construction

IAMF	Title	IAMF Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Title
		Mitigation Management and Application (EMMA) system, of renewable diesel purchase records and equipment and vehicle fuel consumption. Exemptions to use traditional diesel can be made where renewable diesel is not available from suppliers within 200 miles of the project site. The construction contract must identify the quantity of traditional diesel purchased and fully document the availability and price of renewable diesel to meet project demand.								Impact AQ #5: Localized Air Quality Impacts during Alignment Construction (NO_2 concentrations) Impact AQ #6: Localized Air Quality Impacts on School Children and Other Sensitive Receptors during Construction
AQ-IAMF#4	Reduce Criteria Exhaust Emissions from Construction Equipment	Prior to issuance of construction contracts, the Authority would incorporate the following construction equipment exhaust emissions requirements into the contract specifications: 1. All heavy-duty off-road construction diesel equipment used during the construction phase would meet Tier 4 engine requirements. 2. A copy of each unit's certified tier specification and any required CARB or air pollution control district operating permit would be made available to the Authority at the time of mobilization of each piece of equipment. 3. The contractor would keep a written record (supported by equipment-hour meters where available) of equipment usage during project construction for each piece of equipment. 4. The contractor would provide the Authority with monthly reports of equipment operating hours (through the Environmental Mitigation Management and Assessment [EMMA] system) and annual reports documenting compliance.	Pre-construction	Contract specifications	Prior to construction	Authority	Authority	Exhaust emissions requirements incorporated into contract specifications	Contract requirements and specifications	Impact AQ #1: Regional Air Quality Impacts during Construction Impact AQ #2: Compliance with Air Quality Plans Impact AQ #3: Greenhouse Gas Emissions during Construction Impact AQ #5: Localized Air Quality Impacts during Alignment Construction (NO_2 concentrations) Impact AQ #6: Localized Air Quality Impacts on School Children and Other Sensitive Receptors during Construction
AQ-IAMF#5	Reduce Criteria Exhaust Emissions from On-Road Construction Equipment	Prior to issuance of construction contracts, the Authority would incorporate the following material hauling truck fleet mix requirements into the contract specifications: 1. All on-road trucks used to haul construction materials, including fill, ballast, rail ties, and steel, would consist of an average fleet mix of equipment model year 2010 or newer, but no less than the average fleet mix for the current calendar year as set forth in the CARB's EMFAC 2014 database. 2. The contractor would provide documentation to the Authority of efforts to secure such a fleet mix. 3. The contractor would keep a written record of equipment usage during project construction for each piece of equipment and provide the Authority with monthly reports of VMT (through EMMA) and annual reports documenting compliance.	Pre-construction	Contract specifications	Prior to construction	Authority	Authority	Material hauling truck fleet mix requirements incorporated into contract specifications	Contract requirements and specifications	Impact AQ #1: Regional Air Quality Impacts during Construction Impact AQ #2: Compliance with Air Quality Plans Impact AQ #3: Greenhouse Gas Emissions during Construction Impact AQ #5: Localized Air Quality Impacts during Alignment Construction (NO2 concentrations) Impact AQ #6: Localized Air Quality Impacts on School Children and Other Sensitive Receptors during Construction
AQ-IAMF#6	Reduce the Potential Impact of Concrete Batch Plants	Prior to construction of any concrete batch plant, the contractor would provide the Authority with a technical memorandum documenting consistency with the Authority's concrete batch plant siting criteria and utilization of typical control measures. Concrete batch plants would be sited at	Construction	Prepare plan/ Reporting	Prior to construction of concrete batch plants	Contractor	Contractor	Preparation of a concrete batch plant technical memorandum	Contract requirements and specifications	Impact AQ #1: Regional Air Quality Impacts during Construction Impact AQ #2: Compliance with Air Quality Plans

IAMF	Title	IAMF Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Title
		least 1,000 feet from sensitive receptors, including places such as daycare centers, hospitals, senior care facilities, residences, parks, and other areas where people may congregate. The concrete batch plant would implement typical control measures to reduce fugitive dust such as water sprays, enclosures, hoods, curtains, shrouds, movable and telescoping chutes, central dust collection systems, and other suitable technology, to reduce emissions to be equivalent to the USEPA AP-42 controlled emission factors for concrete batch plants. The contractor would provide to the Authority documentation that each batch plant meets this standard during operation.								Impact AQ #3: Greenhouse Gas Emissions during Construction Impact AQ #5: Localized Air Quality Impacts during Alignment Construction (NO_2 concentrations) Impact AQ #6: Localized Air Quality Impacts on School Children and Other Sensitive Receptors during Construction
Noise and Vibration										
NV-IAMF#1	Noise and Vibration	Prior to construction, the contractor shall prepare and submit to the Authority a noise and vibration technical memorandum documenting how the FTA and FRA guidelines for minimizing construction noise and vibration impacts would be employed when work is being conducted within 1,000 feet of sensitive receptors. Typical construction practices contained in the FTA and FRA guidelines for minimizing construction noise and vibration impacts include the following: ▪ Construct sound barriers, such as temporary walls or piles on excavated material, between noisy activities and noise sensitive resources. ▪ Route truck traffic away from residential streets, when possible. ▪ Construct walled enclosures around especially noisy activities or around clusters or noise equipment. ▪ Combine noisy operations so that they occur in the same period. ▪ Phase demolition, earthmoving, and ground-impacting operations so as not to occur in the same time period. ▪ Avoid impact pile driving where possible in vibration sensitive areas.	Pre-construction/ Construction	Prepare technical memorandum/ Compliance reporting	Monthly	Contractor	Contractor	Prepare a construction noise and vibration technical memorandum	Condition of design-build contract	Impact N&V #1: Temporary Exposure of Sensitive Receivers to Construction Noise Impact N&V #2: Temporary Exposure of Sensitive Receivers to Vibration from Construction Impact SOCIO #14: Temporary Impacts on Children's Health and Safety from Construction Impact PK #2: Air Quality, Noise, Vibration, and Visual Impacts during Construction
Electromagnetic Interference and Electromagnetic Fields										
EMI/EMF-IAMF#1	Preventing Interference with Adjacent Railroads	*Technical Memorandum 3.00.10. Implementation Stage Electromagnetic Compatibility Program Plan* requires coordination with adjacent railroads. During Project Design, the Contractor would work with the engineering departments of railroads that operate parallel the HSR system to apply standard design practices to prevent interference with the electronic equipment operated by these railroads. Prior to Operation and Maintenance of each operating segment, the Contractor shall certify through issuance of a technical memorandum to the Authority that design provisions to prevent interference have been established and have been determined to be effective prior to the activation of potentially	Design/ Construction	Prepare technical memorandum/ Compliance reporting	Monthly	Contractor	Contractor/ Authority	Prepare electromagnetic compatibility technical memorandum	Condition of design-build contract	Impact EMI/EMF #10: Effects on Adjacent Existing Rail Lines

IAMF	Title	IAMF Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Title
		interfering systems of the HSR. The contractor would work with the railroad engineering departments where these railways parallel the HSR to apply the standard design practices to prevent interference with the electronic equipment operated by these railroads. Design provisions to prevent interference would be put in place and determined to be adequately effective by a qualified electrical engineering professional prior to the HSR activation of potentially interfering systems. The Authority's Design Criteria Manual Chapter 26 summarizes the applicable EMI/EMF design standards that the Authority would use for the project.								
EMI/EMF-IAMF#2	Controlling Electromagnetic Fields/ Electromagnetic Interference	Prior to construction, the contractor would prepare an EMI/EMF technical memorandum for review and approval by the Authority. The California HSR project shall adhere to international guidelines and comply with applicable federal and state laws and regulations. The HSR project design would follow Technical Memorandum 300.10, Implementation Stage Electromagnetic Compatibility Program Plan, the HSR Design Criteria Manual Chapter 26, which provides detailed electromagnetic compatibility (EMC) design criteria for the HSR systems and equipment, and HSR Design Criteria Manual Chapter 22, which addresses grounding requirements for third-party metallic structures, including fences and pipelines, which are parallel and adjacent to the California HSR System right-of-way. These documents describe the design practices to avoid EMI and to provide for HSR operational safety. Some measures of the ISEP include: ▪ During the planning stage through system design, the Authority would perform EMC/EMI safety analyses, which would include identification of existing nearby radio systems, design of systems to prevent EMI with identified neighboring uses, and incorporation of these design requirements into bid specifications used to procure radio systems. ▪ Pipelines and other linear metallic objects that are not sufficiently grounded through the direct contact with earth would be separately grounded in coordination with the affected owner or utility to avoid possible shock hazards. For cases where metallic fences are purposely electrified to inhibit livestock or wildlife from traversing the barrier, specific insulation design measures would be implemented. ▪ HSR standard corrosion protection measures would be implemented to eliminate risk of substantial corrosion of nearby metal objects.	Design/ Construction	Prepare technical memorandum/ Compliance reporting	Monthly	Contractor	Contractor/ Authority	Prepare EMI/EMF technical memorandum	Condition of design-build contract	Impact EMI/EMF #1: Temporary Impacts from Use of Heavy Construction Equipment Impact EMI/EMF #3: Temporary Impacts from Operation of Electrical Equipment Impact EMI/EMF #4: Permanent Human Exposure to EMF Impact EMI/EMF #5: People with Implanted Medical Devices and Exposure to EMF Impact EMI/EMF #6: Interference with Sensitive Equipment Impact EMI/EMF #7: EMI effects on Schools Impact EMI/EMF #8: Potential for Corrosion of Underground Pipelines and Cables, and Adjoining Rail Impact EMI/EMF #9: Potential for Nuisance Shocks Impact EMI/EMF #11: Effects Related to Adjacent Airports
Public Utilities and Energy										
PUE-IAMF#1	Design Measures	The HSR project design incorporates utilities and design elements that minimize electricity consumption (e.g., using regenerative braking, energy-saving equipment on rolling	Design/ Construction	Reporting	At incorporation or completion of design/monthly	Contractor	Contractor	Incorporation of utilities and design elements	Condition of design-build contract	Impact PU&E #9: Construction Energy Consumption Impact PU&E #16: Operational Energy

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		stock and at station facilities, implementing energy saving measures during construction, and automatic train operations to maximize energy efficiency during operations). Thus, the project would not overburden utility services. The design elements are included in the design-build contract. Additionally, the Authority has adopted a sustainability policy that establishes project design and construction requirements that avoid and minimize impacts.			reporting (during construction)			that minimize electrical consumption into design		Demand
PUE-IAMF#3	Public Notifications	Prior to construction in areas where utility service interruptions are unavoidable, the Contractor would notify the public through a combination of communication media (e.g., by phone, email, mail, newspaper notices, or other means) within that jurisdiction and the affected service providers of the planned outage. The notification would specify the estimated duration of the planned outage and would be published no fewer than 7 days prior to the outage. Construction would be coordinated to avoid interruptions of utility service to hospitals and other critical users. The Contractor would submit the public communication plan to the Authority 60 days in advance of the work for verification that appropriate messaging and notification are to be provided.	Pre-construction/ Construction	Public notification	Monthly	Contractor	Contractor	Public notification of utility service interruptions 60 days in advance of work for verification	Condition of design-build contract	Impact PU&E #1: Temporary Interruption of Utility Service
PUE-IAMF#4	Utilities and Energy	Prior to construction, the Contractor shall prepare a technical memorandum documenting how construction activities would be coordinated with service providers to minimize or avoid interruptions. It would include upgrades of existing power lines to connect the HSR system to existing utility substations. The technical memorandum shall be provided to the Authority for review and approval.	Design/ Pre-construction	Prepare a technical memorandum	At incorporation or completion of design/monthly reporting (during construction)	Contractor	Contractor	Prepare service provider coordination technical memorandum	Condition of design-build contract	Impact PU&E #1: Temporary Interruption of Utility Service Impact PU&E #2: Accidents and Disruption of Services Impact PU&E #3: Conflicts with Existing Utilities
Biological and Aquatic Resources										
BIO-IAMF#1	Designate Project Biologist, Designated Biologists, Species-Specific Biological Monitors and General Biological Monitors	At least 15 business days prior to commencement of any ground-disturbing activity (including but not limited to geotechnical investigations, utility realignments, creation of staging areas, or initial clearing and grubbing), the Authority will submit the name(s) and qualifications of project biologists, designated biologists, species-specific biological monitors, and general biological monitors retained to conduct biological resource monitoring activities and implement avoidance and minimization measures. No ground-disturbing activity would begin until the Authority has received written approval from the USFWS, the NMFS, where applicable, and the CDFW that the biologists and monitors have been approved to conduct the specified work. The project biologist is responsible for ensuring the timely implementation of the biological avoidance and minimization measures, as outlined in the Biological Resources Management Plan (BRMP), and for guiding and directing the work of the designated biologists and Biological Monitors.	Pre-construction	Compliance reporting	15-days prior to ground disturbance	Authority	Authority	Submit names of biologists and monitors to regulatory agencies	EMMA	Impact BIO #1: Construction Effects on Special-Status Plant Species Impact BIO #2: Construction Effects on Special-Status Wildlife Species Impact BIO #3 Construction Effects on Special-Status Natural Communities Impact BIO #4: Construction Effects on Wetlands and Other Aquatic Resources Impact BIO #5: Construction Effects on Wildlife Movement Impact BIO #6: Construction Effects on Protected Trees

IAMF	Title	IAMF Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Title
		Designated biologists will be responsible for directly overseeing and reporting the implementation of general and species-specific conservation measures. In some instances, designated biologists will only be approved for specific species, in which case they will only be authorized to conduct surveys and implement measures for the species for which they have been approved. Species-specific biological monitors will be responsible for implementation of species-specific measures for the species for which they have been approved and will report directly to a designated biologist. General biological monitors will report directly to a designated biologist or to the project biologist. General biological monitors will be responsible for conducting Worker Environmental Awareness Program (WEAP) training, implementing general conservation measures, conducting general compliance monitoring, and reporting on compliance monitoring activities. The term "project biologist" is used in these IAMFs to mean the project biologist, designated biologists, species-specific biological monitors, and general biological monitors, as appropriate. When the Authority is specified as implementing an IAMF, it is assumed that the Authority, or its contractor or agent, is implementing the IAMF under the supervision of biologists and biological monitors, as appropriate.								
BIO-IAMF#2	Facilitate Agency Access	Throughout the construction period, the Authority will allow access by the USFWS, NMFS, U.S. Army Corps of Engineers (USACE), CDFW, and State Water Resources Control Board (SWRCB) to the project site. Because of safety concerns, all visitors will check in with the Authority's resident engineer prior to entering the project footprint. In the event that agency personnel visit the project footprint, the Project Biologist will prepare a memorandum within 3 business days after the visit documenting the issues raised during the field meeting. The Project Biologist will report any issues regarding regulatory compliance raised by agency personnel to the Authority.	Construction	Compliance reporting	3 days after regulatory agency site visit	Contractor	Contractor	Prepare memorandum documenting agency site visit	Condition of design-build contract	Impact BIO #4: Construction Effects on Wetlands and Other Aquatic Resources
BIO-IAMF#3	Prepare Worker Environmental Awareness Program (WEAP) Training Materials and Conduct Construction Period WEAP Training	Prior to any ground-disturbing activity, the project biologist will prepare a WEAP for the purpose of training construction crews to recognize and identify sensitive biological resources that may be encountered in the project vicinity. The WEAP training materials will be submitted to the Authority for review and approval. A video of the WEAP training prepared and presented by the project biologist and approved by the Authority may be used if the project biologist is not available to present the training in person. At a minimum, WEAP training materials will include the following information: key provisions of FESA, CESA, the Bald and Golden Eagle Protection Act (BGEPA), the MBTA, Cal. Fish and Game Code 1600, Porter-Cologne, and the CWA; the consequences and penalties for violation of or	Pre-construction	Training program/ Reporting	Annual (training)/ Monthly (reporting)	Contractor/ Authority	Contractor/ Authority	Prepare WEAP/Annual (training)/ monthly (reporting)	WEAP	Impact BIO #1: Construction Effects on Special-Status Plant Species Impact BIO #2: Construction Effects on Special-Status Wildlife Species Impact BIO #3 Construction Effects on Special-Status Natural Communities Impact BIO #4: Construction Effects on Wetlands and Other Aquatic Resources Impact BIO #5: Construction Effects on Wildlife Movement Impact BIO #6: Construction Effects on Protected Trees

IAMF	Title	IAMF Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Title
		noncompliance with these laws, regulations, and project authorizations; identification and characteristics of special-status plants, special-status wildlife, jurisdictional waters, and special-status plant communities, and explanations about their ecological value; hazardous substance spill prevention and containment measures; the contact person in the event of the discovery of a dead or injured wildlife species; and review of avoidance, minimization, and mitigation measures. The project biologist will present WEAP training to all construction personnel before they work in the project footprint. As part of the WEAP training, construction timing in relation to species' habitat and life-stage requirements will be detailed and discussed on project maps, which will show areas of planned minimization and avoidance measures. Crews will be informed during the WEAP training that, except when necessary as determined in consultation with the project biologist, travel within the project footprint is restricted to established roadbeds, which include all pre-existing and project-constructed unimproved and improved roads. A fact sheet conveying this information will be prepared by the project biologist for distribution to the construction crews and others who enter the project footprint. Fact sheet information will be duplicated in a wallet-sized format and will be provided in other languages as necessary to accommodate non-English-speaking workers. All construction staff will attend the WEAP training prior to beginning work on-site and will attend the WEAP training on an annual basis thereafter. Upon completion of the WEAP training, each member of the construction crew will sign a form stating that they attended the training, understand the information presented, and agree to comply with the requirements set out in the WEAP training. The project biologist will submit the signed WEAP training forms to the Authority on a monthly basis. On an annual basis, the Authority will certify that WEAP training has been provided to all construction personnel. On a monthly basis, the project biologist will provide updates relevant to the training to construction personnel during the daily safety ("tailgate") meeting.							
BIO-IAMF#4	Conduct Operation and Maintenance Period Worker Environmental Awareness Program (WEAP) Training	Prior to initiating operation and maintenance (O&M) activities, O&M personnel will attend a WEAP training session arranged by the Authority. At a minimum, O&M WEAP training materials will include the following information: key provisions of FESA, CESA, the BGEPA, the MBTA, Porter-Cologne, and the CWA; the consequences and penalties for violation of/noncompliance with these laws and regulations and project authorizations; identification and characteristics of special-status plants, special-status wildlife, jurisdictional waters, and special-status plant communities and explanations about their ecological	Post-construction	Training program/ Reporting	Annual	Contractor/ Authority	Contractor/ Authority	WEAP Training/Annual reporting	WEAP	Impact BIO #7: Operation Effects on Special-Status Plant Species Impact BIO #9: Operations Effects on Special-Status Natural Communities Impact BIO #11: Operations Effects on Wildlife Movement Impact BIO #12: Operations Effects on Protected Trees

IAMF	Title	IAMF Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Title
		value; hazardous substance spill prevention and containment measures; and the contact person in the event of the discovery of a dead or injured wildlife species. The training will include an overview of provisions of the biological resources management plan, annual vegetation, and management plan, weed control plan, and security fencing and wildlife exclusion fencing maintenance plans pertinent to O&M activities. A fact sheet prepared by the Authority's environmental compliance staff will be prepared for distribution to the O&M employees. The training will be provided by the Authority's environmental compliance staff. The training sessions will be provided to employees prior to their involvement in any O&M activity and will be repeated for all O&M employees on an annual basis. Upon completion of the WEAP training, O&M employees will, in writing, verify their attendance at the training sessions and confirm their willingness to comply with the requirements set out in those sessions.								
BIO-IAMF#5	Prepare and Implement a Biological Resources Management Plan	Prior to any ground-disturbing activity, the project biologist will prepare the BRMP, which would include a compilation of the biological resources avoidance and minimization measures applicable to the HSR section. All project environmental plans, such as the Restoration and Revegetation Plan (RPP) and Weed Control Plan (WCP), will be included as appendices to the BRMP. The BRMP is intended to serve as a comprehensive document that sets out the range of avoidance and minimization measures to support the appropriate and timely implementation of those measures. The implementation of these measures will be tracked through the final design, construction, and operation phases. The BRMP will contain, but not be limited to, the following information: ▪ A master schedule that shows construction of the project, pre-construction surveys, and establishment of buffers and exclusions zones to protect sensitive biological resources. ▪ Specific measures for the protection of special-status species. ▪ Identification (on construction plans) of the locations and quantity of habitats to be avoided or removed, along with the locations where habitats are to be restored. ▪ Identification of agency-approved project biologists(s) and biological monitors(s), including those responsible for notification and report of injury or death of federally or State-listed species. ▪ Measures to preserve topsoil and control erosion. ▪ Design of protective fencing around environmentally sensitive areas (ESA) and the construction staging areas.	Pre-construction	Prepare plan	Prior to any ground-disturbing activity	Contractor	Contractor	Prepare BRMP	USFWS, USACE, SWRCB, and CDFW permits	Impact BIO #1: Construction Effects on Special-Status Plant Species Impact BIO #2: Construction Effects on Special-Status Wildlife Species Impact BIO #3 Construction Effects on Special-Status Natural Communities Impact BIO #4: Construction Effects on Wetlands and Other Aquatic Resources Impact BIO #5: Construction Effects on Wildlife Movement Impact BIO #6: Construction Effects on Protected Trees Impact BIO #7: Operations Effects on Special-Status Plant Species Impact BIO #9: Operations Effects on Special-Status Natural Communities Impact BIO #10: Operations Effects on Wetlands and Other Aquatic Resources Impact BIO #11: Operations Effects on Wildlife Movement Impact BIO #12: Operations Effects on Protected Trees

IAMF	Title	IAMF Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Title
		▪ Locations of trees to be protected as wildlife habitat (roosting sites) and locations for planting replacement trees. ▪ Specification of the purpose, type, frequency, and extent of chemical use for insect and disease control operations as part of vegetative maintenance within sensitive habitat areas. ▪ Specific measures for the protection of vernal pool habitat and riparian areas. These measures may include erosion and siltation control measures, protective fencing guidelines, dust control measures, grading techniques, construction area limits, and biological monitoring requirements. ▪ Provisions for biological monitoring during ground-disturbing activities to confirm compliance and success of protective measures. The monitoring will: (1) identify specific locations of wildlife habitat and sensitive species to be monitored; (2) identify the frequency of monitoring and the monitoring methods (for each habitat and sensitive species to be monitored); (3) list required qualifications of biological monitor(s); (4) identify the reporting requirements; and (5) provide an accounting of impacts to special-status species habitat compared to pre-construction impact estimates. The BRMP will be submitted to the Authority for review and approval prior to any ground-disturbing activity.								
BIO-IAMF#6	Establish Monofilament Restrictions	Prior to any ground-disturbing activity, the project biologist will verify that plastic monofilament netting (erosion control matting) or similar material is not being used as part of erosion control activities. The project biologist will identify acceptable material for such use, including: geomembranes, coconut coir matting, tackified hydroseeding compounds, and rice straw wattles (e.g., Earthsaver™ wattles: biodegradable, photodegradable, burlap). Within developed or urban areas, the project biologist may allow exceptions to the restrictions on the type of erosion control material if the project biologist determines that the construction area is of sufficient distance from natural areas to ensure the avoidance of potential impacts on wildlife.	Pre-construction	Compliance reporting	Prior to any ground-disturbing activity	Contractor	Contractor	Monthly reporting	Condition of design-build contract	Impact BIO #5: Construction Effects on Wildlife Movement
BIO-IAMF#7	Prevent Entrapment in Construction Materials and Excavations	At the end of each work day during construction, the Authority will cover all excavated, steep-sided holes or trenches more than 8 inches deep and that have sidewalls steeper than 1:1 (45-degree) slope with plywood or similar materials, or provide a minimum of one escape ramp per 100 feet of trenching (with slopes no greater than 3:1) constructed of earth fill or wooden planks. The Project Biologist will thoroughly inspect holes and trenches for trapped animals at the start and end of each work day.	Construction	Monitoring/ Compliance reporting	Daily monitoring/ Monthly reporting	Contractor	Contractor	Daily monitoring/ monthly reporting	Condition of design-build contract	Impact BIO #5: Construction Effects on Wildlife Movement

IAMF	Title	IAMF Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Title
		The Authority will screen, cover, or elevate at least 1 foot above ground all construction pipe, culverts, or similar structures with a diameter of 3 inches or greater that are stored overnight within the project footprint. These pipes, culverts, and similar structures will be inspected by the Project Biologist for wildlife before such material is moved, buried, or capped.								
BIO-IAMF#8	Delineate Equipment Staging Areas and Traffic Routes	Prior to any ground-disturbing activity, the Authority will establish staging areas for construction equipment in areas that minimize effects on sensitive biological resources, including habitat for special-status species, seasonal wetlands, and wildlife movement corridors. Staging areas (including any temporary material storage areas) will be located in areas that would be occupied by permanent facilities, where practicable. Equipment staging areas will be identified on final project construction plans. The Authority will flag and mark access routes to ensure that vehicle traffic within the project footprint is restricted to established roads, construction areas, and other designated areas.	Pre-construction	Compliance reporting	Prior to any ground-disturbing activity	Contractor	Contractor	Monthly reporting	Condition of design-build contract	Impact BIO #1: Construction Effects on Special-Status Plant Species Impact BIO #2: Construction Effects on Special-Status Wildlife Species Impact BIO #3 Construction Effects on Special-Status Natural Communities Impact BIO #4: Construction Effects on Wetlands and Other Aquatic Resources Impact BIO #5: Construction Effects on Wildlife Movement Impact BIO #6: Construction Effects on Protected Trees
BIO-IAMF#9	Dispose of Construction Spoils and Waste	During ground-disturbing activities, the Authority may temporarily store excavated materials produced by construction activities in areas at or near construction sites within the project footprint. Where practicable, the Authority will return excavated soil to its original location to be used as backfill. Any excavated waste materials unsuitable for treatment and reuse will be disposed at an off-site location, in conformance with applicable State and federal laws.	Construction	Compliance reporting	Monthly	Authority	Contractor	Monthly reporting	Condition of design-build contract	Impact BIO #1: Construction Effects on Special-Status Plant Species Impact BIO #3 Construction Effects on Special-Status Natural Communities Impact BIO #4: Construction Effects on Wetlands and Other Aquatic Resources Impact BIO #5: Construction Effects on Wildlife Movement Impact BIO #6: Construction Effects on Protected Trees Impact HWR #3: Temporary Impacts on Surface Water Quality during Construction
BIO-IAMF#10	Clean Construction Equipment	Prior to any ground-disturbing activity, the Authority will ensure that all equipment entering the Work Area is free of mud and plant materials. The Authority will establish vehicle cleaning locations designed to isolate and contain organic materials and minimize opportunities for weeds and invasive species to move in and out of the project footprint. Cleaning may be done by washing with water, blowing with compressed air, brushing, or other hand cleaning. The cleaning areas will be located so as to avoid impacts on surface waters and appropriate Stormwater Pollution Prevention Plan (SWPPP) best management practices (BMP) will be implemented so as to further control any potential for the spread of weeds or other invasive species. Cleaning stations will be inspected regularly (at least monthly).	Pre-construction	Compliance reporting	Prior to any ground-disturbing activity, monthly reporting	Authority	Contractor	Monthly reporting	Condition of design-build contract	Impact BIO #1: Construction Effects on Special-Status Plant Species Impact BIO #3 Construction Effects on Special-Status Natural Communities Impact BIO #4: Construction Effects on Wetlands and Other Aquatic Resources Impact BIO #6: Construction Effects on Protected Trees

IAMF	Title	IAMF Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Title
BIO-IAMF#11	Maintain Construction Sites	Prior to any ground-disturbing activity, the Authority will prepare a construction site BMP field manual. The manual will contain standard construction site housekeeping practices required to be implemented by construction personnel. The manual will identify BMPs for the following topics: temporary soil stabilization, temporary sediment control, wind erosion control, non-stormwater management, waste management and materials control, rodenticide use, and other general construction site cleanliness measures. All construction personnel will receive training on BMP field manual implementation prior to working within the project footprint. All personnel will acknowledge, in writing, their understanding of the BMP field manual implementation requirements. The BMP field manual will be updated by January 31 of each year. The Authority will provide, on an annual basis, training updates to all construction personnel.	Pre-construction	Reporting	Prior to any ground-disturbing activity, annual reporting	Authority	Contractor	Monthly reporting	Condition of design-build contract	Impact BIO #1: Construction Effects on Special-Status Plant Species Impact BIO #2: Construction Effects on Special-Status Wildlife Species Impact BIO #3 Construction Effects on Special-Status Natural Communities Impact BIO #4: Construction Effects on Wetlands and Other Aquatic Resources Impact BIO #5: Construction Effects on Wildlife Movement Impact BIO #6: Construction Effects on Protected Trees Impact HWR #1: Temporary Impacts on Drainage Patterns, Stormwater Runoff, and Hydraulic Capacity (Surface Water Hydrology) during Construction Impact HWR #3: Temporary Impacts on Surface Water Quality during Construction
BIO-IAMF#12	Design the Project to be Bird Safe	Prior to final construction design, the Authority will ensure that the catenary system, masts, and other structures such as fencing are designed to be bird and raptor-safe in accordance with the applicable recommendations presented in *Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 2006 (APLIC 2006) and Reducing Avian Collisions with Power Lines: State of the Art in 2012* (APLIC 2012), including recommendations made by the Authority's Bird Electrocution Avoidance Configuration Working Group. Applicable APLIC recommendations include, but are not limited to: ▪ Ensuring sufficient spacing of phase conductors to prevent bird electrocution ▪ Configuring lines to reduce vertical spread of lines and/or decreasing the span length if such options are feasible ▪ Marking lines to increase the visibility of lines and reduce the potential for collision ▪ Installing perch deterrents to discourage bird presence near project facilities	Pre-construction	Design	Prior to final design	Authority	Authority	Bird and raptor-safe design catenary system, masts, and other structures such as fencing	Condition of design-build contract	Impact BIO#8 Operation Effects on Special-Status Wildlife

IAMF	Title	IAMF Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Title
Hydrology and Water Resources										
HYD-IAMF#1	Storm and Ground Water Management	Prior to construction, the contractor shall prepare a storm and groundwater management and treatment plan for review and approval by the Authority. During the detailed design phase, each receiving storm and groundwater system's capacity to accommodate project runoff would be evaluated. As necessary, on-site storm and groundwater management measures, such as detention or selected upgrades to the receiving system, would be designed to provide adequate capacity and to comply with the design standards in the latest version of Authority Technical Memorandum *2.6.5 Hydraulics and Hydrology Guidelines*. On-site storm and groundwater management facilities would be designed and constructed to capture runoff and provide treatment prior to discharge of pollutant-generating surfaces, including tunnels, trenches, station parking areas, access roads, new road over- and underpasses, reconstructed interchanges, and new or relocated roads and highways. Low-impact development techniques would be used to detain runoff on site and to reduce off site runoff such as constructed wetland systems, biofiltration and bioretention systems, wet ponds, organic mulch layers, planting soil beds, and vegetated systems (biofilters), such as vegetated swales and grass filter strips, would be used where appropriate.	Design	Prepare plan	At incorporation or completion of design	Contractor	Contractor	Prepare a stormwater management and treatment plan	Condition of design-build contract	Impact HWR #2: Permanent Impacts on Drainage Patterns, Stormwater Runoff, and Hydraulic Capacity (Surface Water Hydrology) during Construction Impact HWR #4: Permanent Impacts on Surface Water Quality during Construction Impact HWR #6: Permanent Impacts on Groundwater Volume, Quality, and Recharge during Construction Impact HWR #10: Intermittent Continuous Permanent Surface Water Quality during Operations Impact HWR #11: Intermittent and Continuous Permanent Impacts on Groundwater Volume, Quality, and Recharge during Operations Impact BIO #1: Construction Effects on Special-Status Plant Species Impact BIO #2: Construction Effects on Special-Status Wildlife Species Impact BIO #3 Construction Effects on Special-Status Natural Communities Impact BIO #4: Construction Effects on Wetlands and Other Aquatic Resources Impact BIO #6: Construction Effects on Protected Trees Impact BIO #10: Operation Effects on Wetlands and Other Aquatic Resources Impact PU&E #13: Effects on Storm Drain Facilities during Operation
HYD-IAMF#2	Flood Protection	Prior to construction, the contractor shall prepare a flood protection plan for Authority review and approval. The project would be designed both to remain operational during flood events and to minimize increases in 100-year or 200-year flood elevations, as applicable to locale. Design standards will include the following: ▪ Establish track elevation to prevent saturation and infiltration of stormwater into the sub-ballast. ▪ Minimize development within the floodplain, to such an extent that water surface elevation in the floodplain would not increase by more than 1 foot, or as required by state or local agencies, during the 100-year or 200-year flood flow [as applicable to locale]. Avoid placement of facilities in the floodplain or raise the ground with fill above the base-flood elevation.	Design	Prepare plan	At incorporation or completion of design	Contractor	Contractor	Prepare flood protection plan	Condition of design-build contract	Impact HWR#2: Permanent Impacts on Drainage Patterns, Stormwater Runoff, and Hydraulic Capacity (Surface Water Hydrology) during Construction Impact HWR#8: Permanent Impact on Floodplains during Construction Impact PU&E #13: Effects on Storm Drain Facilities during Operation Impact BIO #1: Construction Effects on Special-Status Plant Species Impact BIO#2: Construction Effects on Special-Status Wildlife Species Impact BIO #3: Construction Effects on Special-Status Plant Communities

IAMF	Title	IAMF Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Title
		▪ Design the floodplain crossings to maintain a 100-year floodwater surface elevation of no greater than 1 foot above current levels, or as required by state or local agencies, and project features within the floodway itself would not increase existing 100-year floodwater surface elevations in Federal Emergency Management Agency-designated floodways, or as otherwise agreed upon with the county floodplains manager. The following design standards would minimize the effects of pier placement on floodplains and floodways: ▪ Design site crossings to be as nearly perpendicular to the channel as feasible to minimize bridge length. ▪ Orient piers to be parallel to the expected high-water flow direction to minimize flow disturbance. ▪ Elevate bridge crossings at least 3 feet above the high-water surface elevation to provide adequate clearance for floating debris, or as required by local agencies. ▪ Conduct engineering analyses of channel scour depths at each crossing to evaluate the depth for burying the bridge piers and abutments. Implement scour-control measures to reduce erosion potential. ▪ Use quarry stone, cobblestone, or their equivalent for erosion control along rivers and streams, complimented with native riparian plantings or other natural stabilization alternatives that would restore and maintain a natural riparian corridor. ▪ Place bedding materials under the stone protection at locations where the underlying soils require stabilization as a result of stream flow velocity.								Impact BIO #4: Construction Effects on Aquatic Resources Impact BIO #5: Construction Effects on Wildlife Movement Impact BIO #6: Construction Effects on Protected Trees Impact BIO #7: Operational Effects on Special-Status Plant Species Impact BIO #8: Operational Effects on Special-Status Wildlife Species Impact BIO #9: Operation Effects on Special-Status Plant Communities Impact BIO #10: Operation Effects on Aquatic Resources Impact BIO #11: Operation Effects on Wildlife Movement Impact BIO #12: Operation Effects on Protected Trees Impact S&S #16: Hazards to High-Speed Rail Passengers and Employees from Extreme Weather Conditions
HYD-IAMF#3	Prepare and Implement a Construction Stormwater Pollution Prevention Plan	Although the project is not required to obtain coverage under the SWRCB Construction General Permit, prior to construction (any ground-disturbing activities), the contractor shall comply with the SWRCB Construction General Permit requiring preparation and implementation of a SWPPP. The Construction SWPPP would propose BMPs to minimize potential short-term increases in sediment transport caused by construction, including erosion control requirements, stormwater management, and channel dewatering for affected stream crossings. These BMPs would include measures to incorporate permeable surfaces into facility design plans where feasible, and how treated stormwater would be retained or detained on site. Other BMPs shall include strategies to manage the amount and quality of overall stormwater runoff. The Construction SWPPP would include measures to address, but are not limited to, the following: ▪ Hydromodification management to verify maintenance of pre-project hydrology by emphasizing on-site retention of	Pre-construction/ Construction	Permit compliance	At incorporation or completion of design/during monthly construction report	Contractor	Contractor	Prepare construction SWPPP	Condition of design-build contract	Impact HWR #1: Temporary Impacts on Drainage Patterns, Stormwater Runoff, and Hydraulic Capacity (Surface Water Hydrology) during Construction Impact HWR #3: Temporary Impacts on Surface Water Quality during Construction Impact HWR #5: Temporary Impacts on Groundwater Volume, Quality, and Recharge during Construction Impact HWR #7: Temporary Impact on Floodplains during Construction Impact PU&E #5: Effects on Stormwater Infrastructure during Construction Impact BIO #1: Construction Effects on Special-Status Plant Species Impact BIO #3 Construction Effects on Special-Status Natural Communities

IAMF	Title	IAMF Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Title
		stormwater runoff using measures such as flow dispersion, infiltration, and evaporation (supplemented by detention where required). Additional flow control measures would be implemented where local regulations or drainage requirements dictate. ▪ Implementing practices to minimize the contact of construction materials, equipment, and maintenance supplies with stormwater. ▪ Limiting fueling and other activities using hazardous materials to areas distant from surface water, providing drip pans under equipment, and daily checks for vehicle condition. ▪ Implementing practices to reduce erosion of exposed soil, including soil stabilization, regular watering for dust control, perimeter siltation fences, and sediment catchment basins. ▪ Implementing practices to maintain current water quality, including siltation fencing, wattle barriers, stabilized construction entrances, grass buffer strips, ponding areas, organic mulch layers, inlet protection, storage tanks, and sediment traps to arrest and settle sediment. ▪ Where feasible, avoiding areas that may have substantial erosion risk, including areas with erosive soils and steep slopes. ▪ Using diversion ditches to intercept surface runoff from off-site. ▪ Where feasible, limiting construction to dry periods when flows in waterbodies are low or absent. ▪ Implementing practices to capture and provide proper off-site disposal of concrete wash water, including isolation of runoff from fresh concrete during curing to prevent it from reaching the local drainage system, and possible treatments (e.g., dry ice). ▪ Developing and implementing a spill prevention and emergency response plan to handle potential fuel and/or hazardous material spills. Implementation of a SWPPP would be performed by the construction contractor as directed by the contractor's Qualified SWPPP Practitioner or designee. As part of that responsibility, the effectiveness of construction BMPs must be monitored before, during and after storm events. Records of these inspections and monitoring results will be maintained by the construction contractor.								Impact BIO #4: Construction Effects on Wetlands and Other Aquatic Resources Impact BIO #6: Construction Effects on Protected Trees Impact HMW #2: Hazards Due to Reasonably Foreseeable Upset and Accident Conditions That Involve the Release of Hazardous Materials during Construction Impact GSSPR #6: Soil Erosion during Construction

IAMF	Title	IAMF Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Title
Geologic, Soils, Seismicity, and Paleontological Resources										
GEO-IAMF#1	Geologic Hazards	Prior to construction, the Contractor shall prepare a Construction Management Plan (CMP) addressing how the Contractor would address geologic constraints and minimize or avoid impacts on geologic hazards during construction. The plan would be submitted to the Authority for review and approval. At a minimum, the plan would address the following geological and geotechnical constraints/resources: a. Groundwater Withdrawal — Controlling the amount of groundwater withdrawal from the project, by re-injecting groundwater at specific locations if necessary, or using alternate foundation designs to offset the potential for settlement. This control is important for locations with retained cuts in areas where high groundwater exists, and where existing buildings are located near the depressed track section. b. Unstable Soils — Employing various methods to mitigate for the risk of ground failure from unstable soils. If soft or loose soils are encountered at shallow depths, they can be excavated and replaced with competent soils. To limit the excavation depth, replacement materials can also be strengthened using geosynthetics. Where unsuitable soils are deeper, ground improvement methods, such as stone columns, cement deep-soil-mixing, or jet-grouting, can be used. Alternatively, if sufficient construction time is available, preloading—in combination with prefabricated vertical drains (wicks) and staged construction—can be used to gradually improve the strength of the soil without causing bearing-capacity failures. c. Subsidence — The Authority addresses subsidence in its design and construction processes. For the initial design, survey monuments were installed to establish a datum and set an initial track profile. In the construction phase, the design-build contractors for track bed preparation would conduct topographic surveys for preparation of final design. Because subsidence could have occurred since the original benchmarks (survey monuments) were established, the design-build contractor's topographic surveys would be used to help determine whether subsidence has occurred. The updated topographic surveys would also be used to establish the top of rail elevations for final design where the HSR system is outside established floodplain areas and above water surface elevations. Where the HSR system is in floodplain areas susceptible to flooding, consideration would be given to overbuild the height of the rail bed in	Design/ Construction	Prepare plan	At incorporation or completion of design/during monthly construction report	Contractor	Contractor	Prepare Construction Management Plan (CMP)	Condition of design-build contract	Impact GSSPR #1: Surface Fault Rupture during Construction Impact GSSPR #2: Seismic Ground Shaking during Construction Impact GSSPR #3: Liquefaction and Other Types of Seismically Induced Ground Failure during Construction Impact GSSPR #5: Seismically Induced Slope Failure Hazards Associated with Landslides and Cut-and-Fill Slopes during Construction Impact GSSPR #6: Soil Erosion during Construction Impact GSSPR #7: Unstable or Collapsible Soils during Construction Impact GSSPR #9: Difficult Excavation Related to Encountering Cobbles or Boulders during Construction Impact GSSPR #10: Soil Corrosion and Expansion during Construction Impact GSSPR #11: Availability of Mineral Resources during Construction Impact GSSPR #13: Geologic Units Sensitive to Paleontological Resources during Construction Impact GSSPR #16: Liquefaction and Other Types of Seismically Induced Ground Failure during Operation Impact GSSPR #20: Unstable or Collapsible Soils During Operation Impact GSSPR #21: Ground Subsidence during Operation Impact GSSPR #23: Soil Corrosion and Expansion Hazards during Operation Impact HWR #5: Temporary Impacts on Groundwater Volume, Quality, and Recharge during Construction

IAMF	Title	IAMF Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Title
		anticipation of future subsidence. d. Water and Wind Erosion — The Contractor would implement erosion control methods as appropriate from the various erosion control methods documented in the Construction SWPPP (See HYD-IAMF#3), the Caltrans Construction Manuals, and the construction technical memorandum (see GEO-IAMF#6), and in coordination with other erosion, sediment, stormwater management and fugitive dust control efforts. Water and wind erosion control methods may include, but are not limited to, use of revegetation, stabilizers, mulches, and biodegradable geotextiles. e. Soils with Shrink-Swell Potential — In locations where shrink-swell potential is marginally unacceptable, soil additives would be mixed with existing soil to reduce the shrink-swell potential. Construction specifications would be based upon the decision whether to remove or treat the soil. This decision is based on the soils, specific shrink-swell characteristics, the additional costs for treatment versus excavation and replacement, as well as the long-term performance characteristics of the treated soil. f. Soils with Corrosive Potential — In locations where soils have a potential to be corrosive to steel and concrete, the soils would be removed and buried structures would be designed for corrosive conditions, and corrosion-protected materials would be used in infrastructure. g. Health and Safety Plan. Contractor shall be responsible for developing and deploying a health and safety plan. The plan will include weekly monitoring requirements and response protocols for exposure of personnel to constituents of concern identified in the Phase II Environmental Site Assessment(s).							
GEO-IAMF#2	Slope Monitoring	During O&M, the Authority shall incorporate slope monitoring by a Registered Engineering Geologist into the Operations and Maintenance procedures. The procedures shall be implemented at sites identified in the Construction Management Plan (CMP) where a potential for long-term instability exists from gravity or seismic loading including but not limited to at-grade sections where slope failure could result in loss of track support or where slope failure could result in additional earth loading to foundations supporting elevated structures.	Operation	Prepare plan/ Monitoring	Monthly during operation	Authority	Contractor	Slope monitoring during operation	Condition of design-build contract	Impact GSSPR #16: Liquefaction and Other Types of Seismically Induced Ground Failure during Operation Impact GSSPR #18: Seismically Induced Slope Failure Hazards Associated with Landslides and Cut-and-Fill Slopes during Operation
GEO-IAMF#3	Gas Monitoring	Prior to Construction, the Contractor shall prepare a CMP addressing how gas monitoring would be incorporated into construction best management practices. The CMP would be submitted to the Authority for review and approval. Hazards	Design/ Construction	Prepare plan/ Design	Prior to construction	Contractor	Contractor	Preparation of a Construction Management Plan	Condition of design-build contract	Impact HMW #6: Risks during Construction on or near Landfills and Oil and Gas Wells

IAMF	Title	IAMF Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Title
		related to potential migration of hazardous gases due to the presence of known oil and gas fields, areas of active or historic landfills, Superfund site, or other subsurface sources can be reduced or eliminated by following strict federal and state Occupational Safety & Health Administration (OSHA/Cal-OSHA) regulatory requirements for excavations, and by consulting with other agencies as appropriate, such as the Department of Conservation (Division of Oil and Gas) and the California Environmental Protection Agency, Department of Toxic Substances Control, regarding known areas of concern. Practices would include using safe and explosion-proof equipment during construction, and testing for gases regularly. Installation of passive or active gas venting systems, gas collection systems, as well as active monitoring systems and alarms would be required in underground construction areas and facilities where subsurface gases are present. Installing gas-detection systems can monitor the effectiveness of these systems during construction and operation of the proposed project.								Impact GSSPR#12: Potential Exposure to Hazardous Gases during Construction
GEO-IAMF#4	Historic or Abandoned Mines and Other Toxic Sites	Prior to Construction, the Contractor shall prepare a CMP addressing how historic and abandoned mines and other toxic sites would be incorporated into construction BMPs. The CMP would be submitted to the Authority for review and approval. Depending on the properties of an individual site, mitigations to address historic or abandoned sites could include: ▪ Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Cleanup. Environmental cleanups at sites that are releasing or threatening to release hazardous substances such as heavy metals from acid mine drainage and contaminated water and vapors. ▪ Non-CERCLA Cleanup. Cleanups of non-hazardous substance-related surface disturbance such as revegetation of disturbed areas, stabilization of mine tailings, reconstruction of stream channels and floodplains. ▪ Safety Mitigation. Mitigation of physical safety hazards such as closure of adits and shafts and removal of dangerous structures.	Design/ Construction	Prepare plan/ Design	Prior to construction	Contractor	Contractor	Preparation of a Construction Management Plan	Condition of design-build contract	Impact GSSPR #11: Availability of Mineral Resources during Construction
GEO-IAMF#5	Hazardous Materials, Soils, or Vapors	Prior to Construction, the Contractor shall prepare a CMP addressing how the contractor would minimize or avoid impacts related to hazardous minerals (i.e., radon, mercury, tetrachloroethylene, trichloroethylene, and naturally occurring asbestos [NOA]), soils, or vapors during construction. The CMP would be submitted to the Authority for review and approval. The CMP shall include appropriate provisions for handling hazardous mineral, soils, or vapors including, but	Design/ Construction	Design/ Monitoring/ Reporting	Prior to construction	Contractor	Contractor	Preparation of a Construction Management Plan	Condition of design-build contract	Cumulative Construction Impacts to Paleontological Resources

IAMF	Title	IAMF Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Title
		not limited to, dust control, control of soil erosion and water runoff, vapor control, and testing and proper disposal of excavated material. The CMP shall include an effective monitoring and cleanup program to be developed and implemented for spills and leaks of any hazardous materials. For operations, the Authority shall prepare and deploy an Emergency Response Procedure Plan. In the unlikely event of a major hazardous materials release close to or in the vicinity of the Project, the Authority will develop emergency response procedures in conformance with Federal, State, and local regulations.								
GEO-IAMF#6	Ground Rupture Early Warning Systems	Prior to Construction, the Contractor shall document how the project design incorporates installation of early warning systems, triggered by strong ground motion association with ground rupture. Known nearby active faults would be monitored. Linear monitoring systems, such as time domain reflectometers or similar technology, shall be installed along rail lines in the zone of potential ground rupture. These devices emit electronic information that is processed in a centralized location and would be used to temporarily control trains, thus reducing accidents due to fault creep. Damage to infrastructure from fault creep can be mitigated with routine maintenance, including minor realignment.	Design/ Construction	Design/ Monitoring	Prior to construction	Contractor	Contractor	Preparation of a Construction Management Plan	Condition of design-build contract	Impact GSSPR #14: Surface Fault Rupture during Operation Impact GSSPR #15: Seismic Ground Shaking during Operation
GEO-IAMF#7	Evaluate and Design for Large Seismic Ground Shaking	Prior to Construction, the Contractor shall document through preparation of a technical memorandum how all HSR components were evaluated and designed for large seismic ground shaking. Prior to final design, the Contractor would conduct additional seismic studies to establish up-to-date estimation of levels of ground motion. The most current Caltrans seismic design criteria at the time of design would be used in the design of any structures supported in or on the ground. These design procedures and features reduce to the greatest practical extent for potential movements, shear forces, and displacements that result from inertial response of the structure. In critical locations, pendulum base isolators may be used to reduce the levels of inertial forces. New composite materials may also be used to enhance seismic performance.	Design	Design/Studies	Prior to final design	Contractor/ Authority	Contractor/ Authority	At incorporation or completion of design	Seismic ground shaking design technical memorandum	Impact GSSPR #1: Surface Fault Rupture during Construction Impact GSSPR #5: Seismically Induced Slope Failure Hazards Associated with Landslides and Cut-and-Fill Slopes during Construction Impact GSSPR #15: Seismic Ground Shaking during Operation
GEO-IAMF#8	Suspension of Operations during an Earthquake	Prior to O&M activities, the Contractor shall document in a technical memorandum how suspension of operations during or after an earthquake was addressed in project design. Motion-sensing instruments to provide ground-motion data and a control system to shut down HSR operations temporarily during or after a potentially damaging earthquake would be incorporated into final design. Monitoring equipment would be installed at select locations where high ground motions could occur. The system would then be inspected for	Design/ Construction/ Operation	Reporting	Prior to O&M activities	Contractor/ Authority	Contractor/ Authority	At incorporation or completion of design/during monthly construction report	Technical memorandum prepared as needed based on an earthquake event	Impact GSSPR#14: Surface Fault Rupture to People and Property during Operation Impact GSSPR#15: Seismic Ground Shaking to People and Property during Operation Impact S&S #7: High-Speed Rail Accidents Associated with Seismic Events

IAMF	Title	IAMF Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Title
		damage due to ground motion and/or ground deformation, and then returned to service when appropriate.								
GEO-IAMF#9	Subsidence Monitoring	Prior to Operations and Maintenance, the Authority shall develop a stringent track monitoring program. Once tracks are operational, a remote monitoring program would be implemented to monitor the effects of ongoing subsidence. Track inspection systems would provide early warning of reduced track integrity. HSR train sets would be equipped with autonomous equipment for daily track surveys. This specification would be added to HSR train bid packages. If monitoring indicates that track tolerances are not met, trains would operate at reduced speed until track tolerances are restored. In addition, the contractor responsible for wayside maintenance would be required to implement a stringent program for track maintenance.	Design/ Operation	Program development	Monthly	Authority	Contractor	Develop a stringent track monitoring program	Condition of design-build contract	Impact GSSPR#21: Ground Subsidence during Operation
GEO-IAMF#10	Geology and Soils	Prior to construction, the Contractor shall document through issuance of a technical memorandum how the following guidelines and standards have been incorporated into facility design and construction: ▪ 2015 American Association of State Highway and Transportation Officials (AASHTO) Load and Resistance Factor Bridge Design Specifications and the 2015 AASHTO Guide Specifications for Load and Resistance Factor Seismic Bridge Design, or their most recent versions. These documents provide guidance for characterization of soils, as well as methods to be used in the design of bridge foundations and structures, retaining walls, and buried structures. These design specifications would provide minimum specifications for evaluating the seismic response of the soil and structures. ▪ Federal Highway Administration (FHWA) Circulars and Reference Manuals: These documents provide detailed guidance on the characterization of geotechnical conditions at sites, methods for performing foundation design, and recommendations on foundation construction. These guidance documents include methods for designing retaining walls used for retained cuts and retained fills, foundations for elevated structures, and at-grade segments. Some of the documents include guidance on methods of mitigating geologic hazards that are encountered during design. ▪ American Railway Engineering and Maintenance-of-Way Association (AREMA) Manual: These guidelines deal with rail systems. Although they cover many of the same general topics as American Association of State Highway and Transportation Officials manuals, they are more focused on best practices for rail systems. The manual includes principles, data, specifications, plans, and	Design/ Construction/ Operation	Design/ Reporting	At incorporation or completion of design/during monthly construction reporting	Contractor	Contractor	Prepare technical memorandum/ Implementation of guidelines during design, construction, and operation phases	Condition of design-build contract	Impact GSSPR #1: Surface Fault Rupture during Construction Impact GSSPR #2: Seismic Ground Shaking during Construction Impact GSSPR #3: Liquefaction and Other Types of Seismically Induced Ground Failure during Construction Impact GSSPR #5: Seismically Induced Slope Failure Hazards Associated with Landslides and Cut-and-Fill Slopes during Construction Impact GSSPR #6: Soil Erosion during Construction Impact GSSPR #7: Unstable or Collapsible Soils during Construction Impact GSSPR #9: Difficult Excavation Related to Encountering Cobbles or Boulders during Construction Impact GSSPR#10: Soil Corrosion and Expansion during Construction Impact GSSPR#16: Liquefaction and Other Types of Seismically Induced Ground Failure during Operation Impact GSSPR#23: Soil Corrosion and Expansion Hazards during Operation Impact S&S #8: Risk of Fire

IAMF	Title	IAMF Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Title
		economics pertaining to the engineering, design, and construction of railways. ▪ California Building Code: The code is based on 2015 International Building Code (IBC). This code contains general building design and construction requirements relating to fire and life safety, structural safety, and access compliance. ▪ International Building Code and American Society of Civil Engineers (ASCE)-7: These codes and standards provide minimum design loads for buildings and other structures. They would be used for the design of the maintenance facilities and stations. Sections in IBC and ASCE-7 provide minimum requirements for geotechnical investigations, levels of earthquake ground shaking, minimum standards for structural design, and inspection and testing requirements. ▪ Caltrans Design Standards: Caltrans has specific minimum design and construction standards for all aspects of transportation system design, ranging from geotechnical explorations to construction practices. These amendments provide specific guidance for the design of deep foundations that are used to support elevated structures, for design of mechanically stabilized earth (MSE) walls used for retained fills, and for design of various types of cantilever (e.g., soldier pile, secant pile, and tangent pile) and tie-back walls used for retained cuts. ▪ Caltrans Construction Manuals: Caltrans has a number of manuals including Field Guide to Construction Dewatering, Caltrans Construction Site BMPs Manual and Construction Site BMP Field Manual and Troubleshooting Guide. These provide guidance and best management practices for dewatering options and management, erosion control and soil stabilization, non-stormwater management, and waste management at construction sites. ▪ American Society for Testing and Materials (ASTM): ASTM has developed standards and guidelines for all types of material testing, from soil compaction testing to concrete-strength testing. The ASTM standards also include minimum performance requirements for materials.							
GEO-IAMF#11	Engage a Qualified Paleontological Resources Specialist	Prior to the 90 percent design milestone for each construction package (CP) within the Project Section, the Contractor would retain a Paleontological Resources Specialist (PRS) responsible for: ▪ Reviewing the final design for the CP. ▪ Developing a detailed Paleontological Resources Monitoring and Mitigation Plan (PRMMP) for the CP	Design	Contractor would retain paleontological resources specialist	Prior to 90 percent design milestone for each CP	Contractor	Contractor	Retain PRS	Condition of design-build contract	Impact GSSPR #13: Geologic Units Sensitive for Paleontological Resources during Construction

IAMF	Title	IAMF Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Title
		▪ The PRS would be responsible for implementing the PRMMP, including development and delivery of WEAP training, supervision of Paleontological Resource Monitors (PRMs), and evaluation and treatment of finds, if any, and preparation o f a final paleontological mitigation report, per the PRMMP and for each CP. Retention of PRS staff would occur in a timely manner, in advance of the 90 percent design milestone for each CP, such that the PRS is on board and can review the 90 percent design submittal without delay when it becomes available. If feasible, the same PRS would be responsible for all CPs within a given Project Section. All PRS staff shall meet or exceed the qualifications for a Principal Paleontologist as defined in the Caltrans current *Standard Environmental Reference*, Chapter 8 (Caltrans 2012). Appointment of PRS staff would be subject to review and approval by the Authority.								

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GEO-IAMF#12	Perform Final Design Review and Triggers Evaluation	For each CP within the Project Section, the responsible PRS would evaluate the 90 percent design submittal to identify the portions of the CP that would involve work in paleontologically sensitive geologic units (either at the surface or in the subsurface), based on findings of the final Paleontological Resources Technical Report (TR) prepared for the Project Section. Evaluation would consider the location, areal extent, and anticipated depth of ground disturbance, the construction techniques that are planned/proposed, and the geology (i.e., location of geologic units with high paleontological resources) of the CP and vicinity. The evaluation and resulting recommendations would be consistent with guidance in the Society of Vertebrate Paleontology (SVP) *Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources* (SVP Impact Mitigation Guidelines Revision Committee 2010), *the SVP Conditions of Receivership for Paleontologic Salvage Collections* (SVP Conformable Impact Mitigation Guidelines Committee 1996), and relevant guidance from Chapter 8 of the current *Caltrans Standard Environmental Reference* (Caltrans 2012). The purpose of the Final Design Review and Triggers Evaluation would be to develop specific language detailing the location and duration of paleontological monitoring and other requirements for paleontological resources applicable to each CP within the Project Section. Paleontological protection requirements identified through the Final Design Review and Triggers Evaluation would be recorded in a concise technical memorandum (“Final Design Review Requirements for Paleontological Resources Protection”), which would then be incorporated in full detail into the PRMMP for each CP. Those portions of the CP requiring paleontological monitoring would also be clearly delineated in the project construction documents for each CP.	Design	Reporting	Prior to 90 percent design milestone for each CP	Contractor	Contractor	CP reporting	Condition of design-build contract	Impact GSSPR #13: Geologic Units Sensitive for Paleontological Resources during Construction
GEO-IAMF#13	Prepare and Implement Paleontological Resources Monitoring and Mitigation Plan (PRMMP)	Following the Final Design Review and Triggers Evaluation for each CP, the PRS would develop a CP-specific PRMMP. For greater efficiency, PRMMPs may be written such that they cover more than one CP, as long as the specific requirements of the IAMFs are satisfied explicitly and in detail for each CP included. The PRMMP for each CP would incorporate the findings of the Design Review and Triggers Evaluation for that CP and would be consistent with the SVP *Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources* (SVP Impact Mitigation Guidelines Revision Committee 2010), the *SVP Conditions of Receivership for Paleontologic Salvage Collections* (SVP Conformable Impact Mitigation Guidelines Committee 1996), and relevant guidance from Chapter 8 of the current *Caltrans*	Design	Prepare CP-specific PRMMP	Following the Final Design Review and Triggers Evaluation for each CP	Contractor	Contractor	CP reporting	Condition of design-build contract	Impact GSSPR #13: Geologic Units Sensitive for Paleontological Resources during Construction

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		Standard Environmental Reference (Caltrans 2012). As such, the PRMMP would provide for at least the following: ▪ Implementation of the PRMMP by qualified personnel, including the following positions: – Paleontological Resource Specialist: The PRS will be required to meet or exceed Principal Paleontologist Qualifications per Chapter 8 of the current Caltrans Standard Environmental Reference (Caltrans 2012). The Supervising Paleontologist may, but not necessarily, be the PRS who prepares the PRMMP. ▪ Development of pre-construction and construction-period coordination procedures and communications protocols. ▪ Evaluation as to whether a pre-construction survey by qualified personnel is warranted for the CP. In general, pre-construction surveys are beneficial if there is a strong possibility that significant paleontological resources (e.g., concentrations of vertebrate fossils) are exposed at the ground surface and would be destroyed during the initial clearing and grubbing phase of earthwork. Such a determination can usually be made during preparation of the paleontological resources TR. ▪ Requirements for paleontological monitoring by qualified personnel of all ground-disturbing activities known to affect, or potentially affect, highly sensitive geologic units and for ground-disturbing activities affecting other geologic units in any areas where the PRS considers it warranted based on the findings of the Paleontological Resources TR or any pre-construction surveys. In all areas of the CP subject to monitoring, monitoring would initially be conducted full-time for all ground-disturbing activities. However, the PRMMP may provide for monitoring frequency in any given location to be reduced once approximately 50 percent of the ground-disturbing activity in locations has been completed, if the reduction is appropriate based on the implementing PRS' professional judgment in consideration of actual site conditions. ▪ Provisions, if recommended by the PRS for paleontological monitoring of specific construction drilling operations. In general, small-diameter (i.e., less than 18 inches) drilling operations or drilling activities operations using bucket augers tend to pulverize impacted sediments and any contained fossils and are typically not monitored. The section in the PRMMP addressing monitoring program for drilling operations would rely, in part, on the information supplied by the CP design and geotechnical teams but would also take into consideration								

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		of the nature, depth, and location of drilling needed, and the anticipated equipment and staging configurations. ▪ Provisions for the content development and delivery of paleontological resources Worker Environmental Awareness Program (WEAP) training. ▪ Provisions for in-progress documentation of monitoring (and, if applicable, salvage/recovery operations) via "construction dailies" or a similar approved means. ▪ Provisions for a "stop work, evaluate, and treat appropriately" response in the event of a known or potential paleontological discovery, including finds in highly sensitive geologic units, as well as finds, if any, in geologic units identified as less sensitive, or nonsensitive, for paleontological resources. ▪ Provisions for sampling and recovery of unearthed fossils consistent with *SVP Standard Procedures* (SVP Impact Mitigation Guidelines Revision Committee 2010) and the SVP *Conditions of Receivership* (SVP Conformable Impact Mitigation Guidelines Committee 1996). Recovery procedures would provide for recovery of both macrofossils and microfossils. ▪ Provisions for acquiring a repository agreement from an approved regional repository for the curation, care, and storage of recovered materials, consistent with the SVP *Conditions of Receivership* (SVP Conformable Impact Mitigation Guidelines Committee 1996). If more than one repository institution is designated, separate repository agreements must be provided. ▪ Provisions for preparation of a final monitoring and mitigation report that meets the requirements of the Caltrans *Standard Environmental Reference* Chapter 8 provisions for the Paleontological Monitoring Report and Paleontological Stewardship Summary (Caltrans 2012). ▪ Provisions for the preparation, identification, and analysis and curation of fossil specimens and data recovered, consistent with the SVP *Conditions of Receivership* (SVP Conformable Impact Mitigation Guidelines Committee 1996) and any specific requirements of the designated repository institution(s).							

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GEO-IAMF#14	Provide WEAP Training for Paleontological Resources	Prior to groundbreaking for each CP within the Project Section, the Contractor would provide paleontological resources WEAP training delivered by the PRS. All management and supervisory personnel and construction workers involved with ground-disturbing activities would be required to take this training before beginning work on the project. Refresher training would also be made available to management and supervisory personnel and workers as needed, based on the judgment of the PRS. At a minimum, paleontological resources WEAP training would include information on: ▪ The coordination between construction staff and paleontological staff, ▪ The construction and paleontological staff roles and responsibilities in implementing the PRMMP, ▪ The possibility of encountering fossils during construction, ▪ The types of fossils that may be seen and how to recognize them, and ▪ The proper procedures in the event fossils are encountered, including the requirement to halt work in the vicinity of the find and procedures for notifying responsible parties in the event of a find. Training materials and formats may include, but are not necessarily limited to, in-person training, prerecorded videos, posters, and informational brochures that provide contacts and summarize procedures in the event paleontological resources are encountered. WEAP training contents would be subject to review and approval by the Authority. Paleontological resources WEAP training may be provided concurrently with cultural resources WEAP training. Upon completion of any WEAP training, the Contractor would require workers to sign a form stating that they attended the training and understand and would comply with the information presented. Verification of paleontological resources WEAP training will be provided to the Authority by the Contractor.	Pre-construction	Training program/ Reporting	Prior to groundbreaking for each CP within the Project Section , then annual (training)/ Monthly (reporting)	Contractor/ Authority	Contractor/ Authority	WEAP training	Condition of design-build contract	Impact GSSPR #13: Geologic Units Sensitive for Paleontological Resources during Construction
GEO-IAMF#15	Halt Construction, Evaluate, and Treat if Paleontological Resources Are Found	Consistent with the PRMMP, if fossil materials are discovered during construction, regardless of the individual making the discovery, all activity in the immediate vicinity of the discovery would halt and the find would be protected from further disturbance. If the discovery is made by someone other than the PRS or Paleontological Resource Monitors, the person who made the discovery would immediately notify construction supervisory personnel, who would in turn notify the PRS. Notification to the PRS would take place promptly (prior to the close of work the same day as the find), and the PRS would evaluate the find and prescribe appropriate	Construction	Reporting	Daily logs during active monitoring	Contractor	Contractor	Weekly reporting (if resource is identified during construction)	PRMMP, WEAP	Impact GSSPR #13: Geologic Units Sensitive for Paleontological Resources during Construction

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		treatment as soon as feasible. Work may continue on other portions of the CP while evaluation (and, if needed, treatment) takes place, as long as the find can be adequately protected in the judgment of the PRS. If the PRS determines that treatment (i.e., recovery and documentation) of unearthed fossil(s) is warranted, such treatment and any required reporting would proceed consistent with the PRMMP. The Contractor would be responsible for ensuring prompt and accurate implementation, subject to verification by the Authority. The stop work requirement does not apply to drilling operations because drilling typically cannot be suspended in mid-course. However, if finds are made during drilling, the same notification and other follow-up requirements would apply. The PRS would coordinate with construction supervisory and drilling staff regarding the handling of recovered fossils. The requirements of this IAMF would be detailed in the PRMMP and presented as part of the paleontological resources WEAP training.								
Hazardous Materials and Wastes										
HMW-IAMF#1	Property Acquisition Phase 1 and Phase 2 Environmental Site Assessments	During the right-of-way acquisition phase, Phase I environmental site assessments (ESA) shall be conducted in accordance with standard ASTM methodologies to characterize each parcel. The determination of parcels that require a Phase II ESA (e.g., soil, groundwater, soil vapor subsurface investigations) would be informed by a Phase I ESA and may require coordination with state and local agency officials. If the Phase II ESA concludes that the site is impacted, remediation or corrective action (e.g., removal of contamination, in-situ treatment, or soil capping) would be conducted with state and local agency officials (as necessary) and in full compliance with applicable state and federal laws and regulations.	Pre-construction/ Construction	Conduct Phase I and Phase II ESAs	During the right-of-way acquisition phase	Contractor	Contractor	Prepare Phase I and II ESAs	Condition of design-build contract	Impact HMW #2: Hazards Due to Reasonably Foreseeable Upset and Accident Conditions that Involve the Release of Hazardous Materials during Construction Impact HMW #3: Hazards Due to Project Location on Potential Environmental Concern Sites or Cortese List Sites during Construction Impact HMW #7: Hazard Due to the Routine Transport, Use, or Disposal of Hazardous Materials during Operation Impact HMW #8: Hazards Due to Reasonably Foreseeable Upset and Accident Conditions that Involve the Release of Hazardous Materials during Operation Impact HMW #9: Hazards Due to Project Location on Potential Environmental Concern Sites or Hazardous Material Sites Compiled Pursuant to Government Code Section 65962.5 during Operation Impact HMW #10: Emit Hazardous Emissions or Handle Hazardous or Acutely Hazardous Materials, Substances, or Waste within 0.25 Mile of a School during Operation

IAMF	Title	IAMF Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Title
										Impact HWR#3: Temporary Impacts on Surface Water Quality during Construction Impact HWR#10: Intermittent Continuous Permanent Surface Water Quality during Operations
HMW-IAMF#2	Landfill	Prior to Construction (any ground disturbing activities), the Contractor shall verify to the Authority through preparation of a technical memorandum that methane protection measures would be implemented for all work within 1,000 feet of a landfill, including gas detection systems and personnel training. This would be undertaken pursuant to State of California Title 27, Environmental Protection – Division 2, Solid Waste, and the hazardous materials best management practices plan.	Pre-construction	Prepare technical memorandum	Prior to Construction (any ground disturbing activities)	Contractor	Contractor	Prepare technical memorandum describing methane protection measures	Technical memorandum	Impact HMW #6: Risks during Construction on or near Landfills and Oil and Gas Wells Impact S&S #1: Accidents and Health Risks at Construction Sites
HMW-IAMF#3	Work Barriers	Prior to construction (any ground-disturbing activities), the Contractor shall verify to the Authority through preparation of a technical memorandum the use of work barriers. Nominal design variances, such as the addition of a plastic barrier beneath the ballast material to limit the potential release of volatile subsurface contaminants, may be implemented in conjunction with site investigation and remediation.	Pre-construction/ Construction	Prepare technical memorandum	Prior to Construction (any ground disturbing activities)	Contractor	Contractor	Prepare work barrier technical memorandum	Condition of design-build contract	Impact HMW #2: Hazards Due to Reasonably Foreseeable Upset and Accident Conditions That Involve the Release of Hazardous Materials during Construction
HMW-IAMF#4	Undocumented Contamination	Prior to construction, the Contractor shall prepare a CMP addressing provisions for the disturbance of undocumented contamination. The plan would be submitted to the Authority for review and approval. Undocumented contamination could be encountered during construction activities and the Contractor would work closely with local agencies to resolve any such encounters and address necessary clean-up or disposal. Copies of all required hazardous material documentation shall be provided within 30 days to the Authority.	Pre-construction/ Construction	Prepare plan/ Reporting	Prior to Construction	Contractor	Contractor	Prepare CMP/Reporting as needed	Condition of design-build contract	Impact HMW #2: Hazards Due to Reasonably Foreseeable Upset and Accident Conditions that Involve the Release of Hazardous Materials during Construction Impact HMW #3: Hazards Due to Project Location on Potential Environmental Concern Sites or Cortese List Sites during Construction
HMW-IAMF#5	Demolition Plans	Prior to Construction that involves demolition, the Contractor shall prepare demolition plans for the safe dismantling and removal of building components and debris. The demolition plans would include a plan for lead and asbestos abatement. The plans shall be submitted to the Project Construction Manager (PCM) on behalf of the Authority for verification that appropriate demolition practices have been followed consistent with federal and state regulations regarding asbestos and lead paint abatement.	Pre-construction/ Construction	Prepare plan/Reporting	Prior to Construction that involves demolition	Contractor	Contractor	Prepare demolition plans/Reporting as needed	Condition of design-build contract	Impact HMW #1: Hazards Due to the Routine Transport, Use, or Disposal of Hazardous Materials during Construction Impact HMW #2: Hazards Due to Reasonably Foreseeable Upset and Accident Conditions that Involve the Release of Hazardous Materials during Construction Impact HMW #4: Hazards Due to Increased Exposure to Asbestos as a Result of Building Demolition
HMW-IAMF#6	Spill Prevention	Prior to Construction (any ground disturbing activities), the Contractor shall prepare a CMP addressing spill prevention. A Spill Prevention, Control, and Countermeasure (SPCC) plan (or Soil Prevention and Response Plan if the total aboveground oil storage capacity is less than 1,320 gallons in	Pre-construction/ Construction	Prepare plan/Reporting	Prior to Construction (any ground disturbing activities)/reportin	Contractor	Contractor	Prepare CMP/Reporting as needed	Condition of design-build contract	Impact HMW #2: Hazards Due to Reasonably Foreseeable Upset and Accident Conditions that Involve the

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		storage containers greater than or equal to 55-gallons) shall prescribe BMPs to follow to prevent hazardous material releases and clean-up of any hazardous material releases that may occur. The plans would be prepared and submitted to the PCM on behalf of the Authority and shall be implemented during Construction.			g during construction					Release of Hazardous Materials during Construction Impact BIO #1: Construction Effects on Special-Status Plant Species Impact BIO #2: Construction Effects on Special-Status Wildlife Species Impact BIO #3 Construction Effects on Special-Status Natural Communities Impact BIO #4: Construction Effects on Wetlands and Other Aquatic Resources Impact BIO #6: Construction Effects on Protected Trees Impact HMW #6: Risks during Construction on or near Landfills and Oil and Gas Wells Impact HWR #3: Temporary Impacts on Surface Water Quality during Construction
HMW-IAMF#7	Storage and Transport of Materials	During Construction, the Contractor would comply with applicable state and federal regulations, such as the Resource Conservation and Recovery Act (RCRA), Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), the Hazardous Materials Release Response Plans and Inventory Law, and the Hazardous Waste Control Act. Prior to Construction the Contractor would provide the Authority with a hazardous materials and waste plan describing responsible parties and procedures for hazardous waste and hazardous materials storage and transport.	Pre-construction/ Construction	Regulation compliance/ Reporting	Monthly	Contractor	Contractor	Weekly record keeping/monthly reporting	Condition of design-build contract	Impact HMW#1: Temporary Effects from the Routine Transport, Use, or Disposal of Hazardous Materials and Wastes Impact HMW#2: Temporary Effects Due to Reasonably Foreseeable Upset and Accident Conditions that Involve the Release of Hazardous Materials Impact HMW #5: Emit Hazardous Emissions or Handle Hazardous or Acutely Hazardous Materials, Substances, or Waste within 0.25 Mile of a School during Construction Impact HWR #3: Temporary Impacts on Surface Water Quality during Construction Impact SOCIO #14: Temporary Impacts on Children's Health and Safety from Construction

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HMW-IAMF#8	Permit Conditions	During Construction and Operation, the Contractor would comply with the State Water Resources Control Board Construction Clean Water Act Section 402 General Permit conditions and requirements for transport, labeling, containment, cover, and other BMPs for storage of hazardous materials during Construction and Operation. Prior to Construction, the Contractor shall provide the Authority with a hazardous materials and waste plan describing responsible parties and procedures for hazardous waste and hazardous materials transport, containment, and storage BMPs that would be implemented during Construction and Operation.	Pre-construction/ Construction	Prepare plan	Prior to construction	Contractor	Contractor	Prepare hazardous materials and waste plan	Condition of design-build contract	Impact HMW#1: Temporary Effects from the Routine Transport, Use, or Disposal of Hazardous Materials and Wastes Impact HMW#2: Temporary Effects Due to Reasonably Foreseeable Upset and Accident Conditions that Involve the Release of Hazardous Materials Impact HMW #5: Emit Hazardous Emissions or Handle Hazardous or Acutely Hazardous Materials, Substances, or Waste within 0.25 Mile of a School during Construction Impact HWR #1: Temporary Impacts on Drainage Patterns, Stormwater Runoff, and Hydraulic Capacity (Surface Water Hydrology) during Construction Impact HWR #3: Temporary Impacts on Surface Water Quality during Construction
HMW-IAMF#9	Environmental Management System	To the extent feasible, the Authority is committed to identifying, avoiding, and minimizing hazardous substances in the material selection process for construction, operation, and maintenance of the HSR system. The Authority would use an Environmental Management System to describe the process that would be used to evaluate the full inventory of hazardous materials as defined by federal and state law employed on an annual basis and would replace hazardous substances with nonhazardous materials. The Contractor shall implement the material substitution recommendation contained in the annual inventory.	Pre-construction/ Construction	Reporting	Annual	Contractor	Contractor	Annual reporting	Condition of design-build contract/EMS	Impact HMW #1: Temporary Effects from the Routine Transport, Use, or Disposal of Hazardous Materials and Wastes Impact HMW #2: Temporary Effects Due to Reasonably Foreseeable Upset and Accident Conditions that Involve the Release of Hazardous Materials Impact HWR #10: Intermittent and Continuous Permanent Impacts on Surface Water Quality during Operations
HMW-IAMF#10	Hazardous Materials Plans	Prior to Operation and Maintenance activities, the Authority shall prepare hazardous materials monitoring and reporting plans. These would use as a basis source, such as a hazardous materials business plan as defined in Title 19 California Code of Regulations and a SPCC plan.	Post-construction	Prepare plans	Prior to operations	Authority	Authority	Prepare hazardous materials monitoring plans	Condition of design-build contract	Impact HMW #7: Hazard Due to the Routine Transport, Use, or Disposal of Hazardous Materials during Operation Impact HMW #8: Hazards Due to Reasonably Foreseeable Upset and Accident Conditions that Involve the Release of Hazardous Materials during Operation Impact HMW #10: Emit Hazardous Emissions or Handle Hazardous or Acutely Hazardous Materials, Substances, or Waste within 0.25 Mile of a School during Operation Impact HWR #10: Intermittent and Continuous Permanent Impacts on Surface Water Quality during Operations

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HMW-IAMF#11	Stakeholder Consultation for the San Fernando Valley Groundwater Basin Superfund Site	As design of the Burbank to Los Angeles Project Section progresses, more project-specific information will be developed regarding the requisite permitting and project design for the potential replacement of, or modification to, extraction wells and/or other ancillary infrastructure used for municipal water supply and remediation of groundwater within the Burbank and Glendale Operable Units of the Superfund Sites in the San Fernando Valley. As the design progresses, the Authority will coordinate with relevant stakeholders on an ongoing basis to review the permitting requirements as well as the project design and construction methods for proposed modifications to the extraction wells and ancillary infrastructure to ensure that municipal water supplies and the effectiveness of the Superfund Site clean-up remedies are not impaired by construction and operation of the HSR Build Alternative. Relevant stakeholders include the United States Environmental Protection Agency (EPA), the California Department of Toxic Substances Control, the California Regional Water Quality Control Board - Los Angeles Region, the California Department of Water Resources, the State Water Resources Control Board Division of Drinking Water, the City of Burbank, the City of Glendale, and Potentially Responsible Parties named in the Second Consent Decree for San Fernando Valley Superfund Site, Burbank Operable Unit, Civil Action No. 4527-MRP(tx) (C.D. Cal. June 23, 1998) and the Consent Decree for the San Fernando Valley Superfund Site and the Consent Decree for the Glendale Operable Unit, Civil Action No. 99-00552 MRP (ANx). The purpose of this ongoing stakeholder coordination is to ensure that municipal water supplies and the effectiveness of the Superfund Site clean-up remedies are not impaired by construction and operation of the HSR Build Alternative. The Authority would coordinate with relevant stakeholders on issues such as ensuring system shutdowns occur within normal timeframes, maintaining operating of existing systems while testing new replacement systems, and providing additional groundwater or surface water supplies if needed. Depending upon the scope of the potential modifications to the extraction wells and ancillary infrastructure, the Authority shall enter into enforceable agreements with the United States Environmental Protection Agency as the agency responsible for the Superfund Program.	During Design	Stakeholder Coordination	Ongoing	Authority	Contractor	the Authority will coordinate with relevant stakeholders on an ongoing basis to review the permitting requirements as well as the project design and construction methods for proposed modifications to the extraction wells and ancillary infrastructure to ensure that municipal water supplies and the effectiveness of the Superfund Site clean-up remedies are not impaired by construction and operation of the HSR Build Alternative	Condition of design-build contract	Impact HMW #3: Hazards Due to Project Location on Potential Environmental Concern Sites or Cortese List Sites during Construction
Safety and Security										
SS-IAMF#1	Construction Safety Transportation Management Plan	Prior to construction (any ground-disturbing activity), the Contractor shall prepare for submittal to the Authority a Construction Safety Transportation Management Plan. The plan would describe the Contractor's coordination efforts with local jurisdictions for maintaining emergency vehicle access. The plan would also specify the Contractor's procedures for implementing temporary road closures, including access to	Pre-construction/ Construction	Prepare plan	Prior to construction (any ground-disturbing activity)	Contractor	Contractor	Prepare Construction Safety Transportation Management Plan	Condition of design-build contract	Impact S&S #2: Accidents Associated with Construction-Related Detours Impact TR #5: Design Feature Hazards, Incompatible Uses, or Conflict with Transit, Airport, Pedestrian, and Bicycle Plans during Construction

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		residences and businesses during construction, lane closures, signage and flag persons, temporary detour provisions, alternative bus and delivery routes, emergency vehicle access, and alternative access locations. The Contractor shall prepare and submit monthly reports to the Authority documenting construction transportation plan implementation activities for compliance monitoring.								Impact S&S#3: Increased Response Times for Fire, Rescue, and Emergency Services from Temporary Road Closures Impact SOCIO #1: Temporary Disruption to Community Cohesion or Division of Existing Communities from Construction
SS-IAMF#2	Safety and Security Management Plan	Sixty days after receiving from the Authority a construction notice to proceed, the Contractor shall provide the Authority with a technical memorandum documenting how the following requirements, plans, programs and guidelines were considered in design, construction, and eventual operation to protect the safety and security of construction workers and users of the HSR. The Contractor shall be responsible for implementing all construction-related safety and security plans and the Authority shall be responsible for implementing all safety and security plans related to HSR operation. ▪ Workplace worker safety is generally governed by the Occupational Health and Safety Act of 1970, which established OSHA. OSHA establishes standards and oversees compliance with workplace safety and reporting of injuries and illnesses of employed workers. In California, OSHA enforcement of workplace requirements is performed by Cal-OSHA. Under Cal-OSHA regulations, as of July 1, 1991, every employer must establish, implement, and maintain an injury and illness prevention program. ▪ The Authority has adopted a Safety and Security Management Plan to guide the safety and security activities, processes, and responsibilities during design, construction and implementation phases of the project to protect the safety and security of construction workers and the public. A Systems Safety Program Plan (SSPP) and a System Security Plan would be implemented prior to the start of revenue service to guide the safety and security of the operation of the HSR system. ▪ Prior to construction, the Contractor shall provide the Authority with a Safety and Security Management Plan documenting how they would implement the Authority's safety and security requirements within their project scope. ▪ Implement site-specific health and safety plans and site-specific security plans to establish minimum safety and security guidelines for contractors of, and visitors to, construction projects. Contractors would be required to develop and implement site-specific measures that address regulatory requirements to protect human health and property at construction sites.	Pre-construction/ Construction	Prepare plan	Sixty days after receiving a construction notice to proceed	Contractor/ Authority	Contractor/ Authority	Prepare technical memorandum documenting compliance with safety requirements, plans, programs, and guidelines	Condition of design-build contract	Impact S&S #1: Accidents and Health Risks at Construction Sites Impact S&S #5: Train Accidents Impact S&S #8: Risk of Fire Impact S&S #9: Increased Response Times for Fire, Rescue, and Emergency Services from Permanent Road Closures Impact S&S #10: Increased Response Times for Fire, Rescue, and Emergency Services Associated with Access to Elevated Track and Tunnels Impact S&S #11: Need for Expansion of Existing Fire, Rescue, and Emergency Services Facilities Impact S&S #18: Criminal Activity and Emergencies aboard Trains and at Stations, Right-of-Way, and Facilities Impact SOCIO #7: Temporary Disruption to Community Facilities from Construction

IAMF	Title	IAMF Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Title
		▪ Preparation of a Valley fever action plan that includes: (1) information on causes, preventative measures, symptoms, and treatments for Valley fever to individuals who could potentially be exposed through construction activities (i.e., construction workers, monitors, managers, and support personnel); (2) continued outreach and coordination with California Department of Public Health; (3) coordination with county departments of public health to ensure that the above-referenced information concerning Valley fever is readily available to nearby residents, schools, and businesses and to obtain area information about Valley fever outbreaks and hotspots; and (4) provide a qualified person dedicated to overseeing implementation of the Valley fever prevention measures to encourage a culture of safety of the contractors and subcontractors. The Valley Fever Health and Safety designee shall coordinate with the county Public Health Officer and oversee and manage the implementation of Valley Fever control measures. The designee is responsible for ensuring the implementation of measures in coordination with the county Public Health Officer. Medical information would be maintained following applicable and appropriate confidentiality protections. The Valley Fever Health and Safety designee, in coordination with the county Public Health Officer, would determine what measures would be added to the requirements for the Safety and Security Management Plan regarding preventive measures to avoid Valley fever exposure. Measures shall include, but are not limited to, the following: (1) train workers and supervisors on how to recognize symptoms of illness and ways to minimize exposure, such as washing hands at the end of shifts; (2) provide washing facilities nearby for washing at the end of shifts; (3) provide vehicles with enclosed, air conditioned cabs and make sure workers keep the windows closed; (4) equip heavy equipment cabs with high-efficiency particulate air (HEPA) filters; and (5) make NIOSH-approved respiratory protection with particulate filters as recommended by the California Department of Public Health available to workers who request them. ▪ System safety program plans incorporate FRA requirements and are implemented upon Authority approval. FRA's Systems Safety Program Plans requirements would be determined in FRA's new System Safety Regulation (49 C.F.R. 270). ▪ Rail systems must comply with FRA requirements for tracks, equipment, railroad operating rules and practices, passenger safety, emergency response, and passenger								

IAMF	Title	IAMF Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Title
		equipment safety standards found in 49 C.F.R. Parts 200-299. ▪ The *HSR Urban Design Guidelines* (Authority 2011) require implementing the principles of crime prevention through environmental design. The contractor shall consider four basic principles of crime prevention through environmental design during station design and site planning: (1) territoriality (design physical elements that express ownership of the station or site); (2) natural surveillance (arrange physical features to maximize visibility); (3) improved sightlines (provide clear views of surrounding areas); and (4) access control (provide physical guidance for people coming and going from a space). The HSR design includes emergency access to the rail right-of-way, and elevated HSR structure design includes emergency egress points. ▪ Implement fire/life safety and security programs that promote fire and life safety and security in system design, construction, and implementation. The fire and life safety program is coordinated with local emergency response organizations to provide them with an understanding of the rail system, facilities, and operations, and to obtain their input for modifications to emergency response operations and facilities, such as evacuation routes. The Authority would establish fire/life safety and security committees throughout the HSR section. ▪ Implement system security plans that address design features intended to maintain security at the stations within the track right-of-way, at stations, and onboard trains. A dedicated police force would ensure that the security needs of the HSR system are met. ▪ The design standards and guidelines require emergency walkways on both sides of the tracks for both elevated and at-grade sections and the provision of appropriate space as defined by fire and safety codes along at-grade sections of the alignment to allow for emergency response access. ▪ Implement standard operating procedures and emergency operating procedures, such as the FRA-mandated Roadway Worker Protection Program to address the day-to-day operation and emergency situations that would maintain the safety of employees, passengers, and the public.							
SS-IAMF#3	Hazard Analyses	The Authority's hazard management program includes the identification of hazards, assessment of associated risk, and application of control measures (mitigation) to reduce the risk to an acceptable level. Hazard assessment includes a preliminary hazard analysis and threat and vulnerability	Pre-construction/ Construction	Reporting	Monthly	Authority	Authority	Monthly reporting	Condition of design-build contract	Impact S&S #5: Train Accidents Impact S&S #18: Criminal Activity and Emergencies aboard Trains and at Stations, Right-of-Way, and Facilities

IAMF	Title	IAMF Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Title
		assessment. ▪ The Authority's programmatic preliminary hazard analyses are developed in conformance with the FRA's *Collison Hazard Analysis Guide: Commuter and Intercity Passenger Service* (FRA 2007) and the U.S. Department of Defense's *System Safety Program Plan* (MIL-STD-882) to identify and determine the facility hazards and vulnerabilities so that they can be addressed—and either eliminated or minimized—by the design. ▪ Threat and vulnerability assessments establish provisions for the deterrence and detection of, as well as the response to, criminal and terrorist acts for rail facilities and system operations. Provisions include right-of-way fencing, intrusion detection, security lighting, security procedures and training, and closed-circuit televisions. Intrusion-detection technology could also alert to the presence of inert objects, such as toppled tall structures or derailed freight trains, and stop HSR operations to avoid collisions. ▪ During design and construction, the Contractor would conduct site-specific preliminary hazard analysis and threat and vulnerability assessments to apply the programmatic work to their specific project designs. The Authority's safety and security committees would be responsible for implementing the recommendations contained in the hazard analysis during HSR operation.								
SS-IAMF#4	Oil and Gas Wells	Prior to ground-disturbing activities, the Contractor shall identify and inspect all active and abandoned oil and gas wells within 200 feet of the HSR tracks. Any active wells would be abandoned and relocated by the Contractor in accordance with the California Department of Conservation, Division of Oil, and Gas and Geothermal Resources (DOGGR) standards in coordination with the well owners. In the event that relocated wells do not attain the current production rates of the now-abandoned active wells, the Authority would be responsible for compensating the well owner for lost production. All abandoned wells within 200 feet of the HSR tracks would be inspected and re-abandoned, as necessary, in accordance with DOGGR standards and in coordination with the well owner. The Contractor would provide the Authority with documentation that the identification and inspection of the wells has occurred prior to construction.	Pre-construction	Regulatory Compliance/ Reporting	Prior to ground-disturbing activities	Contractor/Authority	Authority	Compliance with DOGGR standards	Condition of design-build contract	Impact S&S #1: Accidents and Health Risks at Construction Sites Impact PU&E #8: Potential Conflicts with Oil Wells Impact HMW #3: Temporary Effects Due to Project Location on Potential Environmental Concern Sites or Sites on the Cortese List Impact HMW #6: Risks during Construction on or near Landfills and Oil and Gas Wells Impact GSSPR #12: Potential Exposure to Hazardous Gases during Construction
SS-IAMF#5	Aviation Safety	To address Federal Aviation Administration (FAA) requirements related to their mandate of ensuring civil aviation safety and to prevent the potential for disruption of airfield and airspace operations at Hollywood Burbank Airport as a result of construction and/or operation of the Burbank to	Pre-Construction	Prepare plan/reporting	Monthly	Authority	Authority	Compliance with FAA requirements related to aviation safety	Condition of design-build contract	Impact S&S #1: Accidents and Health Risks at Construction Sites Impact S&S #12: Accident Risks to Airports, Private Airstrips, and Heliports

IAMF	Title	IAMF Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Title
		Los Angeles Project Section, the Authority and/or its contractor(s) on behalf of the Authority will: ▪ Submit designs and/or information to the FAA as required by Code of Federal Regulations, Title 14, Part 77, to ensure design of permanent HSR features within and adjacent to the boundary of Hollywood Burbank Airport do not adversely affect imaginary surfaces as defined in 14 C.F.R. section 77.9(b). ▪ Submit construction plans and/or information to the FAA as required by Code of Federal Regulations, Title 14, Part 77, which may include the location of planned HSR construction and construction staging areas within and adjacent to the boundary of the Hollywood Burbank Airport, the types and height of proposed equipment, and planned time/duration of construction, to ensure construction within and adjacent to the boundary of Hollywood Burbank Airport does adversely affect imaginary surfaces as defined in 14 C.F.R. section 77.9(b). ▪ Implement measures required by the FAA to ensure continued safety of air navigation during HSR construction and operation, pursuant to 14 C.F.R. section 77.5(c). ▪ Ensure that the planned HSR facilities do not violate any grant assurances that are imposed at Hollywood Burbank Airport as a condition for obtaining an Airport Improvement Grants from the FAA. ▪ If applicable, work with the Burbank-Glendale-Pasadena Airport Authority (BGPAA) to amend the current Airport Layout Plan to depict the permanent above-ground facilities required for the HSR project, to be submitted to the FAA for approval.								Impact TR #5: Design Feature Hazards, Incompatible Uses, or Conflict with Transit, Airport, Pedestrian, and Bicycle Plans during Construction
SS-IAMF#6	Stakeholder Coordination for the Hollywood Burbank Airport	As design of the Burbank to Los Angeles Project Section progresses, the Authority shall continue to coordinate with the Federal Aviation Administration (FAA) and the Burbank-Glendale-Pasadena Airport Authority (BGPAA) to avoid conflicts due to overlapping construction schedules and future operations at the Hollywood Burbank Airport. The purpose of this ongoing stakeholder coordination is to ensure that the design, construction, and operation of the HSR Build Alternative takes into consideration the Airport Layout Plan (ALP) and any future improvements to the Hollywood Burbank Airport identified in SCAG's 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy and to ensure that construction and operation of the HSR Build Alternative do not negatively impact these future improvements.	During design	Coordination	Ongoing	Authority	Contractor	Authority shall continue to coordinate with the Federal Aviation Administration (FAA) and the Burbank-Glendale-Pasadena Airport Authority (BGPAA) to avoid conflicts due to overlapping construction schedules and	Condition of design-build contract	Impact S&S #1: Accidents and Health Risks at Construction Sites Impact S&S #12: Accident Risks to Airports, Private Airstrips, and Heliports

IAMF	Title	IAMF Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Title
								future operations at the Hollywood Burbank Airport		
Socioeconomics and Communities										
SOCIO-IAMF#1	Construction Management Plan	Prior to construction, the Contractor shall prepare a CMP providing measures that minimize impacts on low-income households and minority populations. The plan shall be submitted to the Authority for review and approval. The plan would include actions pertaining to communications, visual protection, air quality, safety controls, noise controls, and traffic controls to minimize impacts on low-income households and minority populations. The plan would verify that property access is maintained for local businesses, residences, and emergency services. This plan would include maintaining customer and vendor access to local businesses throughout construction by using signs to instruct customers about access to businesses during construction. In addition, the plan would include efforts to consult with local transit providers to minimize impacts on local and regional bus routes in affected communities.	Design/ Construction	Prepare plan	Prior to construction	Contractor	Contractor	Prepare CMP	Condition of design-build contract	Impact SOCIO #14: Temporary Impacts on Children's Health and Safety from Construction Impact TR #1: Temporary Road Closures during Construction
SOCIO-IAMF#2	Compliance with Uniform Relocation Assistance and Real Property Acquisition Policies Act	The Authority must comply with the Uniform Act. The provisions of the Uniform Act, a federally mandated program, would apply to all acquisitions of real property or displacements of persons resulting from this federally assisted project. It was created to provide for fair and equitable treatment of all affected persons. Additionally, the Fifth Amendment of the U.S. Constitution provides that private property may not be taken for a public use without payment of "just compensation." The Uniform Act requires that the owning agency provide notification to all affected property owners of the agency's intent to acquire an interest in their property. This notification includes a written offer letter of just compensation. A right-of-way specialist is assigned to each property owner to assist him or her through the acquisition process. The Uniform Act also provides benefits to displaced individuals to assist them financially and with advisory services related to relocating their residence or business operation. Benefits are available to both owner occupants and tenants of either residential or business properties. The Uniform Act requires provision of relocation benefits to all eligible persons regardless of race, color, religion, sex, or national origin. Benefits to which eligible owners or tenants may be entitled are determined on an individual basis and explained in detail by an assigned right-of-way specialist. The California Relocation Assistance Act essentially mirrors the Uniform Act and also provides for consistent and fair treatment of property owners. However, because the project	Design/ Construction/ Operation	Reporting and meeting with interested parties	Prior to completion of property acquisition	Authority	Authority	Comply with Uniform Act/Monthly reporting and record keeping	Compliance with acts, creation of ombudsman office and reporting	Impact SOCIO #2: Permanent Disruption to Community Cohesion or Division of Existing Communities from Construction Impact SOCIO #3: Permanent Displacement and Relocation of Local Residents from Construction Impact SOCIO #4: Permanent Displacement and Relocation of Local Businesses from Construction Impact SOCIO #5: Permanent Displacement and Relocation of Sensitive Populations during Construction Impact SOCIO #12: Permanent Changes in School District Funding from Construction Impact TR #3: Permanent Road Closures during Operation

IAMF	Title	IAMF Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Title
		would receive federal funding, the Uniform Act takes precedence. Owners of private property have federal and state constitutional guarantees that their property would not be acquired or damaged for public use unless owners first receive just compensation. Just compensation is measured by the "fair market value," where the property value is considered to be the highest price that would be negotiated on the date of valuation. The value must be agreed upon by a seller who is willing, not obliged to sell, but under no particular or urgent necessity and by a buyer who is ready, willing, and able to buy but under no particular necessity. Both the owner and the buyer must deal with the other with the full knowledge of all the uses and purposes for which the property is reasonably adaptable and available (Code of Civil Procedure Section 1263.320a). More detailed information about how the Authority plans to comply with the Uniform Act and the California Relocation Assistance Act is provided in the following three detailed relocation assistance documents modeled after Caltrans versions: Your Rights and Benefits as a Displacee under the Uniform Relocation Assistance Program (Residential) Your Rights and Benefits as a Displacee under the Uniform Relocation Assistance Program (Mobile Home) Your Rights and Benefits as a Displaced Business, Farm, or Nonprofit Organization under the Uniform Relocation Assistance Program								
SOCIO-IAMF#3	Relocation Mitigation Plan	Before any acquisitions occur, the Authority would develop a relocation mitigation plan, in consultation with affected cities and counties and property owners. In addition to establishing a program to minimize the economic disruption related to relocation, relocation mitigation plan would be written in a style that also enables it to be used as a public-information document. The relocation mitigation plan would be designed to meet the following objectives: ▪ Provide affected property and business owners and tenants a high level of individualized assistance in situations when acquisition is necessary and the property owner desires to relocate the existing land use. ▪ Coordinate relocation activities with other agencies acquiring property resulting in displacements in the study area to provide for all displaced persons and businesses to receive fair and consistent relocation benefits. ▪ Make a best effort to minimize the permanent closure of businesses and nonprofit agencies as a result of property acquisition.	Design/ Construction	Prepare plan	Prior to property acquisitions	Authority	Authority	Develop relocation mitigation plan	Condition of design-build contract	Impact SOCIO #2: Permanent Disruption to Community Cohesion or Division of Existing Communities from Project Construction Impact SOCIO #3: Permanent Displacement and Relocation of Local Residents from Construction Impact SOCIO #4: Permanent Displacement and Relocation of Local Businesses from Construction Impact SOCIO #5: Permanent Displacement and Relocation of Sensitive Populations from Construction Impact LU #1: Temporary Land Use Conversion and Incompatibility

IAMF	Title	IAMF Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Title
		▪ Within the limits established by law and regulation, minimize the economic disruption caused to property owners by relocation. ▪ In individual situations, where warranted, consider the cost of obtaining the entitlement permits necessary to relocate to a suitable location and take those costs into account when establishing the fair market value of the property. ▪ Provide those business owners who require complex permitting with regulatory compliance assistance. The relocation mitigation plan would include the following components: ▪ A description of the appraisal, acquisition, and relocation process as well as a description of the activities of the appraisal and relocation specialists. ▪ A means of assigning appraisal and relocation staff to affected property owners, tenants, or other residents on an individual basis. ▪ Individualized assistance to affected property owners, tenants, or other residents in applying for funding, including research to summarize loans, grants, and federal aid available, and research areas for relocation. ▪ Creation of an ombudsman's position to act as a single point of contact for property owners, residents, and tenants with questions about the relocation process. The ombudsman would also act to address concerns about the relocation process as it applies to the individual situations of property owners, tenants, and other residents.								
Station Planning, Land Use, and Development										
LU-IAMF#1	HSR Station Area Development General Principals and Guidelines	Prior to Operation and Maintenance, the Authority shall prepare a memorandum for each station describing how the Authority's station area development principles and guidelines are applied to achieve the anticipated benefits of station area development. Refer to HSR Station Area Development: General Principles and Guidelines, February 3, 2011	Post-construction	Reporting	Prior to Operation and Maintenance for each station	Authority	Authority	Authority would prepare a technical memorandum for each station	Condition of design-build contract	Impact LU #4: Potential for Operations to Conflict with Land Use Patterns
LU-IAMF#2	Station Area and Local Agency Coordination	Prior to Operation and Maintenance, the Authority shall prepare a memorandum for each station describing the local agency coordination and station area planning conducted to prepare the station area for HSR operations. Refer to HSR Station Area Development: General Principles and Guidelines, February 3, 2011.	Post-construction	Reporting	Prior to Operation and Maintenance for each station	Authority	Authority	Authority would prepare a technical memorandum for each station	Condition of design-build contract	Impact LU #4: Potential for Operations to Conflict with Land Use Patterns

IAMF	Title	IAMF Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Title
LU-IAMF#3	Restoration of Land Used Temporarily During Construction	Prior to any ground disturbing activities at the site of land to be used temporarily during construction, the Contractor shall prepare a restoration plan addressing specific actions, sequence of implementation, parties responsible for implementation and successful achievement of restoration for temporary impacts. Before beginning construction use of land, the Contractor shall submit the restoration plan to the Authority for review and obtain Authority approval. The restoration plan shall include time-stamped photo documentation of the pre-construction conditions of all temporary staging areas. All construction access, mobilization, material laydown, and staging areas would be returned to a condition equal to the pre-construction staging condition. This requirement is included in the design-build construction contract requirements.	Pre-construction	Prepare restoration plan	Prior to construction	Contractor	Contractor	Contractor would prepare a restoration plan	Condition of design-build contract	Impact LU #1: Temporary Land Use Conversion and Incompatibility Impact LU #3: Potential for Construction to Permanently Disrupt Planned Development Impact SOCIO #7: Temporary Disruption to Community Facilities from Construction
Parks, Recreation and Open Space										
PK-IAMF#1	Parks, Recreation, and Open Space	Prior to construction, the Contractor shall prepare and submit to the Authority a technical memorandum that identifies project design features to be implemented to minimize impacts on parks, recreation, and open space. Typical design measures to avoid or minimize impacts on parks and recreation may include: ▪ Provide safe and attractive access for present travel modes (e.g., motorists, bicyclists, pedestrians—as applicable) to existing park and recreation facilities. ▪ Design guideway, system, and station features in such a way as to enhance the surrounding local communities. Provide easy crossings of the guideway which allows for community use under the guideway or at station areas.	Pre-construction	Reporting	At incorporation or completion of design/monthly reporting during construction	Contractor	Contractor	Prepare technical memorandum that documents project design features that minimize impacts to park, recreation, and open space	Condition of design-build contract	Impact PK #1: Temporary Impact Areas, Temporary Access Restrictions, Temporary Facility Closures, or Temporary Detours during Construction Impact PK #3: Permanent Easements or Acquisition of Property from Parks, Recreation, and School Play Area Resources Due to Construction Impact PK #4: Changes to Planned Parks and Recreational Resources Due to Construction Impact PK #5: Changes to Park or Recreation Facility Use or Character Due to Operation Impact TR #5: Design Feature Hazards, Incompatible Uses, or Conflict with Transit, Airport, Pedestrian, and Bicycle Plans during Construction
Aesthetics and Visual Quality										
AVQ-IAMF#1	Aesthetic Options	Prior to construction, the Contractor shall document, through issue of a technical memorandum, how the Authority's aesthetic guidelines have been employed to minimize visual impacts. The Authority seeks to balance providing a consistent, project-wide aesthetic with the local context for the numerous HSR non-station structures across the state. Examples of aesthetic options would be provided to local jurisdictions that can be applied to nonstandard structures in the HSR system. Refer to *Aesthetic Options for Non-Station Structures,* 2011.	Pre-construction	Reporting	At incorporation or completion of design/monthly reporting during construction	Contractor	Contractor	Prepare aesthetics technical memorandum	Condition of design-build contract	Impact AVQ #1: Visual Disturbance during Construction Impact AVQ #3: Visual Quality in the Burbank to Los Angeles Project Section Impact SOCIO #15: Permanent Disruption to Community Cohesion or Division of Existing Communities from Operation Impact PK #2: Air Quality, Noise, Vibration, and Visual Impacts during Construction

IAMF	Title	IAMF Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Title
AVQ-IAMF#2	Aesthetics Review Process	Prior to construction, the Contractor shall document that the Authority's aesthetic review process has been followed to guide the development of non-station area structures. Documentation shall be through issuance of a technical memorandum to the Authority. The Authority would identify key non-station structures recommended for aesthetic treatment, consult with local jurisdictions on how best to involve the community in the process, solicit input from local jurisdictions on their aesthetic preferences, and evaluate aesthetic preferences for potential cost, schedule, and operational impacts. The Authority would also evaluate compatibility with project-wide aesthetic goals, include recommended aesthetic approaches in the construction procurement documents, and work with the Contractor and local jurisdictions to review designs and local aesthetic preferences and incorporate them into final design and construction. Refer to *Aesthetic Options for Non-Station Structures,* 2014.	Pre-construction	Reporting	At incorporation or completion of design/monthly reporting during construction	Contractor	Contractor	Prepare aesthetics review process technical memorandum	Condition of design-build contract	Impact AVQ #3: Visual Quality in the Burbank to Los Angeles Project Section Impact SOCIO #15: Permanent Disruption to Community Cohesion or Division of Existing Communities from Operation
Cultural Resources										
CUL-IAMF#1	Geospatial Data Layer and Archaeological Sensitivity Map	Prior to Construction (any ground-disturbing activities) and staging of materials and equipment, the Contractor's archaeologist or geoarchaeologist shall prepare a geospatial data layer identifying the locations of all known archaeological resources and built historic resources that require avoidance or protection, and areas of archaeological sensitivity that require monitoring within the area of potential effect (APE). The Contractor's archaeologist, who meets the Secretary of the Interior's Professional Qualifications Standards provided in 36 Code of Federal Regulations Part 61, is to use, as appropriate, a combination of the following: known locations of archaeological sites and built historic properties, tribal consultation, landforms, depositional processes, distance to water, mapping provided in the Archaeological Treatment Plan, or historic mapping. This mapping is to be updated as the design progresses if it results in an expansion of the area of ground disturbance/APE, including temporary construction easements and new laydown and access areas. This mapping would be used to develop an archaeological monitoring plan to be prepared by the Contractor's archaeologist, and upon approval by the Authority, implemented by the Contractor's archaeologist. When design is sufficiently advanced, a geospatial data layer would be produced by the Contractor overlaying the locations of all known archaeological resources and built historic resources within the APE, for which avoidance measures are necessary, and all archaeologically sensitive areas, for which monitoring is required.	Design/Pre-construction	Prepare plan	At incorporation or completion of design	Contractor's archaeologist or geoarchaeologist	Authority	Prepare geospatial data layer	Condition of design-build contract	Impact CUL #1: Construction Effects on Known Archaeological Resources Impact CUL #2: Construction Effects on Unknown Archaeological Resources Impact CUL #3: Construction Effects on Historic Built Resources

IAMF	Title	IAMF Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Title
CUL-IAMF#2	Worker Environmental Awareness Program (WEAP) Training Session	Prior to Construction (any ground disturbing activity) construction contractor personnel who work on site would attend a WEAP training session provided by the Contractor. The WEAP would include cultural resources awareness training performed by the Contractor's archaeologist who meets the Secretary of the Interior's Professional Qualification Standards provided in 36 C.F.R. Part 61. The Contractor would develop instructional materials and a fact sheet for distribution to the construction crews, and submit the materials, as well as qualifications of the personnel providing the training, to the Authority for approval at least 15 days prior to being permitted onsite access. The training would address measures required to avoid or protect built historic resources, educate crews on artifacts and archaeological features they may encounter and the mandatory procedures to follow should potential cultural resources be exposed during construction. Translation services shall be provided by the Contractor for non-English speaking participants. The training sessions shall be given prior to the initiation of any ground disturbance activities and repeated on an annual basis. Additionally, new construction crewmembers shall attend an initial WEAP training session prior to working on site. On completion of the WEAP training, construction crews would sign a form stating that they attended the training, understood the information presented, and would comply with the WEAP requirements. The Contractor's archaeologist would submit the signed WEAP training forms to the Mitigation Manager on a monthly basis. On an annual basis, the Contractor would provide the Authority with a letter indicating that regular WEAP training has been implemented and would provide at least one PowerPoint annually of the WEAP training. On a monthly basis, the Contractor's archaeologist would provide updates and synopsis of the training to workers during the daily safety ("tailgate") meeting. Construction crews would be informed during the WEAP training that, to the extent possible, travel within the marked project site would be restricted to established roadbeds.	Pre-construction	Training program/ Reporting	Prior to Construction (any ground-disturbing activity), then annual (training)/ monthly (reporting)	Contractor	Contractor	WEAP training	Condition of design-build contract	Impact CUL #1: Construction Effects on Known Archaeological Resources Impact CUL #2: Construction Effects on Unknown Archaeological Resources Impact CUL #3: Construction Effects on Historic Built Resources
CUL-IAMF#3	Preconstruction Cultural Resource Surveys	Prior to Construction (any ground-disturbing activities in areas not yet surveyed) and the staging of materials and equipment, the Contractor shall conduct pre-construction cultural resource surveys. Resulting from lack of legal access, much of the construction footprint may not have been surveyed. Once parcels are accessible the Contractor would have archaeologists or architectural historians, as appropriate, who meet the Secretary of the Interior professional qualification standards survey and complete reporting in appropriate document for archaeology and / or built resources, in accordance with documentation	Pre-construction	Conduct pre-construction surveys; Identify historic and/or cultural resources	Surveys conducted prior to ground disturbance	Contractor	Contractor	Cultural resource surveys conducted prior to ground disturbance	Condition of design-build contract	Impact CUL #1: Construction Effects on Known Archaeological Resources Impact CUL #2: Construction Effects on Unknown Archaeological Resources

IAMF	Title	IAMF Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Title
		requirements stipulated in the Programmatic Agreement. Identified resources shall be evaluated for the National Register of Historic Places (NRHP) and the California Register of Historical Resources (CRHR). The qualified archaeologist or architectural historian, as appropriate, would assess the potential to affect to historic properties (NRHP) by applying the effects criteria in 36 C.F.R. Part 800.5(a)(1), and the potential of significant impacts to historical resources (CRHR) by applying the criteria in California Environmental Quality Act (CEQA) Guidelines 15064.5(b). Should the Authority determine, in consultation with the State Historic Preservation Office (SHPO), that any newly identified historic properties or historical resources would be adversely affected, the Built Environment Treatment Plan or Archeological Treatment Plan, as appropriate, would be amended, to document mitigation measures agreed upon by the MOA signatories. The schedule of these surveys would be dependent on the timing of obtaining legal access to the properties and may be driven by the need to complete construction-related activities, e.g., geotechnical borings, laydown yards, etc. Prior to beginning surveys, updated records searches may be required by the Authority, depending on the length of the passage of time, to validate that accurate information was obtained regarding previous inventory and evaluation efforts. The Contractor's archaeologist, in consultation with the Authority, would determine if an updated records search is required. If an updated records search is necessary, the search shall be performed by the Contractor's archaeologist.								
CUL-IAMF#4	Relocation of Project Features when Possible	Changing the rail alignment to avoid newly discovered sites is likely infeasible; however, access areas and laydown sites may be relocated should their proposed location be found to be on archaeological sites or have the potential to affect historic built resources in the vicinity. The contractor would delineate all avoidance and protection measures for identified archaeological and built resources on construction drawings.	Construction	Relocation of access areas and laydown sites	As needed	Contractor	Contractor	Relocation access areas and laydown sites as needed to avoid archeological or historic built resources	Condition of design-build contract	Impact CUL #1: Construction Effects on Known Archaeological Resources Impact CUL #2: Construction Effects on Unknown Archaeological Resources
CUL-IAMF#5	Archaeological Monitoring Plan and Implementation	Prior to construction the Contractor's professionally qualified archaeologist, as defined in the Programmatic Agreement, would prepare a monitoring plan based on the results of geospatial data layer and archaeological sensitivity map. The plan is to be reviewed and approved by the Authority prior to any ground-disturbing activities. During Construction (any ground disturbing activities) or staging of materials or equipment, the Contractor would be responsible for implementing the monitoring plan and providing archaeological and tribal monitoring of ground-disturbing construction activities with a potential to affect archaeological remains in areas identified as archaeologically sensitive in the Archaeological Treatment Plan. The Contractor shall obtain	Pre-construction/ Construction	Prepare and implement monitoring plan	Prior to construction (prepare plan)/ During construction (implement plan)	Contractor	Contractor	Prepare archaeological monitoring plan	Condition of design-build contract	Impact CUL #1: Construction Effects on Known Archaeological Resources Impact CUL #2: Construction Effects on Unknown Archaeological Resources

IAMF	Title	IAMF Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Title
		Authority approval of all persons providing archaeological or tribal monitoring.								
CUL-IAMF#6	Preconstruction Conditions Assessment, Plan for Protection of Historic Built Resources, and Repair of Inadvertent Damage	Prior to Construction (any ground-disturbing activities that are within 1,000 feet of a historic built property) the Contractor may be required to assess the condition of construction-adjacent historic properties, and prepare a Plan for the Protection of Historic Built Resources and Repair of Inadvertent Damage. The MOA and Built Environment Treatment Plan (BETP) would stipulate for which properties the plan is to be prepared. MOA signatories and consulting parties may comment on the adequacy of the assessments. Protection measures would be developed in consultation with the landowner or land-owning agencies as well as the SHPO and the MOA signatories and consulting parties, as required by the Programmatic Agreement. As the design progresses, additional properties may be identified by the Authority as requiring this plan. The plan shall record existing conditions in order to (1) establish a baseline against which to compare the property's post-project condition, (2) to identify structural deficiencies that make the property vulnerable to project construction related damage, such as vibration, and (3) to identify stabilization or other measures required to avoid or minimize inadvertent adverse effects. The plan would be further described in the BETP and be prepared by an interdisciplinary team, including (but not limited to) as appropriate, an architectural historian, architect, photographer, structural engineer, and acoustical engineer. Ambient conditions would be used to identify buildings that are sensitive receptors to construction-related vibration and require vibration monitoring during construction activities. Additional protective measures may be required if the property is vacant during construction. The plan content shall be outlined in the BETP and is to be completed and approved by the Authority, with protective measures implemented before construction begins within 1,000 feet of the subject building. The plan shall describe the protocols for documenting inadvertent damage (should it occur), as well as notification, coordination, and reporting to the SHPO, MOA signatories, and the owner of the historic property. The plan shall direct that inadvertent damage to historic properties shall be repaired in accordance with the Secretary of the Interior's (SOI) Standards for the Treatment of Historic Properties (U.S. Department of the Interior, 1995). The plan shall be developed in coordination with the Authority, and shall be submitted to the SHPO for review and approval. Protective plans would be required for buildings that would be moved as part of the project mitigation, including stabilization before, during, and after relocation; protection during	Pre-construction	Conduct assessment and protection plan	Required if within 1,000 feet of historic built property	Contractor/ Authority	Contractor/ Authority	Assess the condition of construction-adjacent historic properties and prepare a Plan for the Protection of Historic Built Resources and Repair of Inadvertent Damage	MOA/PA/BETP	Impact CUL #3: Construction Effects on Historic Built Resources Impact AVQ #1: Visual Disturbance during Construction

IAMF	Title	IAMF Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Title
		temporary storage; and relocation to a new site, followed by rehabilitation.								
CUL-IAMF#7	Built Environment Monitoring Plan	Prior to Construction (any ground-disturbing activities within 1,000 feet of a historic property or resource) the Contractor shall prepare a Built Environment Monitoring Plan (BEMP). Draft and final BEMP's would be prepared describing the properties that would require monitoring, the type of activities or resources that would require full-time monitoring or spot checks, the required number of monitors for each construction activity, and the parameters that would influence the level of effort for monitoring. Maximum vibration level thresholds may be established in the Plan for Protection of Historic Resources and Repair of Inadvertent Damage the monitoring of which would be included in this monitoring plan. The BETP would outline the process for corrective action should the protection measures prove ineffective. Consultation procedures would also be defined in the BETP. The Contractor shall develop both the draft and final plans in coordination with the Authority, and shall be submitted to the SHPO for review and approval. The plan would be implemented prior to any ground-disturbing activities within 1,000 feet of properties identified as requiring monitoring, as specified in the BETP.	Pre-construction	Prepare monitoring plan	Prior to Construction (any ground-disturbing activities within 1,000 feet of a historic property or resource)	Contractor/ Authority	Contractor/ Authority	Prepare a BEMP	BETP	Impact CUL #3: Construction Effects on Historic Built Resources
CUL-IAMF#8	Implement Protection and/or Stabilization Measures	Implement the plan described in the Plan for Protection of Historic Resources and Repair of Inadvertent Damage and in the Built Environment Treatment Plan. Such protection measures would include, but would not be limited to, vibration monitoring of construction in the vicinity of historic properties; cordoning off of resources from construction activities (e.g., traffic, equipment storage, personnel); shielding of resources from dust or debris; and stabilization of buildings adjacent to construction. Temporary stabilization and protection measures would be removed after construction is complete, and the historic properties would be restored to their preconstruction condition. For buildings that would be moved, treatment would include stabilization before, during, and after relocation; protection during temporary storage; and relocation to a new site, followed by rehabilitation.	Pre-construction	Implement protection and/or stabilization measures	Per BETP	Contractor	Contractor	Implement historic built resource protection measures per BETP	BETP	Impact CUL #3: Construction Effects on Historic Built Resources
Transportation										
TR-IAMF#1	Protection of Public Roadways during Construction	Prior to Construction, the Contractor shall provide a photographic survey documenting the condition of the public roadways along truck routes providing access to the proposed project site and implement post-project remedial pavement preservation work that is needed to restore the affected roadways to their pre-project Pavement Management index conditions. The photographic survey shall be submitted for approval to the agency responsible for road maintenance and the Authority. The Contractor shall be	Pre-construction/ Post-construction	Survey/ Reporting	Immediately prior to and immediately following construction, and during construction as needed.	Contractor	Contractor	Provide a photographic survey	Condition of design-build contract	Impact TR #4: Circulation and Emergency Access Inadequacies during Construction

IAMF	Title	IAMF Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Title
		responsible for the repair of any structural damage to public roadways caused by HSR construction or construction access, returning any damaged sections to the equivalent of their original pre HSR construction structural condition or better. The Contractor shall survey the condition of the public roadways along truck routes providing access to the proposed project site after construction is complete. The Contractor shall complete a before- and after-survey report and submit it to the Authority for review, indicating the location and extent of any damage.								
TR-IAMF#2	Construction Transportation Plan	The design-build contractor shall prepare a detailed Construction Transportation Plan (CTP) for the purpose of minimizing the impact of construction and construction traffic on adjoining and nearby roadways in close consultation with the local jurisdiction having authority over the site. The Authority must review and approve the CTP before the Contractor commences any construction activities. This plan would address, in detail, the activities to be carried out in each construction phase, with the requirement of maintaining traffic flow during peak travel periods. Such activities include, but are not limited to, the routing and scheduling of materials deliveries, materials staging and storage areas, construction employee arrival and departure schedules, employee parking locations, and temporary road closures, if any. The CTP would provide traffic controls pursuant to the *California Manual on Uniform Traffic Control Devices* sections on temporary traffic controls (Caltrans 2012) and would include a traffic control plan that includes, at a minimum, the following elements: ▪ Temporary signage to alert drivers and pedestrians to the construction zone. ▪ Flag persons or other methods of traffic control. ▪ Traffic speed limitations in the construction zone. ▪ Temporary road closures and provisions for alternative access during the closure. ▪ Detour provisions for temporary road closures—alternating one-way traffic would be considered as an alternative to temporary closures where practicable and where it would result in better traffic flow than would a detour. ▪ Identified routes for construction traffic. ▪ Provisions for safe pedestrian and bicycle passage or convenient detour. ▪ Provisions to minimize access disruption to residents, businesses, customers, delivery vehicles, and buses to the extent practicable—where road closures are required	Design/ Construction	Prepare plan/ Reporting	At incorporation or completion of design/ implementation during construction	Contractor	Contractor	Prepare and implement CTP	Condition of design-build contract	Impact TR #1: Signalized Intersection Delay Increases during Construction Impact TR #2: Unsignalized Intersection Delay Increases during Construction Impact TR #3: Roadway Segment Volume-to-Capacity Ratio Changes during Construction Impact TR #4: Circulation and Emergency Access Inadequacies during Construction Impact TR #5: Design Feature Hazards, Incompatible Uses, or Conflict with Transit, Airport, Pedestrian, and Bicycle Plans during Construction Impact S&S #3: Increased Response Times for Fire, Rescue, and Emergency Services from Temporary Road Closures Impact SOCIO #1: Temporary Disruption to Community Cohesion or Division of Existing Communities from Construction Impact PK #1: Temporary Impact Areas, Temporary Access Restrictions, Temporary Facility Closures, or Temporary Detours during Construction

IAMF	Title	IAMF Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Title
		during construction, limit to the hours that are least disruptive to access for the adjacent land uses. ▪ Provisions for farm equipment access. ▪ Provisions for 24-hour access by emergency vehicles. ▪ Safe vehicular and pedestrian access to local businesses and residences during construction. The plan would provide for scheduled transit access where construction would otherwise impede such access. Where an existing bus stop is within the work zone, the design-builder would provide a temporary bus stop at a safe and convenient location away from where construction is occurring in close coordination with the transit operator. Adequate measures would be taken to separate students and parents walking to and from the temporary bus stop from the construction zone. ▪ Advance notification to the local school district of construction activities and rigorously maintained traffic control at all school bus loading zones, to provide for the safety of schoolchildren. Review existing or planned Safe Routes to Schools with school districts and emergency responders to incorporate roadway modifications that maintain existing traffic patterns and fulfill response route and access needs during project construction and HSR operations. ▪ Identification and assessment of the potential safety risks of project construction to children, especially in areas where the project is located near homes, schools, daycare centers, and parks. ▪ Promotion of child safety within and near the project area. For example, crossing guards could be provided in areas where construction activities are located near schools, daycare centers, and parks. CTPs would consider and account for the potential for overlapping construction projects.								
TR-IAMF#3	Off-Street Parking for Construction-Related Vehicles	The Contractor shall identify adequate off-street parking for all construction-related vehicles throughout the construction period to minimize impacts on public on-street parking areas. If adequate parking cannot be provided on the construction sites, the Contractor shall designate a remote parking area and arrange for the use a shuttle bus to transfer construction workers to/from the job site. This measure shall be addressed in the CTP.	Design/ Construction	Prepare plan	Prior to construction	Contractor	Contractor	Prepare CTP/Identify adequate off-street parking for all construction-related vehicles	Condition of design-build contract	Impact TR #1: Signalized Intersection Delay Increases during Construction Impact TR #2: Unsignalized Intersection Delay Increases during Construction Impact TR #3: Roadway Segment Volume-to-Capacity Ratio Changes during Construction Impact TR #4: Circulation and Emergency Access Inadequacies during Construction Impact SOCIO #1: Temporary Disruption to Community Cohesion or Division of Existing Communities from Construction

IAMF	Title	IAMF Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Title
TR-IAMF#4	Maintenance of Pedestrian Access	The Contractor shall prepare specific construction management plans to address maintenance of pedestrian access during the construction period. Actions that limit pedestrian access would include, but not be limited to, sidewalk closures, bridge closures, crosswalk closures or pedestrian rerouting at intersections, placement of construction-related material within pedestrian pathways or sidewalks, and other actions that may affect the mobility or safety of pedestrians during the construction period. If sidewalks are maintained along the construction site frontage, provide covered walkways and fencing. The plan objective shall be to maintain pedestrian access where feasible (i.e., meeting design, safety, and Americans with Disabilities Act [ADA] requirements). This measure shall be addressed in the CTP.	Design/ Construction	Prepare plan	Prior to construction	Contractor	Contractor	Prepare construction management plans that address maintenance of pedestrian access	Condition of design-build contract	Impact TR #5: Design Feature Hazards, Incompatible Uses, or Conflict with Transit, Airport, Pedestrian, and Bicycle Plans during Construction *Impact S&S #2: Accidents Associated with Construction-Related Detours* *Impact SOCIO #1: Temporary Disruption to Community Cohesion or Division of Existing Communities from Construction* *Impact PK #1: Temporary Impact Areas, Temporary Access Restrictions, Temporary Facility Closures, or Temporary Detours during Construction*
TR-IAMF#5	Maintenance of Bicycle Access	The Contractor shall prepare specific construction management plans to address maintenance of bicycle access during the construction period. Actions that limit bicycle access would include, but not be limited to, bike lane closures or narrowing, closure or narrowing of streets that are designated bike routes, bridge closures, placement of construction-related materials within designated bike lanes or along bike routes, and other actions that may affect the mobility or safety of bicyclists during the construction period. Maintain bicycle access where feasible (i.e., meeting design, safety, and ADA requirements). This measure shall be addressed in the CTP.	Design/ Construction	Prepare plan	Prior to construction	Contractor	Contractor	Prepare construction management plans that address maintenance of bicycle access	Condition of design-build contract	Impact TR #5: Design Feature Hazards, Incompatible Uses, or Conflict with Transit, Airport, Pedestrian, and Bicycle Plans during Construction Impact S&S #2: Accidents Associated with Construction-Related Detours Impact SOCIO #1: Temporary Disruption to Community Cohesion or Division of Existing Communities from Construction Impact PK #1: Temporary Impact Areas, Temporary Access Restrictions, Temporary Facility Closures, or Temporary Detours during Construction
TR-IAMF#6	Restriction on Construction Hours	The Contractor shall limit construction material deliveries between 7 a.m. and 9 a.m. and between 4 p.m. and 6 p.m. on weekdays to minimize impacts on traffic on roadways. The Contractor shall limit the number of construction employees arriving or departing the site between the hours of 7 a.m. and 8:30 a.m. and 4:30 p.m. and 6 p.m. Areas where these restrictions would be implemented would be determined as part of the CTP. Based on Authority review of the CTP, the restricted hours may be altered due to local travel patterns.	Construction	CTP to be prepared prior to construction followed by reporting	Prior to construction/ Weekly	Contractor	Contractor	Prepare CTP/ Limit construction materials deliveries and employee arrival and departures	Condition of design-build contract	Impact TR #1: Signalized Intersection Delay Increases during Construction Impact TR #2: Unsignalized Intersection Delay Increases during Construction Impact TR #3: Roadway Segment Volume-to-Capacity Ratio Changes during Construction Impact TR #4: Circulation and Emergency Access Inadequacies during Construction *Impact SOCIO #1: Temporary Disruption to Community Cohesion or Division of Existing Communities from Construction*

IAMF	Title	IAMF Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Title
TR-IAMF#7	Construction Truck Routes	The Contractor shall deliver all construction-related equipment and materials on the appropriate truck routes and shall prohibit heavy-construction vehicles from using alternate routes to get to the site. Truck routes would be established away from schools, daycare centers, and residences, or along routes with the least impact if the Authority determines those areas are unavoidable. This measure shall be addressed in the CTP.	Construction	CTP to be prepared prior to construction followed by reporting.	Prior to construction/ Weekly	Contractor	Contractor	Prepare CTP/ Establish truck routes	Condition of design-build contract	Impact TR #1: Signalized Intersection Delay Increases during Construction Impact TR #2: Unsignalized Intersection Delay Increases during Construction Impact TR #3: Roadway Segment Volume-to-Capacity Ratio Changes during Construction Impact TR #4: Circulation and Emergency Access Inadequacies during Construction *Impact SOCIO #1: Temporary Disruption to Community Cohesion or Division of Existing Communities from Construction* *Impact PK #1: Temporary Impact Areas, Temporary Access Restrictions, Temporary Facility Closures, or Temporary Detours during Construction*
TR-IAMF#8	Construction during Special Events	The Contractor shall provide a mechanism to prevent roadway construction activities from reducing roadway capacity during major athletic events or other special events that substantially (10 percent or more) increase traffic on roadways affected by project construction. Mechanisms include the presence of police officers directing traffic, special-event parking, use of within-the-curb parking, or shoulder lanes for through-traffic and traffic cones. This measure shall be addressed in the CTP.	Construction	CTP to be prepared prior to construction followed by reporting	Prior to construction/ Weekly	Contractor	Contractor	Prepare CTP/ Event coordination	Condition of design-build contract	Impact TR #1: Signalized Intersection Delay Increases during Construction Impact TR #2: Unsignalized Intersection Delay Increases during Construction Impact TR #3: Roadway Segment Volume-to-Capacity Ratio Changes during Construction Impact SOCIO #1: Temporary Disruption to Community Cohesion or Division of Existing Communities from Construction
TR-IAMF#9	Protection of Freight and Passenger Rail during Construction	The Contractor shall repair any structural damage to freight or public railways that may occur during the construction period and return any damaged sections to their original structural condition. If necessary, during construction, a “shoofly” track would be constructed to allow existing train lines to bypass any areas closed for construction activities. Upon completion, tracks would be opened and repaired; or new mainline track would be constructed, and the “shoofly” would be removed. Contractor repair responsibility would be included in the design-build contract.	Construction	Design-build and CTP to be prepared prior to construction followed by reporting	Weekly	Contractor	Contractor	Repair structural damage to freight or public railways	Condition of design-build contract	Impact TR #5: Design Feature Hazards, Incompatible Uses, or Conflict with Transit, Airport, Pedestrian, and Bicycle Plans during Construction
TR-IAMF#11	Maintenance of Transit Access	The Contractor shall prepare specific Construction Management Plans to address maintenance of transit access during the construction period. Actions that limit transit access include, but are not limited to, roadway lane closures or narrowing, closure or narrowing of streets that are designated transit routes, bus stop closures, bridge closures, placement of construction-related materials within designated transit lanes, bus stop or layover zones or along transit routes, and other actions that may affect the mobility or safety of bus transit during the construction period. A plan objective	Construction	Design-build and CTP to be prepared prior to construction followed by reporting	Prior to construction/ Weekly	Contractor	Contractor	Prepare Construction Management Plans to address maintenance of transit access	Condition of design-build contract	Impact TR #5: Design Feature Hazards, Incompatible Uses, or Conflict with Transit, Airport, Pedestrian, and Bicycle Plans during Construction Impact SOCIO #1: Temporary Disruption to Community Cohesion or Division of Existing Communities from Construction

IAMF	Title	IAMF Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Title
		shall be to maintain transit access where feasible (i.e., meeting design, safety, and ADA requirements). This measure shall be addressed in the CTP.								
TR-IAMF#12	Pedestrian and Bicycle Safety	Prior to construction, the Contractor shall provide a technical memorandum describing how pedestrian and bicycle accessibility would be provided and supported across the HSR corridor, to and from stations and on station property. Priority of safety for pedestrians and bicycles and vulnerable populations over motor vehicle access would be done in a way so as to encourage maximum potential access from non-motorized modes. Local access programs, such as Safe Routes to Schools, shall be maintained or enhanced. Access to community facilities for vulnerable populations shall be maintained or enhanced.	Pre-construction	Prepare technical memorandum	Prior to construction	Contractor	Contractor	Preparation of a pedestrian and bicycle accessibility technical memorandum	Condition of design-build contract	Impact TR #5: Design Feature Hazards, Incompatible Uses, or Conflict with Transit, Airport, Pedestrian, and Bicycle Plans during Construction Impact S&S #6: Motor Vehicle, Pedestrian, and Bicycle Accidents Associated with High-Speed Rail Operations Impact SOCIO #1: Temporary Disruption to Community Cohesion or Division of Existing Communities from Construction
Environmental Justice										
EJ-IAMF#1	Construction EJ Ombudsman/Business Spotlighting	To avoid or minimize adverse impacts to residents, businesses, and community facilities in EJ communities during construction, the Authority will create an ombudsman position to address the needs of affected residents, businesses, and community facilities in those EJ communities adversely affected by construction impacts, including street closures and detours and noise and dust resulting from construction activities. The position will act as a single point of contact for residents, businesses, and community facility operators and users in EJ communities with potential adverse construction impacts. The EJ ombudsman shall ensure multilingual notices of upcoming vehicle, pedestrian, bicycle, and transit access disruptions and construction activities are mailed to affected EJ communities, shall ensure that the notices inform EJ communities of the Authority's hotline for reporting community concerns or complaints regarding construction noise and traffic impacts, shall work with the Authority's construction contractor to minimize effects to community members, and shall prepare a report (quarterly, at minimum) of all concerns and complaints received in EJ communities and measures taken by the Authority to address the complaints and concerns. In those cases when construction activities will disrupt access or make access inconvenient to businesses in EJ communities, the Authority shall provide assistance to those businesses to maintain visibility during construction, including providing signage and targeted advertising and marketing campaigns, incentives for construction worker patronage (as applicable), and Authority-sponsored community events.	Construction	Create ombudsman position	Ongoing during construction	Contractor	Contractor	Creation of an ombudsman position	Condition of design-build contract	Impact EJ #1: Changes to Traffic and Circulation Patterns during Construction
EJ-IAMF#2	EJ Community-Inclusive Process for Development of	The Authority shall follow its aesthetic options and aesthetic review procedures outlined in AVQ-IAMF#1 (Aesthetic Options) and AVQ-IAMF#2 (Aesthetic Review Process) for key non-station structures. In addition to seeking input from	Pre-construction	Reporting	At incorporation or completion of design/monthly	Contractor	Contractor	Prepare aesthetics technical memorandum	Condition of design-build contract	Impact EJ #8: Changes to Aesthetics and Visual Quality during Construction

IAMF	Title	IAMF Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Title
	Aesthetic Treatments	the Cities of Burbank, Glendale, and Los Angeles on aesthetic preferences and to minimize adverse visual or related community cohesion impacts, the Authority shall also seek input on aesthetic preferences for potential treatments from the visually impacted EJ communities residing within the EJ resource study area in Los Angeles. Visually impacted communities and the EJ resource study area are defined in Chapter 5 of the FEIS/FEIR.			reporting during construction					
EJ-IAMF#3	Equity Noise Analysis	Prior to Construction, the Authority's Contractor will prepare an operation noise technical report for Authority review and approval, as described in N&V-MM#6. As described in N&V MM#3, sound treatments will be proposed to impacted receptors based on the recommendations in the approved noise impact report. To minimize EJ impacts, the final technical report will include an assessment of whether remaining severe noise impacts, after application of recommended noise treatments and mitigations, may continue to adversely impact EJ communities. If the report finds that adverse impacts may result, the Authority's contractor will prepare an additional report to assess whether any additional practicable measures may be undertaken to avoid, eliminate, or reduce the adverse noise impacts. The Authority will seek and consider the input of affected EJ sensitive receptors prior to finalizing the report, including the Taylor Yard community in Cypress Park on N San Fernando Road, generally between Arvia Street and Rio de Los Angeles State Park.	Pre-construction	Design	Prior to construction	Contractor	Contractor	Prepare an additional report to assess whether any additional practicable measures may be undertaken to avoid, eliminate, or reduce the adverse noise impacts	Submit assessment and supplemental environmental documentation	Impact EJ #12: Generation of Noise and Vibration during Operation
EJ-IAMF#4	EJ Relocation/Displacement Assistance	As described in SOCIO-IAMF#3 Relocation Mitigation Plan, the Authority will develop a relocation mitigation plan before any acquisitions occur, in consultation with affected cities and counties and property owners. The Plan will be designed to meet the objectives described in SOCIO-IAMF#3. To avoid or minimize adverse impacts in EJ communities in Los Angeles, the Plan will also include: (1) EJ Impact Minimization Measures: A description of measures taken or proposed to minimize adverse community cohesion effects of displacement and relocation on EJ communities, including a description of measures to relocate displacees (including tenants) in close proximity to their same community and an assessment of whether adverse EJ community cohesion effects remain after application of these measures; and (2) EJ Outreach: The Authority shall seek and consider input from impacted EJ communities prior to finalizing the Authority's Plan to minimize community cohesion effects of non-residential and residential displacements; and (3) EJ Ombudsman: Creation of an additional ombudsman's position to address needs of EJ communities identified in Los Angeles as adversely affected by displacements or relocations. The position will act as a single point of contact for property	Design/ Construction	Prepare plan	Prior to property acquisitions	Authority	Authority	Develop relocation mitigation plan	Condition of design-build contract	Impact EJ #6: Displacement of Persons or Businesses during Construction

IAMF	Title	IAMF Text	Phase	Implementation Action	Reporting Schedule	Implementation Party	Reporting Party	Implementation Text	Implementation Mechanism	Impact # and Impact Title
		owners, residents, and tenants in EJ communities with potential adverse relocation impacts. EJ communities are geographically defined and mapped in the findings of Chapter 5 of the FEIR/FEIS,								
EJ-IAMF#5	Community-Inclusive Process to Reroute Bike Paths in EJ Communities	As described in PR-MM#4, Replacement of Property Acquired from Existing or Planned Bicycle Routes, during the right-of-way acquisition process, the Authority will consult with the public agency with jurisdiction over any existing or planned bicycle routes regarding the specific conditions of acquisition and replacement of the land that will be acquired. To avoid or minimize adverse impacts to EJ communities from the relocation of planned or existing bike paths, the Authority will seek input from impacted EJ communities on the relocation of these bike paths.	Pre-construction	Final design/ consultation	Prior to final design	Authority	Authority	Authority will seek input from impacted EJ communities on the relocation of these bike paths.	Condition of design-build contract	Impact EJ #15: Disruption to Parks, Recreation, and Open Space during Operation

AASHTO	American Association of State Highway and Transportation Officials
ADA	Americans with Disabilities Act
APLIC	Avian Power Line Interaction Committee
AREMA	American Railway Engineering and Maintenance-of-Way Association
ASCE	American Society of Civil Engineers
ASTM	American Society for Testing and Materials
APE	area of potential effects
Authority	California High-Speed Rail Authority
BEMP	Built Environment Monitoring Plan
BETP	built environment treatment plan
BGEPA	Bald and Golden Eagle Protection Act
BMP	best management practice
BRMP	biological resources management plan
Cal-OSHA	California Occupational Safety and Health Administration
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESA	California Endangered Species Act
C.F.R.	Code of Federal Regulations
CMP	construction management plan
CP	construction package
CRHR	California Register of Historical Resources
CTP	construction transportation plan
CWA	Clean Water Act
DOGGR	California Department of Conservation, Division of Oil, and Gas and Geothermal Resources
EMC	electromagnetic capability
EMF	electromagnetic field
EMI	electromagnetic interference
EMMA	Environmental Mitigation Management and Assessment
ESA	Environmental Site Assessment
FAA	Federal Aviation Administration
FESA	Endangered Species Act
FHWA	Federal Highway Administration
FRA	Federal Railroad Administration
FTA	Federal Transit Administration
HSR	high-speed rail
IBC	International Building Code
ISEP	Implementation Stage Electromagnetic Compatibility Program Plan
IAMF	impact avoidance and minimization feature
MBTA	Migratory Bird Treaty Act
MOA	Memorandum of Understanding
mph	miles per hour
NIOSH	National Institute for Occupational Safety and Health
NMFS	National Marine Fisheries Service
NO_2	nitrogen dioxide
NOA	naturally occurring asbestos
NRHP	National Register of Historic Places
O&M	operations and maintenance
OSHA	Occupational Safety & Health Administration
PCM	Project Construction Manager
Porter-Cologne	Porter-Cologne Water Quality Control Act
PRM	Paleontological Resource Monitors
PRMMP	Paleontological Resources Monitoring and Mitigation Plan
PRS	Paleontological Resources Specialist
RCRA	Resource Conservation and Recovery Act
RF	radio frequency
SHPO	State Historic Preservation Office
SOI	Secretary of the Interior
SPCC	Spill Prevention, Control, and Countermeasure
SSPP	Systems Safety Program Plan
SVP	Society of Vertebrate Paleontology
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TR	technical report
Uniform Act	Uniform Relocation Assistance and Real Property Acquisition Policies Act, as amended
USACE	U.S. Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
VMT	vehicle miles traveled
VOC	volatile organic compound
WCP	Weed Control Plan
WEAP	Worker Environmental Awareness Program

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APPENDIX B: ERRATA SHEET FOR FINAL EIS

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California High-Speed Rail Authority

Burbank to Los Angeles Project Section

Final Environmental Impact Report/Environmental Impact Statement

Errata

March 2022

CALIFORNIA High-Speed Rail Authority

The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being or have been carried out by the State of California pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated July 23, 2019, and executed by the Federal Railroad Administration and the State of California.

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ERRATA SHEET

The following items are clarified and corrected (note corrected text in underline and strikethrough). Clarifications and corrections requiring underline and strikethrough text are indicated with a vertical line in the margin of this errata document. The Authority has considered whether any of these clarifications/corrections require supplementation/recirculation and has determined they do not.

Table 1 Errata in the Final EIR/EIS

Number	Reference	Published Final EIR/EIS Text	Clarification of or Correction to Final EIR/EIS	Reason for Clarification or Correction
1	Table of Contents	Page xxxv: Table 6-1 Capital Cost of the Burbank to Los Angeles Alternative (2020$ in millions)	**Correction:** As discussed in Reference 26 (below), the title of Table 6-1 has been revised to: Table 6-1 Capital Cost of the Burbank to Los Angeles Alternative (2021$ in millions)	Edit made to correct the year of the table data.
2	Section 3.3 Air Quality and Global Climate Change, page 3.3-56	Page 3.3-56: Emissions from construction of the HSR Build Alternative would be limited to the construction duration of up to 8 calendar years.	**Correction:** Impact AQ # 2 references 8 calendar years of construction. But as shown in Table 3.3-16, there would be 9 years of construction. The following edit has been made: Emissions from construction of the HSR Build Alternative would be limited to the construction duration of up to ~~8~~ 9 calendar years.	Edit made to correct the number of construction years.
3	Section 3.3 Air Quality and Global Climate Change, page 3.3-64	Page 3.3-64: The six discrete construction areas listed above were designed to represent the conservative approach in terms of construction-related air quality and health risk impacts, typically areas that have a large amount of construction activity with exhaust vented to the air near sensitive receptors along the Palmdale to Burbank alignment.	**Correction:** The text on page 3.3-64 has been revised to state: The six discrete construction areas listed above were designed to represent the conservative approach in terms of construction-related air quality and health risk impacts, typically areas that have a large amount of construction activity with exhaust vented to the air near sensitive receptors along the ~~Palmdale to~~ Burbank to Los Angeles alignment.	Edit made to correctly reference the Burbank to Los Angeles alignment.

Number	Reference	Published Final EIR/EIS Text	Clarification of or Correction to Final EIR/EIS	Reason for Clarification or Correction
4	Section 3.4 Noise and Vibration, page 3.4-59	Page 3.4-59: Under NEPA, operation of the HSR Build Alternative would result in noise impacts to sensitive receivers. Although the implementation of mitigation measures N&V-MM#3 through N&V-MM#6 would reduce HSR Build Alternative noise impacts, severe residual noise impacts would still remain at 48 locations.	**Correction:** The following edits were made: Under NEPA, operation of the HSR Build Alternative would result in noise impacts to sensitive receivers. Although the implementation of mitigation measures N&V-MM#3 through N&V-MM#6 would reduce HSR Build Alternative noise impacts, severe residual noise impacts would still remain at ~~48~~ 68 locations.	Edit made to correct the number of severe residual noise impacts, consistent with Tables 3.4-22 and 3.4-25.
5	Section 3.7 Biological and Aquatic Resources, page 3.7-48	Page 3.7-48: With incorporation of BIO-MM#14 through BIO-MM#17, along with BIO-MM#56, BIO-MM#61, and BIO-MM#63, as summarized above, temporary construction impacts on special-status bird species would be less than significant under CEQA.	**Correction:** The following text correction was made to the CEQA Conclusion under Impact BIO #2 (birds): With incorporation of BIO-MM#14 ~~through~~, BIO-MM#15, along with BIO-MM#56, BIO-MM#61, and BIO-MM#63, as summarized above, temporary construction impacts on special-status bird species would be less than significant under CEQA.	Edited to correct the mitigation measures associated with Impact BIO #2: Construction Effects on Special-Status Wildlife Species (birds).
6	Section 3.7 Biological and Aquatic Resources, page 3.7-76	Page 3.7-76: BIO-MM#62 Prepare Plan for Dewatering and Water Diversions	**Correction:** The following text was added to BIO-MM#62 Prepare Plan for Dewatering and Water Diversions: Prior to initiating any construction activity that occurs within open or flowing water, the Authority will prepare a dewatering plan, which will be subject to the review and approval by the applicable regulatory agencies. The plan will incorporate measures to minimize turbidity and siltation, such as the use of silt fences, fiber rolls, and/or temporary sediment basins or settling ponds.	Provided text to clarify examples of best management practices to reduce turbidity in BIO-MM#62.

Number	Reference	Published Final EIR/EIS Text	Clarification of or Correction to Final EIR/EIS	Reason for Clarification or Correction
7	Section 3.8 Hydrology and Water Resources, page 3.8-21	Page 3.8-21: The HSR Build Alternative included retaining walls near the Metro Gold Line and Broadway, where the HSR tracks would have been depressed two feet below existing grade.	**Correction:** The following text edits were made; The HSR Build Alternative would also construct retaining walls adjacent to the Los Angeles River near the Metrolink CMF ~~and near the Metro Gold Line and Broadway~~.	In October 2021, USACE shared details of the Los Angeles River Ecosystem Restoration Project with the HSR Authority, which expressed concern that the originally proposed retaining wall at the Gold Line would not facilitate or may limit proposed, future improvements associated with the Los Angeles River Ecosystem Restoration Project at this location (commonly referred to as the Cornfields). Therefore, the design of the HSR Build Alternative was refined at this location and the tracks will no longer be depressed, and the retaining walls would not be required.
8	Section 3.8 Hydrology and Water Resources, page 3.8-51	Page 3.8-51: The HSR Build Alternative included retaining walls near the Metro Gold Line and Broadway, where the HSR tracks would have been depressed two feet below existing grade.	**Correction:** The following text edits were made: Construction of the HSR Build Alternative would take place in or over the FEMA-designated floodplains associated with the Lockheed Channel, the Burbank Western Channel, Verdugo Wash, and at the <u>four</u> ~~five~~ following locations in the Los Angeles River: • A retaining wall adjacent to the Metrolink Central Maintenance Facility (CMF) • An existing rail bridge north of SR 110 (Los Angeles River Downey Bridge) • ~~A retaining wall near the Metro Gold Line and Broadway~~ • A new vehicular bridge adjacent to the existing Main Street bridge for the proposed Main Street grade separation (one of the early action projects) • An existing rail bridge southeast of Bolero Lane (Mission Tower Bridge)	In October 2021, USACE shared details of the Los Angeles River Ecosystem Restoration Project with the HSR Authority, which expressed concern that the originally proposed retaining wall at the Gold Line would not facilitate or may limit proposed, future improvements associated with the Los Angeles River Ecosystem Restoration Project at this location (commonly referred to as the Cornfields). Therefore, the design of the HSR Build Alternative was refined at this location and the tracks will no longer be depressed, and the retaining walls would not be required.

Number	Reference	Published Final EIR/EIS Text	Clarification of or Correction to Final EIR/EIS	Reason for Clarification or Correction
9	Section 3.8 Hydrology and Water Resources, page 3.8-52	Page 3.8-52: The HSR Build Alternative included retaining walls near the Metro Gold Line and Broadway, where the HSR tracks would have been depressed two feet below existing grade.	**Correction:** The following text edits were made: The Authority and the USACE have been coordinating under the November 2010 MOU with respect to the following facilities and project construction: 1) Los Angeles River (Main Street grade separation); 2) the Burbank Western Channel (clear span bridge); 3) Verdugo Wash (clear span bridge); and 4) Los Angeles River (retaining wall near Metrolink CMF)~~; and 5) Los Angeles River (retaining wall near the Metro Gold Line and Broadway)~~.	In October 2021, USACE shared details of the Los Angeles River Ecosystem Restoration Project with the HSR Authority, which expressed concern that the originally proposed retaining wall at the Gold Line would not facilitate or may limit proposed, future improvements associated with the Los Angeles River Ecosystem Restoration Project at this location (commonly referred to as the Cornfields). Therefore, the design of the HSR Build Alternative was refined at this location and the tracks will no longer be depressed, and the retaining walls would not be required.
10	Section 3.8 Hydrology and Water Resources, page 3.8-53	Page 3.8-53: The HSR Build Alternative included retaining walls near the Metro Gold Line and Broadway, where the HSR tracks would have been depressed two feet below existing grade.	**Correction:** The following text edits were made: The HSR Build Alternative would also construct retaining walls adjacent to the Los Angeles River in one ~~two~~ location~~s~~.	In October 2021, USACE shared details of the Los Angeles River Ecosystem Restoration Project with the HSR Authority, which expressed concern that the originally proposed retaining wall at the Gold Line would not facilitate or may limit proposed, future improvements associated with the Los Angeles River Ecosystem Restoration Project at this location (commonly referred to as the Cornfields). Therefore, the design of the HSR Build Alternative was refined at this location and the tracks will no longer be depressed, and the retaining walls would not be required.

Number	Reference	Published Final EIR/EIS Text	Clarification of or Correction to Final EIR/EIS	Reason for Clarification or Correction
11	Section 3.8 Hydrology and Water Resources, page 3.8-60	Page 3.8-60: The HSR Build Alternative included retaining walls near the Metro Gold Line and Broadway, where the HSR tracks would have been depressed two feet below existing grade.	**Correction:** In Table 3.8-10, the "Los Angeles River near Metro Gold Line and Broadway" row has been deleted.	In October 2021, USACE shared details of the Los Angeles River Ecosystem Restoration Project with the HSR Authority, which expressed concern that the originally proposed retaining wall at the Gold Line would not facilitate or may limit proposed, future improvements associated with the Los Angeles River Ecosystem Restoration Project at this location (commonly referred to as the Cornfields). Therefore, the design of the HSR Build Alternative was refined at this location and the tracks will no longer be depressed, and the retaining walls would not be required.
12	Section 3.8 Hydrology and Water Resources, page 3.8-61	Page 3.8-61: The HSR Build Alternative included retaining walls near the Metro Gold Line and Broadway, where the HSR tracks would have been depressed two feet below existing grade.	**Correction:** The following text was deleted: ~~**Los Angeles River Near the Metro Gold Line and Broadway (Retaining Walls)**~~ ~~The HSR Build Alternative would include new retaining walls directly north of Broadway. As the grade of the tracks would be lowered in this area, sump pumps or direct connections to the channel would be needed, to prevent flooding during any rain event. However, the addition of the retaining wall would not modify the Los Angeles River channel hydraulics and floodplain impacts. The existing floodplain would remain the same as it is under existing conditions, and the current capacity of the channel would not be reduced.~~	In October 2021, USACE shared details of the Los Angeles River Ecosystem Restoration Project with the HSR Authority, which expressed concern that the originally proposed retaining wall at the Gold Line would not facilitate or may limit proposed, future improvements associated with the Los Angeles River Ecosystem Restoration Project at this location (commonly referred to as the Cornfields). Therefore, the design of the HSR Build Alternative was refined at this location and the tracks will no longer be depressed, and the retaining walls would not be required.

Number	Reference	Published Final EIR/EIS Text	Clarification of or Correction to Final EIR/EIS	Reason for Clarification or Correction
13	Section 3.8 Hydrology and Water Resources, page 3.8-63	Page 3.8-63: The HSR Build Alternative included retaining walls near the Metro Gold Line and Broadway, where the HSR tracks would have been depressed two feet below existing grade.	**Correction:** The following text edits have been made: The Authority and the USACE have been coordinating under the November 2010 MOU with respect to the following facilities and project construction: 1) Los Angeles River (Main Street grade separation); 2) the Burbank Western Channel (clear span bridge); 3) Verdugo Wash (clear span bridge); and 4) Los Angeles River (retaining wall near Metrolink CMF)~~; and 5) Los Angeles River (retaining wall near the Metro Gold Line and Broadway)~~.	In October 2021, USACE shared details of the Los Angeles River Ecosystem Restoration Project with the HSR Authority, which expressed concern that the originally proposed retaining wall at the Gold Line would not facilitate or may limit proposed, future improvements associated with the Los Angeles River Ecosystem Restoration Project at this location (commonly referred to as the Cornfields). Therefore, the design of the HSR Build Alternative was refined at this location and the tracks will no longer be depressed, and the retaining walls would not be required.

Number	Reference	Published Final EIR/EIS Text	Clarification of or Correction to Final EIR/EIS	Reason for Clarification or Correction
14	Section 3.11 Safety and Security, pages 3.11-29 and 3.11-30	Pages 3.11-29 and 3.11-30: The Los Angeles County Sheriff's Department's Transit Policing Division (Transit Policing Division) provides contract transit services to Metro, which operates the public transit system serving Los Angeles County and the RSA. The deputies provide transit police services for both the light rail and bus transportation systems. The Transit Policing Division also serves as the contract transit police agency for Metrolink's heavy commuter rail transportation system located within the RSA (Los Angeles County Sheriff's Department 2017). While the Transit Policing Division provides contract transit services, the local agencies identified above also respond to calls for these transportation systems when requested by the Transit Policing Division. The Transit Policing Division dispatch policy requires that a response from a local agency be requested when Transit Policing Division patrol units are not able to respond in a reasonable amount of time. Additionally, many of the calls are received directly by local law enforcement agencies due to transit patrons dialing 911, where, in most cases, the public safety calls are routed to dispatch centers of the local law enforcement agencies (Metro 2016).	**Correction**: Section 3.11 incorrectly states the Transit Policing Division provides contract transit services to LA Metro. The Los Angeles County Sheriff Department's Transit Services Bureau provides policing services to LA Metro. The Los Angeles County Sheriff's Department's Transit Services Bureau (Transit Services Bureau) provides contract transit services to Metro, which operates the public transit system serving Los Angeles County and the RSA. The deputies provide transit police services for both the light rail and bus transportation systems. The Transit Services Bureau also serves as the contract transit police agency for Metrolink's heavy commuter rail transportation system located within the RSA (Los Angeles County Sheriff's Department 2017). While the Transit Services Bureau provides contract transit services, the local agencies identified above also respond to calls for these transportation systems when requested by the Transit Services Bureau. The Transit Services Bureau dispatch policy requires that a response from a local agency be requested when Transit Services Bureau patrol units are not able to respond in a reasonable amount of time. Additionally, many of the calls are received directly by local law enforcement agencies due to transit patrons dialing 911, where, in most cases, the public safety calls are routed to dispatch centers of the local law enforcement agencies (Metro 2016). Additionally, the Department's Metrolink Bureau currently has a contract with Metrolink to provide policing services.	In November 2021, the Los Angeles County Sheriff's Department provided correspondence identifying inaccuracies in Section 3.11, Safety and Security. The text correction has been made to address input from Los Angeles County Sheriff's Department.

Number	Reference	Published Final EIR/EIS Text	Clarification of or Correction to Final EIR/EIS	Reason for Clarification or Correction
15	Section 3.13 Station Planning, Land Use, and Development, page 3.13-60	Page 3.13-60: With implementation of N&V-MM#3 and N&V-MM#4, the 210 properties where there would be severe noise impacts would be reduced to 48 locations, all 718 properties with moderate noise impacts would be mitigated, and ground-borne vibration and ground-borne noise impacts would remain at 12 locations.	**Correction:** The following edits were made: With implementation of N&V-MM#3 and N&V-MM#4, the 210 properties where there would be severe noise impacts would be reduced to ~~48~~ 68 locations, all 718 properties with moderate noise impacts would be mitigated, and ground-borne vibration and ground-borne noise impacts would remain at 12 locations.	Edit made to correct the number of severe residual noise impacts, consistent with Tables 3.4-22 and 3.4-25.
16	Section 3.13 Station Planning, Land Use, and Development, page 3.13-67	Page 3.13-67: Even with implementation of the mitigation measures, severe residual noise impacts would remain at 48 locations and ground-borne vibration and ground-borne noise impacts would remain at 12 locations.	**Correction:** The following edits were made: Even with implementation of the mitigation measures, severe residual noise impacts would remain at ~~48~~ 68 locations and ground-borne vibration and ground-borne noise impacts would remain at 12 locations.	Edit made to correct the number of severe residual noise impacts, consistent with Tables 3.4-22 and 3.4-25.
17	Section 3.16 Aesthetics and Visual Quality, page 3.16-47	Page 3.16-47: Table 3.16-7 provides a summary of how the built elements of the HSR Build Alternative would change the existing visual quality for each KVP in the three landscape units. Determinations of this effect on aesthetics and visual quality according to NEPA and CEQA criteria, after AVQ-IAMF#1 and AVQ-IAMF#2 are applied, are provided below.	**Correction:** The text describing Table 3.16-7 in Section 3.16 has been revised to state that effects determinations are determined after implementation of both IAMFs and mitigation measures. Table 3.16-7 provides a summary of how the built elements of the HSR Build Alternative would change the existing visual quality for each KVP in the three landscape units. Determinations of this effect on aesthetics and visual quality according to NEPA and CEQA criteria, after AVQ-IAMF#1 and AVQ-IAMF#2 are applied and after implementation of applicable mitigation measures, are provided below.	Text correction has been provided to ensure consistency of text presented in Impact AVQ #3 (page 3.16-75) and the findings in Table 3.16-7.

Number	Reference	Published Final EIR/EIS Text	Clarification of or Correction to Final EIR/EIS	Reason for Clarification or Correction
18	Section 3.19 Cumulative Impacts, page 3.19-31	Page 3.19-31: CEQA Conclusion under Section 3.19.8.3: Mitigation measure AQ-MM#1 would reduce the effects of the HSR Build Alternative on regional air quality through the purchase of emission offsets for project-level air quality impacts. However, sufficient offset credits may not be available to fully reduce the regional air quality impact. In addition, AQ-MM#1 would only reduce regional air quality impacts and would not reduce localized air quality impacts. Therefore, even with implementation of the prescribed mitigation measure, the maximum concentrations associated with construction would still exceed the nitrogen dioxide California Ambient Air Quality Standards at the localized level. Therefore, the contribution of the HSR Build Alternative to the significant cumulative air quality impact would be cumulatively considerable for nitrogen dioxide.	**Correction**: AQ-MM#2 has been added to the air quality discussion in Section 3.19. Mitigation Measure AQ-MM#1 would reduce the effects of the HSR Build Alternative on regional air quality through the purchase of emission offsets for project-level air quality impacts. However, sufficient offset credits may not be available to fully reduce the Preferred Alternative's daily emissions to below the SCAQMD CEQA thresholds for NOx and CO. In addition, AQ-MM#1 would only reduce regional air quality impacts and would not reduce localized air quality impacts. Mitigation Measure AQ-MM# 2, which would require the contractor to utilize a minimum of 25 percent ZE or NZE vehicles, would also reduce NOx emissions, but sufficient information is not available to conclude that this measure would reduce NOx emissions from the HSR Build Alternative to below a significant level. Therefore, even with implementation of the prescribed mitigation measures, the maximum concentrations associated with construction would still exceed the nitrogen dioxide California Ambient Air Quality Standards at the localized level. Therefore, the contribution of the HSR Build Alternative to the significant cumulative air quality impact would be cumulatively considerable for nitrogen dioxide.	Edited text to include a reference to AQ-MM#2 which was inadvertently omitted from Section 3.19.
19	Chapter 6 Project Costs and Operations, page 6-4	Page 6-4: Table 6-1 Capital Cost of the Burbank to Los Angeles Alternative (2020$ in millions)	**Correction**: Table 6-1 in Chapter 6 has been revised to reference 2021$ in millions rather than 2020$ in millions. Table 6-1 Capital Cost of the Burbank to Los Angeles Alternative (2021$ in millions)	Edit made to correct the year of the table data.
20	Appendix 3.1-A Parcels Affected by the Project Footprint	The Draft EIR/EIS version of Appendix 3.1-A.	**Correction:** The Final EIR/EIS version of Appendix 3.1-A has been posted to the website.	The Draft EIR/EIS version of Appendix 3.1-A was inadvertently published with the Final EIR/EIS.

Number	Reference	Published Final EIR/EIS Text	Clarification of or Correction to Final EIR/EIS	Reason for Clarification or Correction
21	Appendix 3.12-D Parcel Acquisition	The Draft EIR/EIS version of Appendix 3.12-D.	**Correction:** The Final EIR/EIS version of Appendix 3.12-D has been posted to the website.	The Draft EIR/EIS version of Appendix 3.12-D was inadvertently published with the Final EIR/EIS.
22	Appendix 5-A Draft Environmental Justice Outreach Plan	The Draft version of the Environmental Justice Outreach Plan.	**Correction:** The Final Environmental Justice Outreach Plan has been posted to the website.	The Draft version of the Environmental Justice Outreach Plan was finalized.
23	Volumes 3.1 through 3.6	Volumes 3.1 through 3.6: A two to five-foot retaining wall is required adjacent to the Rio de Los Angeles State Park. In order to maintain the wall in the future, the design included a ten-foot permanent easement within the park boundaries.	**Correction**: The design has been revised to remove the permanent maintenance easement. The revised sheets include the following: • Volume 3.1, Sheets TT-D1325, TT-D1326, TT-D1507, TT-D1508, RW-M4140, RW-M4141, and RW-M4241 • Volume 3.2, Sheets ST-G1134 and ST-G1135 • Volume 3.3, Sheet CV-T1141 • Volume 3.4, Sheets UT-C1540, UT-C1541, UT-D1640, UT-D1641, UT-D7141, CV-G1140, CV-G1141, and TC-O4108	After consultation with the California Department of Parks and Recreation in October 2021, the Authority determined that the wall could be constructed completely from within the railroad right-of-way, and that during operations, a permanent maintenance easement would not be needed.

Number	Reference	Published Final EIR/EIS Text	Clarification of or Correction to Final EIR/EIS	Reason for Clarification or Correction
24	Volumes 3.1 through 3.4 of the PEPD	The HSR Build Alternative included retaining walls near the Metro Gold Line and Broadway, where the HSR tracks would have been depressed two feet below existing grade.	**Correction:** The design has been revised to keep the HSR tracks at-grade and remove the retaining walls. The revised sheets include the following: • Volume 3.1, Sheets GE-A0101, GE-D0101, GE-D0102, TT-D1331, T-D1332, TT-D1333, TT-D1334, TT-D1335, TT-D1336, TT-D3110, TT-D3111, TT-D6102, TT-D6014, RW-M4148, RW-M4149, and RW-M4150 • Volume 3.2, Sheets GE-A0201, GE-D0201, ST-G1141, ST-G1142, ST-G1143, and ST-G1144 • Volume 3.3, Sheets GE-A0301, GE-D0301, and GE-D0302 • Volume 3.4, Sheets GE-A0401, GE-D0401, GE-D0402, UT-C1547, UT-C1548, UT-C1549, UT-C1550, UT-D1647, UT-D1648, UT-D1649, UT-D1650, CV-G1147, CV-G1148, CV-G1149, CV-G1150, CV-G6105, and TC-O4110 • Volume 3.5, Sheets GE-A0501 and GE-D0501 • Volume 3.6, Sheets GE-A0601 and GE-D0601	In October 2021, USACE shared details of the Los Angeles River Ecosystem Restoration Project with the HSR Authority, which expressed concern that the originally proposed retaining wall at the Gold Line would not facilitate or may limit proposed, future improvements associated with the Los Angeles River Ecosystem Restoration Project at this location (commonly referred to as the Cornfields). Therefore, the design of the HSR Build Alternative was refined at this location and the tracks will no longer be depressed, and the retaining walls would not be required.

Number	Reference	Published Final EIR/EIS Text	Clarification of or Correction to Final EIR/EIS	Reason for Clarification or Correction
25	Appendix 2-B Project Impact Avoidance and Minimization Features Analysis	AQ-IAMF#1: Fugitive Dust Emissions	**Clarification:** The following two bullet points were added to the AQ-IAMF#1 in Appendix 2-B: • Require the construction contractor to post a publicly visible sign on the construction site with the telephone number and person to contact at the Authority for any dust or other air quality complaints. The person will be required to take corrective action within 48 hours. The phone number for the local air district must also be visible to ensure compliance with applicable regulations. • Provisions in the dust control plan will allow school administrators and/or their designated representative(s) to notify the Authority if construction-related air emission levels generated by the project are adversely impacting the learning environment. All notices will be investigated by the Authority and corrective action will be taken within 48 hours.	Text has been added in Appendix 2-B to AQ-IAMF#1 to provide clarifying detail on the complaint procedure for the fugitive dust control plan.
26	Volume 4, Chapter 23, Response 692-751 (San Antonio Winery)	Response to Comment 692-751 (page 23-362): The street network has been revised to address stakeholder concerns regarding circulation, including providing a direct connection between Lamar Street and the new Main Street, removing a connection between Lamar Street and Clover Street, and maintaining the existing Clover/Main intersection conditions.	**Clarification:** The following edits were made: The street network has been revised to address stakeholder concerns regarding circulation, including providing a direct connection between Lamar Street and the new Main Street, removing a permanent connection between Lamar Street and Clover Street, and maintaining the existing Clover/Main intersection conditions. A temporary connection between Lamar Street and Clover Street will be available during construction.	During email correspondence between HSR and the San Antonio Winery on March 10, 2021 and March 25, 2021, the San Antonio Winery requested clarification on the permanent and temporary connections between Lamar Street and Clover Street.
27	Appendix 3.1-C, Various Engineering Refinements	Page 3.1-C-3: These design modifications also include the reconfiguration of several roadways on the east side of the Los Angeles River, including Albion Street, Gibbon Street, and Lamar Street. Avenue 17 and Clover Street would no longer be reconfigured.	**Correction:** The following edits were made: These design modifications also include the reconfiguration of several roadways on the east side of the Los Angeles River, including Albion Street, Gibbon Street, and Lamar Street. Avenue 17 and Clover Street would no longer be reconfigured. A temporary connection between Lamar Street and Clover Street will be available during construction.	During email correspondence between HSR and the San Antonio Winery on March 10, 2021 and March 25, 2021, the San Antonio Winery requested clarification on the permanent and temporary connections between Lamar Street and Clover Street.

Number	Reference	Published Final EIR/EIS Text	Clarification of or Correction to Final EIR/EIS	Reason for Clarification or Correction
28	Volume 4, Chapter 23, Response 692-755 (San Antonio Winery)	Response to Comment 692-755 (page 23-363): However, in recognition of the challenge associated with reconfiguring the parking lot on the southeast quadrant of the intersection and the need to accommodate an emergency access road, the commercial property on the southwest corner of Lamar Street and Main Street is now proposed as a full acquisition.	**Correction:** The following edits were made: However, in recognition of the challenge associated with reconfiguring the parking lot on the southeast quadrant of the intersection ~~and the need to accommodate an emergency access road~~, the commercial property on the southwest corner of Lamar Street and Main Street is now proposed as a full acquisition.	The design was updated after a coordination meeting between HSR and the San Antonio Winery on December 15, 2020, to provide a direct connection from Lamar to Main Street. Therefore, the emergency access road is no longer required.
29	Volume 4, Chapter 23, Response 696-780 (Overton Moore Properties)	Response to Comment 696-780 (page 23-333): The Authority acknowledges that the Avion Burbank Project is now fully entitled and partially constructed. Any property that needs to be acquired from the Avion Burbank Project by the Authority will be done so in accordance with impact avoidance and minimization feature SOCIO-IAMF#2 which requires compliance with the Uniform Relocation and Real Property Acquisitions Policy Act. No revisions have been made to this Final EIR/EIS in response to this comment.	**Correction**: The following edits were made: The Authority acknowledges that the Avion Burbank Project is now fully entitled and partially constructed. Any property that needs to be acquired from the Avion Burbank Project by the Authority will be done so in accordance with impact avoidance and minimization feature SOCIO-IAMF#2 which requires compliance with the Uniform Relocation and Real Property Acquisitions Policy Act. <u>In response to comments raised by the commenter, revisions have been made to the residential displacements, business displacements, property tax revenue losses, and school district revenue losses based on changes to parcel acquisitions resulting from engineering and design refinements, as well as updated data regarding construction of the Avion Burbank development (Section 3.12).</u> ~~No revisions have been made to this Final EIR/EIS in response to this comment.~~	Text correction to the response to comment for consistency with the updated text in Section 3.12.

Number	Reference	Published Final EIR/EIS Text	Clarification of or Correction to Final EIR/EIS	Reason for Clarification or Correction
30	Volume 4, Chapter 23, Response 696-781 (Overton Moore Properties)	Response to Comment 696-781 (page 23-333): The more detailed the design becomes in subsequent phases, the more detailed the cost estimate should be. Therefore, the capital costs provided in Chapter 6 of this Final EIR/EIS are preliminary in nature and will be refined in the next phase of project design. Once the design is final and the exact nature of impacts to the Burbank Avion Development is defined, the Authority will coordinate with the property owner and follow the procedures described in the Right-of-Way Manual (Authority 2019).	**Correction:** The following edits were made: The more detailed the design becomes in subsequent phases, the more detailed the cost estimate should be. ~~Therefore,~~ While the capital costs provided in Chapter 6 of this Final EIR/EIS are preliminary in nature and will be refined in the next phase of project design, the capital costs associated with 40 Sitework, Right-of-Way, Land, Existing Conditions have been updated to include estimated right-of-way costs associated with the Burbank Avion Development. Once the design is final and the exact nature of impacts to the Burbank Avion Development is defined, the Authority will coordinate with the property owner and follow the procedures described in the Right-of-Way Manual (Authority 2019).	Text correction to the response to comment for consistency with the updated text in Chapter 6.
31	Volume 4, Chapter 24, Response 658-674 (Mark Johnston, June 26, 2020)	The Burbank Airport Station location was then studied in the 2016 Palmdale to Burbank SAA and the 2018 Burbank Station Options Screening Report and Option B was selected as the preferred alternative in 2018.	**Correction:** The Burbank Airport Station location was then studied in the 2016 Palmdale to Burbank SAA and the 2018 Burbank Station Options Screening Report and Option B Refined was selected as the preferred alternative in 2018.	Revised text to state that Option B Refined was carried forward and not Option B.
32	Appendix 3.6-C, High-Risk and Major Utilities Report	Page 81, Row 505: Disposition for the utility is “To be raised (relocated)”.	**Correction:** The design has been revised to keep the HSR tracks at-grade and remove the retaining walls. The utility would no longer need to be relocated, and the disposition has been changed to “Protect in place”.	In October 2021, USACE shared details of the Los Angeles River Ecosystem Restoration Project with the HSR Authority, which expressed concern that the originally proposed retaining wall at the Gold Line would not facilitate or may limit proposed, future improvements associated with the Los Angeles River Ecosystem Restoration Project at this location (commonly referred to as the Cornfields). Therefore, the design of the HSR Build Alternative was refined at this location and the tracks will no longer be depressed, and the retaining walls would not be required.

Source: California High Speed Rail Authority, 2022
CEQA = California Environmental Quality Act HSR = high-speed rail EIR/EIS = Environmental Impact Report/Environmental Impact Statement IAMF = impact avoidance and minimization feature

APPENDIX C: STATE HISTORIC PRESERVATION OFFICER SECTION 106 CONCURRENCE LETTER AND MEMORANDUM OF AGREEMENT, OCTOBER 25, 2021

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MEMORANDUM OF AGREEMENT
AMONG THE CALIFORNIA HIGH-SPEED RAIL AUTHORITY, THE SURFACE TRANSPORTATION BOARD, AND THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER,
REGARDING THE BURBANK TO LOS ANGELES PROJECT SECTION OF THE CALIFORNIA HIGH-SPEED RAIL PROGRAM IN LOS ANGELES COUNTY, CALIFORNIA

WHEREAS, the California High-Speed Rail Authority (Authority) proposes to construct the Burbank to Los Angeles Project Section (the Undertaking), an approximately 14-mile portion of the California High-Speed Rail Program in Los Angeles County, in an existing railroad corridor crossing the cities of Burbank, Glendale, and Los Angeles; and

WHEREAS, the approximately 54-mile long Palmdale to Los Angeles Project Section was identified as an Undertaking subject to review under Section 106 of the National Historic Preservation Act (54 United States Code [U.S.C.] § 306108) and its implementing regulations (36 Code of Federal Regulations [CFR] Part 800) in the *Programmatic Agreement among the Federal Railroad Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California High-Speed Rail Authority regarding compliance with Section 106 of the National Historic Preservation Act as it pertains to the California High-Speed Train Project* (PA), executed on July 22, 2011 (**Attachment 1**); and

WHEREAS, the *First Amendment to the Programmatic Agreement among the Federal Railroad Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California High-Speed Rail Authority regarding compliance with Section 106 of the National Historic Preservation Act as it pertains to the California High-Speed Train Project* was executed on July 21, 2021, extending the expiration of the PA from July 22, 2021 to July 23, 2024 (**Attachment 1**); and

WHEREAS, in 2014, the Federal Railroad Administration (FRA) advised the public in a Notice of Intent (NOI) that they were amending the original 2007 NOI for the Palmdale to Los Angeles Project Section in that they were now preparing two separate Environmental Impact Statements (EIS): one for the approximately 40-mile-long Palmdale to Burbank Project Section and one for the approximately 14-mile-long Burbank to Los Angeles Project Section; and

WHEREAS, the Authority has coordinated compliance with Section 106 and 36 CFR Part 800 with steps taken to meet the requirements of the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA) and has planned public participation, analysis, and review in such a way to satisfy the requirements of each statute; and

WHEREAS, on July 23, 2019, the State of California and the FRA executed a memorandum of understanding (MOU) under the Surface Transportation Project Delivery Program (known as NEPA Assignment), pursuant to the legal authority under 23 U.S.C. §327; and under NEPA Assignment, the state, acting through the California State Transportation Agency and the Authority, assumed FRA's responsibilities under NEPA and other federal environmental laws, including Section 106; and

WHEREAS, government-to-government consultation with federally recognized Native American tribes remains the FRA's responsibility under NEPA assignment; and

WHEREAS, on April 18, 2013, the Surface Transportation Board (STB) issued a decision concluding that it has jurisdiction over the construction of the California High-Speed Rail Program, requiring the Authority to obtain STB approval for the construction of each project section and subsequently designated FRA lead agency to act on its behalf for the purposes of compliance with Section 106 for High-Speed Rail Program Undertakings, and on June 23, 2021 the STB designated the Authority as lead Federal agency for Section 106, and the STB accepted the Authority's invitation to be an Invited Signatory to this memorandum of agreement (MOA); and

WHEREAS, on May 20, 2020, the United States Army Corps of Engineers (USACE), San Francisco, Sacramento and Los Angeles districts, sent a letter to the Authority reaffirming their understanding regarding the Authority's role as lead agency for compliance with Section 106, and that the Authority has the responsibility to act on the USACE's behalf for their discretionary federal actions related to all HSR project sections; and

WHEREAS, the Undertaking would be designed and constructed using a design-build procurement process, in which the current level of design is generally 15 percent complete, and which the Authority's design-build contractor (the Contractor) will advance to 100 percent, potentially resulting in adjustments to the project footprint; and

WHEREAS, the Authority has delineated the Area of Potential Effects (APE) for the Undertaking based on the current level of design in accordance with Stipulation VI.A of the PA to encompass the geographic areas within which the Undertaking may directly or indirectly cause alterations in the character or use of historic properties, as depicted in **Attachment 2**; and

WHEREAS, the Authority surveyed the APE for built-environment resources and, in consultation with the California State Historic Preservation Officer (SHPO) and other consulting parties, determined that the APE contains 23 built-environment historic properties listed in or considered eligible for listing in the National Register of Historic Places (**Attachment 3**); and

WHEREAS, the Authority proposes to phase the identification and evaluation of archaeological historic properties as provided for in Stipulation VI.E of the PA and 36 CFR 800.4(b)(2); and

WHEREAS, due to access restrictions and the predominance of paved or otherwise non-visible ground surfaces, the Authority has not yet surveyed any of the project footprint for archaeological resources and, in consultation with the SHPO and other consulting parties, determined that the APE contains three (3) previously identified archaeological historic properties (**Attachment 3**), one of which, P-19-001575, has been previously determined eligible, and two others, P-19-1875085 and P-10-101229 are currently unevaluated and presumed NRHP-eligible for planning purposes; and

WHEREAS, the Advisory Council on Historic Preservation (ACHP) notified the Authority that the ACHP would not be participating in consultation regarding the Undertaking by letter on July 29, 2020; and

WHEREAS, the Authority, in consultation with the SHPO, Invited Signatories and other Consulting Parties, determined that the Undertaking, as currently designed, may have an adverse effect on four (4) built-environment historic properties (the Arroyo Seco Parkway Historic District, Broadway Viaduct, Spring Street Viaduct, and Main Street Bridge), no adverse effect on 19 built-resource historic properties, and no effect on two (2) of the three (3) previously recorded archaeological historic properties, as documented in the Finding of Effect (FOE) report for the Burbank to Los Angeles Project Section, and as listed in **Attachment 3** of this MOA; the Authority will phase the evaluation and effects assessment for the single remaining archaeological property that has been identified in the APE; and

WHEREAS, the Authority will ensure the avoidance, minimization, or resolution of adverse effects of the Undertaking on historic properties through the execution and implementation of this MOA and the implementation of the Archaeological Treatment Plan (ATP; **Attachment 4**) and the Built Environment Treatment Plan (BETP; **Attachment 5**); and

WHEREAS, because the Contractor has not yet been selected, the Authority shall ensure that the terms of this MOA, ATP, and BETP are incorporated in their entirety in all contracts, licenses, or other approvals for this Undertaking, with the intent to bind the Contractors to compliance with this MOA, ATP, and BETP; and

WHEREAS, in accordance with Stipulation V.A and V.B of the PA, the Authority has consulted with agencies with jurisdiction over portions of the APE and other consulting parties with a demonstrated interest in the Undertaking, a legal or economic relation to an affected historic property, or concern with the Undertaking's effects on historic properties, as noted in **Attachment 6**, about the Undertaking and its effects on historic properties and has taken into account all comments received from them; and

WHEREAS, in accordance with Stipulation IV.A.5 and IV.C.2 of the PA, the FRA, with the support of and in coordination with the Authority, has formally consulted with or has made a good faith effort to formally consult with the federally recognized Native American tribes, as identified in **Attachment 7,** that may attach religious and cultural significance to historic properties within the APE of the Undertaking; and

WHEREAS, no federally recognized tribes have chosen to participate in the consultation; and

WHEREAS, in accordance with Stipulation IV.B.5, IV.C.1, and IV.C.2 of the PA, the Authority has consulted with or made a good faith effort to consult with California Native American tribes that are on the Native American Heritage Commission's (NAHC) consultation list that are traditionally and culturally affiliated with the APE of the Undertaking; the California Native American tribes that have chosen to participate in the consultation are identified in **Attachment 7**; and

WHEREAS, the parties listed in **Attachments 6** and **7** have accepted the Authority's invitation to be Consulting Parties to the Undertaking (collectively referred to as Consulting Parties); and

WHEREAS, the Authority sought and considered the views of the public on this Undertaking through its public involvement program as part of the environmental review process and requirements of NEPA and CEQA, as described in the Environmental Impact Report/Environmental Impact Statement (EIR/EIS) for the Undertaking, which included distributing informational materials to the public, making presentations and soliciting comments at public meetings, and circulating the draft and final EIR/EIS and supporting technical reports for public review and comment; and

WHEREAS, the Authority and SHPO are collectively referred to as the Signatories; STB is referred to as an Invited Signatory; and

WHEREAS, the Consulting Parties have been invited to sign this MOA as concurring parties; and

NOW, THEREFORE, the Authority and SHPO (Signatories) agree the Undertaking will be implemented in accordance with the following stipulations in order to take into account the effects of the Undertaking on historic properties, and further agree that these stipulations shall govern the Undertaking and all its parts until this MOA expires or is terminated.

STIPULATIONS

The Authority, with the assistance of the Contractor, shall ensure that the following stipulations of this MOA are carried out:

I. OVERSIGHT AND COORDINATION

The Authority, as the lead federal agency, will be responsible for ensuring compliance with all stipulations of this MOA.

The Authority shall ensure that the terms of this MOA, including the ATP and BETP, are incorporated in their entirety in all contracts, licenses, or other approvals for this Undertaking and shall ensure the completion of all measures specified in this MOA, including in the ATP and BETP.

The Authority shall ensure that it carries out its responsibilities under the PA (as may be amended from time to time) and any subsequent programmatic agreements regarding compliance with Section 106, to the extent such responsibilities are applicable to the Undertaking and in effect.

As an Invited Signatory, STB will receive all documentation related to this MOA and treatment plans, be provided the opportunity to review and comment on such documentation during the implementation of this MOA, and will be part of the ongoing consultation process during implementation of this MOA. The Authority will consider any comments made by STB prior to finalizing all MOA-associated documentation.

II. MODIFICATIONS TO THE AREA OF POTENTIAL EFFECTS

In accordance with the PA, the APE was developed and agreed upon by the Authority and the SHPO, and accounts for potential impacts on both archaeological and built-environment resources that may result from the construction and operation of the Undertaking.

If modifications to the Undertaking, subsequent to the execution of this MOA, necessitate the revision of the APE, the Authority is responsible for informing the SHPO, Invited Signatories and other Consulting Parties within 15 days of identification of the needed changes in accordance with PA Stipulation VI. The Authority shall document the revised APE in an appropriate supplemental identification report (e.g., APE Modification Memo, addendum Archaeological Survey Report, and/or addendum Historic Architecture Survey Report). The SHPO will have 30 days to review the modified APE. If the SHPO objects to the modified APE, the Authority will revise the APE to address SHPO comments and resubmit for review. The SHPO will have 30 days to review and comment on this revised APE.

III. COMPLETION OF HISTORIC PROPERTIES IDENTIFICATION EFFORT PRIOR TO CONSTRUCTION

The Authority will ensure that any additional historic property identification efforts are completed as outlined below and that documentation of the identification efforts is prepared in accordance with this MOA, including the ATP and BETP and PA Stipulation VI. The Authority will submit documentation of these efforts to the SHPO, Invited Signatories and other interested Consulting Parties for a 30-day review period. Prior to finalizing any inventory and evaluation documentation, the Authority shall consider the comments regarding identification efforts that are received through this consultation process.

Completion of the historic properties identification effort will be consistent with Stipulation VI (Identification of Historic Properties) and IX (Changes in Ancillary Area/Construction ROW) of the PA, including archaeological survey of areas not previously accessible/surveyed prior to construction. The Authority shall provide the SHPO, Invited Signatories and other Consulting Parties with the information necessary to document that efforts to identify and evaluate historic properties in the Undertaking's APE are sufficient to comply with 36 CFR § 800.4(b) and (c).

The Authority will ensure that addendum FOEs (aFOE) are prepared, in accordance with PA Stipulation VII, once supplemental historic property identification efforts are completed. The Authority will submit aFOEs to the Invited Signatories and other Consulting Parties with an interest in the historic property for a concurrent 30-day review period. The Authority shall take into consideration all comments regarding effects received within the review period prior to finalizing aFOEs for submission to the SHPO for review and concurrence. The SHPO shall have an additional 30 days to review final aFOE reports. If the SHPO makes no objection within the final 30-day review period, the findings for resources documented in the aFOE will become final. Should SHPO have any objections, the Authority will follow Stipulation VII.A, Dispute Resolution.

IV. TREATMENT OF HISTORIC PROPERTIES IDENTIFIED IN THE APE

This MOA outlines the Authority's commitments regarding the treatment of all historic properties, both currently known and yet-to-be-identified, that may be affected by the Undertaking. As allowed under Stipulation VI.C of the PA, this MOA includes provisions for treatment plans that include use of a combined archaeological testing and data recovery program. Two detailed historic property treatment plans have been prepared for the Undertaking: the ATP and the BETP.

The ATP (**Attachment 4**) describes treatments for effects on archaeological properties and Native American traditional cultural properties. The BETP (**Attachment 5**) describes the treatments for effects on the built environment resources. The work described in the treatment plans will be conducted prior to construction, during construction, and/or after construction of the Undertaking as specified in the treatment plans. The treatments to historic properties known at the time of execution of this MOA are summarized in an impact/treatment table, organized by historic property, in **Attachment 3**. The treatment measures listed will be applied to historic properties within the APE in order to avoid, minimize, and/or mitigate effects of the Undertaking. The Authority shall implement and complete the treatment measures within two (2) years of completion of construction of the Undertaking, or earlier if so specified. The Authority shall ensure that sufficient time and funding are provided to complete all necessary preconstruction commitments before disturbances related to the Undertaking occur.

A. Archaeological Treatment Plan

The ATP describes in detail the methods that will be employed to complete the historic properties identification effort within the Undertaking's APE as part of the phased identification of archaeological resources. More specifically, the ATP builds upon the identification efforts completed to date and specifies where and under what circumstances further efforts to identify significant archaeological deposits will take place within the Undertaking's areas of physical impact.

The ATP also describes in detail the avoidance, minimization, and/or mitigation treatment measures for all currently known and yet-to-be-identified significant archaeological resources and Native American cultural resources affected by the Undertaking. Additional measures to

avoid, minimize, or mitigate effects on archaeological historic properties may be developed in consultation with consulting parties as identification and evaluation efforts are performed in future planning and construction phases of the Undertaking. The Authority commits to implementing the terms of the ATP.

The SHPO, Invited Signatories and other Consulting Parties with an interest in archaeological resources and traditional cultural properties shall have the opportunity to review and comment on cultural resources documentation specified in the ATP in accordance with Stipulation VI of this MOA.

B. Built Environment Treatment Plan

The BETP provides detailed descriptions of treatment measures for built environment historic properties located within the APE that may be affected by the Undertaking. The treatments will be carried out by qualified professionals per Stipulation III of the PA. The treatment measures are included in the BETP and are intended to avoid, minimize, and/or mitigate adverse effects caused by the Undertaking. The Authority commits to implementing the terms of the BETP.

The Authority shall provide documentation produced under the BETP to the SHPO, Invited Signatories and Consulting Parties with an interest in historic properties included in the BETP for review and comment in accordance with Stipulation VI of this MOA.

C. Avoidance and Minimization Measures

The Authority has identified property-specific and programmatic Impact Avoidance and Minimization Features (IAMF) to ensure the Undertaking would result in no adverse effect to 19 built historic properties, as outlined in the BETP (**Attachment 5**).

a. The Authority will ensure that the IAMFs are incorporated into project design and construction contracts for the Undertaking.

b. In consultation with SHPO, Invited Signatories, and other Consulting Parties, the Authority will ensure that the IAMFs are implemented during the appropriate design and construction phases of the Undertaking.

c. The Authority may revise the IAMFs or develop additional IAMFs to ensure the Undertaking would result in no adverse effects in accordance with Stipulation VII.B below, should project design changes result in new potential effects to previously identified historic properties or to additional historic properties within revised APEs.

D. Conditions for the Treatment of Historic Bridges Requiring Intrusion Protection Barriers

Three of the four historic bridges in the Undertaking APE, the Los Angeles River Bridges within the Arroyo Seco Parkway Historic District, the Broadway/Buena Vista Viaduct, and the Spring Street Viaduct require intrusion protection barriers to be constructed on the bridge decks that may result in adversely affecting the historic properties. To ensure the barriers will be designed to minimize physical damage and visual effects to the bridges or the Arroyo Seco Parkway Historic District, the Authority shall convene a consulting party treatment oversight panel (TOP) with the consulting parties with demonstrable interest or jurisdiction over the bridges. The TOP

will review and comment on the design of the barriers as it advances to ensure that compliance with the Secretary of the Interior's Standards for the Treatment of Historic Properties is achieved to the extent feasible, as stipulated in the BETP and in IV.D.1-2, below.

When a design/build contractor has been contracted to design the barriers, the Authority will require them to participate in an Authority presentation about the bridges, their historical significance and character-defining features, and the requirement to avoid, as much as is feasible, adversely affecting the bridges by designing the required intrusion barriers to be context sensitive and following the Secretary of the Interior's Standards for the Treatment of Historic Properties. The Authority will also describe the required consultation and review process, and the TOP participants' roles in the ongoing process to ensure the design/build contractor is fully aware of their contractual commitments to avoid or minimize adversely affecting the bridges to the extent feasible.

1. Continued Consultation

a. Members of the TOP will include the Authority, SHPO, Caltrans, LA Conservancy, and the LA Department of City Planning – Office of Historic Resources, and a representative from the Authority's contractor.

b. The Authority will establish an outreach schedule in consultation with the TOP that will be integrated in the future design and construction schedules. As intrusion protection barrier design advances, the Authority will seek the input of the TOP as project design reaches 30 percent, 60 percent and 90 percent. The Authority shall afford the TOP members the opportunity to review and comment on project design documentation at approximately 30 percent, 60 percent and 90 percent development levels, in accordance with IV.D.2 below. The design/build contractor will not advance the design at each review stage until the TOP has the opportunity to comment within the period of time specified in Section D.2 and, if requested, meet to discuss the design.

   The LA Department of City Planning – Office of Historic Resources may consult with the LA Bureau of Engineering on the proposed design during each review and comment period and incorporate any comments from the LA Bureau of Engineering in their responses to the proposed design.

c. The Authority shall consider comments received in developing final design for the barriers, in accordance with Stipulation IV.D.2, below.

d. If through the design-review process, the Authority determines the Undertaking would still result in adverse effects on the three bridges, the Authority shall consult with the TOP to minimize or mitigate adverse effects. Attachment 8 briefly describes potential mitigation measures should the bridges be adversely affected despite the TOP and design teams' efforts, and continued consultation is required. The TOP may further develop these measures or propose other measures.

e. Disputes arising from this consultation shall be resolved in accordance with Stipulation VII.A of this MOA.

2. Review Process

The Authority will submit design and planning documentation for the design and installation of the barriers, including 30, 60 and 90 percent design development documentation, to the TOP for review and comment as the documentation becomes available.

a. The Authority will notify the TOP members of the upcoming availability of design documentation at least one week before the documentation is made available for review.

b. The Authority will develop and provide TOP members additional visualization materials and documentation to inform the review of barrier designs.

c. For each design review period, the TOP members will have 30 calendar days from receipt of a printed or electronic copy of the materials to provide written comments to the Authority. If requested by a TOP member, the Authority will coordinate a virtual or in-person meeting during the review period to present and review the documentation.

d. If the TOP members do not comment within 30 days, the documentation will be considered final. If any TOP member provides comments within the 30-day review period, the Authority will take the comments into consideration and may make revisions before finalizing the documentation. The Authority will consider an extension to the 30-day review period if requested by a TOP member.

e. If the Authority determines that the developing designs are likely to avoid adversely affecting the bridges, the Authority will prepare an addendum FOE (aFOE) and continue consultation with the TOP, in accordance with the BETP, before design is advanced further. The Authority will transmit the aFOE to the TOP members for a 30-day review and comment period. The Authority shall ensure that comments are considered prior to finalizing the aFOE report for submission to the SHPO for review and concurrence. The SHPO shall have an additional 30 days to review the final aFOE report. If the SHPO makes no objection within the final 30-day review period, the findings for those resources would become final. If SHPO objects, the Authority will follow the dispute resolution procedures identified in Stipulation VII.A. of this MOA.

f. The Authority will make up to two presentations to the Heritage Commission regarding the designs of the barriers. The TOP will determine when the design is sufficiently advanced to present to the Heritage Commission.

E. Conditions for the Treatment of Main Street Bridge

Access to the Main Street Bridge may be terminated by the Undertaking, and the introduction of a new bridge adjacent to the historic bridge will result in a change to the historic bridge's setting. If vehicle access is terminated, the Authority will ensure that a feasibility study will be prepared to explore design options that would restore the historic use of the Main Street Bridge to the maximum extent feasible or consider alternative uses that would best serve the community should retention of its historic use prove infeasible. Based on the results of the feasibility study, the Authority will continue consultation to determine the optimal and appropriate treatment of the bridge, following the Secretary of the Interior's Standards for the Treatment of Historic Properties as much as is feasible. The Authority shall consider comments

received from the Consulting Parties in the determination of appropriate treatment of the bridge through the TOP process.

1. Continued Consultation

a. Members of the TOP will include the Authority, SHPO, LA Conservancy, LA Department of City Planning – Office of Historic Resources, and a representative from the Authority's contractor.

b. Should the feasibility study find that vehicular access cannot be retained it will identify alternative options for the use of the historic bridge. The TOP will select an option or options to be more fully developed. Once the TOP concurs the options are adequately developed with visual aids and project descriptions, the Authority, with the LA Department of City Planning, will conduct public outreach to determine public opinion on the proposed future use of the historic bridge.

c. Additionally, if the historic use of the bridge cannot be retained, in conjunction with considering the future use of the bridge, the TOP will also develop appropriate measures to mitigate adverse effects resulting from its new use as well as mitigation measures to address the adverse visual effect resulting from the introduction of a new bridge in close proximity to the historic bridge. Attachment 8 briefly describes potential mitigation measures to consider.

d. As with the design of the intrusion barriers, the Authority will require the design/builder, once contracted, to participate in an Authority presentation regarding the historic significance of the historic bridge and other eligible properties in the vicinity of the proposed new bridge, including other LA River bridges, the R. Schiffman Medical Co., Standard Oil Company facilities, and the Bureau of Power and Light General Services Headquarters. and inform them of the applicability of the Secretary of the Interior's Standards for the Treatment of Historic Properties. The intent of the presentation will be to inform the design/build contractor that the design of the new bridge must be sensitive to the context of the area and subordinate in design and scale to the Main Street Bridge and the other eligible and listed bridges over the LA River as much as possible, while achieving grade separation.

e. Disputes arising from this consultation shall be resolved in accordance with Stipulation VII.A of this MOA.

2. Review Process

The Authority will submit design and planning documentation for the design of the new bridge, including 30, 60 and 90 percent design development documentation, to the TOP for review and comment as the documentation becomes available.

a. The Authority will notify the TOP members of the upcoming availability of design documentation at least one week before the documentation is made available for review.

b. The Authority will develop and provide TOP members additional visualization materials and documentation to inform the review of the bridge design.

c. For each design review period, the TOP members will have 30 calendar days from receipt of a printed or electronic copy of the materials to provide written comments to the Authority. If requested by a TOP member, the Authority will coordinate a virtual or in-person meeting during the review period to present and review the documentation.

d. If the TOP members do not comment within 30 days, the documentation will be considered final. If any TOP member provides comments within the 30-day review period, the Authority will take the comments into consideration and may make revisions before finalizing the documentation. The Authority will consider an extension to the 30-day review period if requested by a TOP member.

e. If the Authority determines that vehicular access to the Main Street Bridge can be maintained and/or if the developing design of the new bridge is likely to avoid adversely affecting the Main Street Bridge, the Authority will prepare an aFOE and continue consultation with the TOP, in accordance with the BETP, before design is advanced further. The Authority will transmit the aFOE to the TOP members for a 30-day review and comment period. The Authority shall ensure that comments are considered prior to finalizing the aFOE report for submission to the SHPO for review and concurrence. The SHPO shall have an additional 30 days to review the final aFOE report. If the SHPO makes no objection within the final 30-day review period, the findings for those resources would become final. If SHPO objects, the Authority will follow the dispute resolution procedures identified in Stipulation VII.A. of this MOA.

V. POST-REVIEW DISCOVERIES

If properties are discovered that may be historically significant or unanticipated effects on historic properties are found, the Authority shall follow the processes detailed in the ATP and BETP.

VI. PREPARATION AND REVIEW OF DOCUMENTS

A. Professional Qualifications

The Authority shall ensure that all cultural resources studies carried out pursuant to this MOA are performed by or under the direct supervision of personnel meeting *The Secretary of the Interior's Professional Qualifications Standards* (48 Federal Register 44738-39) in the disciplines of history, architectural history, historic architecture, and/or archaeology, as appropriate.

B. Confidentiality

The Signatories and Invited Signatories acknowledge that the handling of documentation regarding historic properties covered by this MOA are subject to the provisions of Section 304 of the National Historic Preservation Act of 1966 (54 U.S.C. 307103), and section 6254.10 of the California Government Code (Public Records Act).

C. Review

Unless otherwise specified, parties to this MOA will have 30 calendar days upon receipt to provide the Authority comments on all technical materials, findings, and other documentation arising from this MOA. If no comments are received from a party within the 30-calendar-day review period, the Authority may assume that the non-responsive party has no comment. The Authority shall take into consideration all comments received in writing within the 30-calendar-day review period and may make revisions before finalizing the documentation.

For documentation that is amended or revised, the Authority will prepare a comment and response summary or matrix and provide it to SHPO, Invited Signatories and other Consulting Parties.

If a party to this MOA objects to documentation provided for review within 30 calendar days of the receipt of any submissions, the Authority shall resolve the objection in accordance with Stipulation VII.A, below.

D. Electronic Submittals

Unless otherwise requested, documentation produced under this MOA will be distributed electronically. Additionally, electronic mail may serve as an official method of communication regarding this MOA.

VII. ADMINISTRATIVE STIPULATIONS

A. Dispute Resolution

Should any Signatory, the Invited Signatory or other Consulting Party to this MOA object at any time to any actions proposed or the manner in which the terms of this MOA are implemented, the Authority shall consult with such party to resolve the objection. If the Authority determines that such objection cannot be resolved, the Authority will:

1. Forward all documentation relevant to the dispute, including the Authority's proposed resolution, to the ACHP. The Authority will also provide a copy to the SHPO, Invited Signatories and Consulting Parties with a demonstrated interest in the affected property or subject of the dispute. The ACHP shall provide the Authority with its advice on the resolution of the objection within 30 days of receiving adequate documentation. Prior to reaching a final decision on the dispute, the Authority shall prepare a written response that takes into account any timely advice or comments regarding the dispute from the ACHP, SHPO, Invited Signatories and interested Consulting Parties, and provide them with a copy of this written response. The Authority will then proceed according to its final decision.

2. If the ACHP does not provide its advice regarding the dispute within the 30-day time period, the Authority may make a final decision on the dispute and proceed accordingly. Prior to reaching such a final decision, the Authority shall prepare a written response that takes into account any comments regarding the dispute from the SHPO, Invited Signatories and Consulting Parties with a demonstrated interest in the affected property

or subject of the dispute and provide them and the ACHP with a copy of such written response.

3. The Authority's responsibility to carry out all other actions subject to the terms of this MOA that are not the subject of the dispute remains unchanged.

B. Amendments and Revisions

The MOA may be amended by written request from either Signatory or Invited Signatory. Consulting Parties shall be afforded 30 days to review and comment on any proposed amendments to the MOA. The Signatories and Invited Signatory shall take into consideration all comments received prior to executing an amendment. The amendment will be effective when all Signatories and Invited Signatories that signed the original agreement sign a copy of the amendment.

Notwithstanding the prior paragraph, to address changes in the Undertaking or the treatment of historic properties affected by the Undertaking, the Authority may revise the ATP, the BETP, or other attachments to this MOA in consultation with the SHPO, Invited Signatories, and other Consulting Parties without executing a formal amendment to this MOA. The Authority shall provide proposed ATP or BETP revisions to the SHPO, Invited Signatories, and other Consulting Parties with an interest in historic properties that may be affected by the proposed revisions for a 30-day review. The Signatories shall take into consideration all timely comments received prior to agreeing to the revisions. Upon the written concurrence from the SHPO, revisions to the ATP, the BETP, or other attachments shall take effect and be considered a part of this MOA.

C. Termination

If any Signatory or Invited Signatory determines that the terms of the MOA will not or cannot be carried out, that party shall immediately consult with the Signatories and Invited Signatories to attempt to resolve the issue under Stipulation VII.A, above, or to develop an amendment per Stipulation VII.B, above. If within 30 days (or another time period agreed to by Signatories and Invited Signatories) an amendment cannot be reached, either Signatory or Invited Signatories may terminate this MOA upon written notification to the Signatories and Invited Signatories. Termination hereunder shall render this MOA without further force or effect.

If this MOA is terminated, and the Authority determines that the Undertaking will proceed, the Authority must either execute a new MOA pursuant to 36 CFR § 800.6 prior to proceeding further with the Undertaking or follow the procedures for termination of consultation pursuant to 36 CFR § 800.7. The Authority shall notify the SHPO, Invited Signatories, and Consulting Parties as to the course of action it will pursue.

D. Duration

If the Authority determines that construction of the Undertaking has not been completed within ten (10) years following execution of this MOA, the Signatories and Invited Signatories shall consult to reconsider its terms. Reconsideration may include continuation of the MOA as originally executed, amendment, or termination.

This MOA will be in effect through the Authority’s implementation of the Undertaking and will terminate and have no further force or effect when the Authority, in consultation with the SHPO

and Invited Signatories, determines that the terms of this MOA have been fulfilled in a satisfactory manner. The Authority shall provide the SHPO and Invited Signatories with written notice of its determination and of termination of this MOA.

E. Annual Reporting and Meetings

The Authority shall prepare an annual report documenting the implementation of the actions taken under this MOA as stipulated in the First Amendment to the PA Section 13.C. The annual report shall include specific lists of studies, reports, actions, evaluations, and consultation and outreach efforts related to implementation of this MOA. The Authority will provide the annual report to the SHPO, Invited Signatories and other Consulting Parties. If requested by the SHPO, Invited Signatories and other Consulting Parties, the Authority will coordinate a meeting or call to discuss the annual report.

VIII. EFFECTIVE DATE AND EXECUTION

This MOA may be executed in counterparts, with a separate page for each Signatory and Invited Signatory, and will take effect on the latest date of execution by the Authority and SHPO. STB's signature is not required to execute this MOA or for its effectiveness. Separate concurrence pages may also be provided for each Concurring Party. The Authority shall ensure that the SHPO, Invited Signatories and each Concurring Party is provided with a copy of the fully executed MOA. The refusal of any Concurring Party to sign this MOA shall not invalidate this MOA or prevent this MOA from taking effect.

Execution of this MOA by the Authority and SHPO and implementation of its terms evidence that the Authority has taken into account the effects of this Undertaking on historic properties and afforded the ACHP an opportunity to comment.

MEMORANDUM OF AGREEMENT
AMONG THE CALIFORNIA HIGH-SPEED RAIL AUTHORITY, THE SURFACE TRANSPORTATION BOARD, AND THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER, REGARDING THE BURBANK TO LOS ANGELES PROJECT SECTION OF THE CALIFORNIA HIGH-SPEED RAIL PROGRAM IN LOS ANGELES COUNTY, CALIFORNIA

SIGNATORIES:

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

By: Brian P. Kelly Date: 10/1/2021
Brian P. Kelly
Chief Executive Officer

CALIFORNIA STATE HISTORIC PRESERVATION OFFICER

By: _____ Date: _____
Julianne Polanco
State Historic Preservation Officer

INVITED SIGNATORY:

SURFACE TRANSPORTATION BOARD

By: _____ Date: _____
Danielle Gosselin
Acting Director, Office of Environmental Analysis

MEMORANDUM OF AGREEMENT
AMONG THE CALIFORNIA HIGH-SPEED RAIL AUTHORITY, THE SURFACE TRANSPORTATION BOARD, AND THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER, REGARDING THE BURBANK TO LOS ANGELES PROJECT SECTION OF THE CALIFORNIA HIGH-SPEED RAIL PROGRAM IN LOS ANGELES COUNTY, CALIFORNIA

SIGNATORIES:

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

By: Brian P. Kelly Date: 10/1/2021
Brian P. Kelly
Chief Executive Officer

CALIFORNIA STATE HISTORIC PRESERVATION OFFICER

By: _____ Date: 10/25/2021
Julianne Polanco
State Historic Preservation Officer

INVITED SIGNATORY:

SURFACE TRANSPORTATION BOARD

By: _____ Date: _____
Danielle Gosselin
Acting Director, Office of Environmental Analysis

MEMORANDUM OF AGREEMENT
AMONG THE CALIFORNIA HIGH-SPEED RAIL AUTHORITY, THE SURFACE TRANSPORTATION BOARD, AND THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER, REGARDING THE BURBANK TO LOS ANGELES PROJECT SECTION OF THE CALIFORNIA HIGH-SPEED RAIL PROGRAM IN LOS ANGELES COUNTY, CALIFORNIA

SIGNATORIES:

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

By: Brian P. Kelly Date: 10/1/2021
Brian P. Kelly
Chief Executive Officer

CALIFORNIA STATE HISTORIC PRESERVATION OFFICER

By: _____ Date: _____
Julianne Polanco
State Historic Preservation Officer

INVITED SIGNATORY:

SURFACE TRANSPORTATION BOARD

By: Dan Kerr Date: 10/14/21
Danielle Gosselin
Acting Director, Office of Environmental Analysis

MEMORANDUM OF AGREEMENT
AMONG THE CALIFORNIA HIGH-SPEED RAIL AUTHORITY, THE SURFACE TRANSPORTATION BOARD, AND THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER, REGARDING THE BURBANK TO LOS ANGELES PROJECT SECTION OF THE CALIFORNIA HIGH-SPEED RAIL PROGRAM IN LOS ANGELES COUNTY, CALIFORNIA

CONCURRING PARTIES

LOS ANGELES CONSERVANCY

By: Adrian Scott Fine Date: _10.22.2021_____
Name Adrian Scott Fine
Title Senior Director of Advocacy

CALIFORNIA DEPARTMENT OF TRANSPORTATION, DISTRICT 7

By: _____ Date: _____
Name
Title

LOS ANGELES DEPARTMENT OF CITY PLANNING, OFFICE OF HISTORIC RESOURCES

By: _____ Date: _____
Name
Title

FERNANDEÑO TATAVIAM BAND OF MISSION INDIANS

By: _____ Date: _____
Name
Title

GABRIELEÑO BAND OF MISSION INDIANS – KIZH NATION

By: _____ Date: _____
Name
Title

GABRIELIÑO/TONGVA NATION

By: _____ Date: _____
Name
Title

MEMORANDUM OF AGREEMENT
AMONG THE CALIFORNIA HIGH-SPEED RAIL AUTHORITY, THE SURFACE TRANSPORTATION BOARD, AND THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER, REGARDING THE BURBANK TO LOS ANGELES PROJECT SECTION OF THE CALIFORNIA HIGH-SPEED RAIL PROGRAM IN LOS ANGELES COUNTY, CALIFORNIA

CONCURRING PARTIES

LOS ANGELES CONSERVANCY

By: _____ Date: _____
Name
Title

CALIFORNIA DEPARTMENT OF TRANSPORTATION, DISTRICT 7

By: _____ Date: 10/19/2021
Name Tony Tavares
Title Caltrans, District 7 Director

LOS ANGELES DEPARTMENT OF CITY PLANNING, OFFICE OF HISTORIC RESOURCES

By: _____ Date: _____
Name
Title

FERNANDEÑO TATAVIAM BAND OF MISSION INDIANS

By: _____ Date: _____
Name
Title

GABRIELEÑO BAND OF MISSION INDIANS – KIZH NATION

By: _____ Date: _____
Name
Title

GABRIELIÑO/TONGVA NATION

By: _____ Date: _____
Name
Title

MEMORANDUM OF AGREEMENT
AMONG THE CALIFORNIA HIGH-SPEED RAIL AUTHORITY, THE SURFACE TRANSPORTATION BOARD, AND THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER, REGARDING THE BURBANK TO LOS ANGELES PROJECT SECTION OF THE CALIFORNIA HIGH-SPEED RAIL PROGRAM IN LOS ANGELES COUNTY, CALIFORNIA

CONCURRING PARTIES

LOS ANGELES CONSERVANCY

By: _____ Date: _____
Name
Title

CALIFORNIA DEPARTMENT OF TRANSPORTATION, DISTRICT 7

By: _____ Date: _____
Name
Title

LOS ANGELES DEPARTMENT OF CITY PLANNING, OFFICE OF HISTORIC RESOURCES

By: _____ Date: October 13, 2021
Name Ken Bernstein
Title Principal City Planner

FERNANDEÑO TATAVIAM BAND OF MISSION INDIANS

By: _____ Date: _____
Name
Title

GABRIELEÑO BAND OF MISSION INDIANS – KIZH NATION

By: _____ Date: _____
Name
Title

GABRIELIÑO/TONGVA NATION

By: _____ Date: _____
Name
Title

MEMORANDUM OF AGREEMENT
AMONG THE CALIFORNIA HIGH-SPEED RAIL AUTHORITY, THE SURFACE TRANSPORTATION BOARD, AND THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER, REGARDING THE BURBANK TO LOS ANGELES PROJECT SECTION OF THE CALIFORNIA HIGH-SPEED RAIL PROGRAM IN LOS ANGELES COUNTY, CALIFORNIA

CONCURRING PARTIES

LOS ANGELES CONSERVANCY

By: _____ Date: _____
Name
Title

CALIFORNIA DEPARTMENT OF TRANSPORTATION, DISTRICT 7

By: _____ Date: _____
Name
Title

LOS ANGELES DEPARTMENT OF CITY PLANNING, OFFICE OF HISTORIC RESOURCES

By: _____ Date: _____
Name
Title

FERNANDEÑO TATAVIAM BAND OF MISSION INDIANS

By: _____ Date: _____
Name
Title

GABRIELEÑO BAND OF MISSION INDIANS – KIZH NATION

By: _____ Date: 10/28/21
Name
Title

GABRIELIÑO/TONGVA NATION

By: _____ Date: _____
Name
Title

MEMORANDUM OF AGREEMENT
AMONG THE CALIFORNIA HIGH-SPEED RAIL AUTHORITY, THE SURFACE TRANSPORTATION BOARD, AND THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER, REGARDING THE BURBANK TO LOS ANGELES PROJECT SECTION OF THE CALIFORNIA HIGH-SPEED RAIL PROGRAM IN LOS ANGELES COUNTY, CALIFORNIA

CONCURRING PARTIES

LOS ANGELES CONSERVANCY

By: _____ Date: _____
Name
Title

CALIFORNIA DEPARTMENT OF TRANSPORTATION, DISTRICT 7

By: _____ Date: _____
Name
Title

LOS ANGELES DEPARTMENT OF CITY PLANNING, OFFICE OF HISTORIC RESOURCES

By: _____ Date: _____
Name
Title

FERNANDEÑO TATAVIAM BAND OF MISSION INDIANS

By: _____ Date: _____
Name
Title

GABRIELEÑO BAND OF MISSION INDIANS – KIZH NATION

By: _____ Date: _____
Name
Title

GABRIELIÑO/TONGVA NATION

By: Sam Dunlap Date: 10/16/21
Name SAM DUNLAP
Title CULTURAL RESOURCE DIRECTOR

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APPENDIX D: SECTION 4(F) CONCURRENCE LETTERS

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CALIFORNIA
High-Speed Rail Authority

September 29, 2021

Justin Hess
City Manager
City of Burbank
City Hall, 275 East Olive Avenue
Burbank, CA 91510

Subject: Request for Concurrence with Section 4(f) *De Minimis* Determination: San Fernando Bike Path (Planned Phase 3), and Section 4(f) Temporary Occupancy Exception: Chandler Bikeway (Planned Extension)

Dear Mr. Hess:

The California High-Speed Rail Authority's (Authority) is currently preparing an Environmental Impact Report/Environmental Impact Statement (EIR/EIS) for the Burbank to Los Angeles Project Section of the California High-Speed Rail. The purpose of this letter is to request your concurrence with the Authority's determination that permanent impacts and temporary closure of planned Phase 3 of the San Fernando Bike Path during construction of the Burbank to Los Angeles (B-LA) Project Section of the California High-Speed Rail (HSR) Project would not constitute a "use" of this bike path as defined by Section 4(f) of the United States Department of Transportation Act. The Authority is also requesting your concurrence that a temporary construction easement on the planned extension of the Chandler Bikeway would meet the temporary occupancy exception requirements under Title 23, Section 774.13(d) of the Code of Federal Regulations (CFR) and would not constitute a use under Section 4(f).

Under Section 4(f) (49 U.S.C. 303), an operating agency of the United States Department of Transportation may not approve a project that uses protected properties unless there are no prudent or feasible alternatives to such use and the project includes all possible planning to minimize harm to such properties. Section 4(f) properties are publicly owned lands of a park, recreation area, wildlife and waterfowl refuge, or land of a historical site of national, state, or local significance and listed on or determined to be eligible for the National Register of Historic Places, as determined by the federal, state, regional, or local officials having jurisdiction over the resource.

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

A constructive use of a Section 4(f) resource occurs when a transportation project does not permanently incorporate the property of a protected resource but the proximity of the project results in impacts (e.g., noise, vibration, visual, access, or ecological) that are so severe that the protected activities, features, or attributes that qualify the resource for protection under Section 4(f) are substantially impaired. Substantial impairment occurs only if the protected activities, features, or attributes of the resource are substantially diminished.

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

- The occupancy must be of temporary duration (e.g., shorter than the period of construction) and must not involve a change in ownership of the property.
- The scope of work must be minor, with only minimal changes to the protected resource.

- There must be no permanent adverse physical impacts on the protected resource or interference with activities or purpose of the resource.
- The property being used must be fully restored to a condition that is at least as good as that which existed before project construction.
- There must be documented agreement of the appropriate officials having jurisdiction over the resource regarding the foregoing requirements.

For parks, recreation areas, and wildlife and waterfowl refuges, a *de minimis* impact determination may be made for permanent impacts if the Authority concludes the transportation project will not adversely affect the activities, features, and attributes qualifying the property for protection under Section 4(f) after mitigation. In addition, to make a *de minimis* impact determination there must be:

- Public notice and opportunity for public review and comment. (For this project, the public notice and public review was concurrent with circulation of the Draft Environmental Impact Report/Environmental Impact Statement [EIR/EIS], which was a 90-day review period.)
- Concurrence on the effect finding is received from the official(s) with jurisdiction over the property.

Burbank Western Channel Bike Path

In response to comments provided by the Burbank City Council and in coordination with City planning staff, the proposed location of a construction trench was modified to avoid affecting the Burbank Western Channel Bike Path. There will be no occupation of the Burbank Western Channel Bike Path for construction of the Burbank to Los Angeles project section and therefore, no further discussion about the Burbank Western Channel Bike Path is included in this request for concurrence letter.

San Fernando Bike Path (Planned Phase 3)

The HSR Build Alternative would require a permanent easement on a 0.28-mile portion of the planned Phase 3 of the San Fernando Bike Path between Burbank Boulevard and Chandler Boulevard, where the bike path is planned to run adjacent to the Lockheed Channel and to the east of the Burbank Water Reclamation Plant. In this area, the addition of HSR tracks would allow no room to accommodate the Class I bike path. Therefore, to accommodate the addition of electrified tracks within the existing railroad right-of-way, this 0.28-mile portion of the planned Class I bike path would be rerouted as a Class IV[1] separated bikeway along N Victory Boulevard, approximately 600 feet to the west of the Burbank Water Reclamation Plant (see Figure 1). The City of Burbank's Class IV bikeway design guidelines are provided in Section 7G of the City's Complete Our Streets Plan, pages 100-103 (June 16, 2020).

The affected portion of the planned Phase 3 of the San Fernando Bike Path is minor in size (approximately 0.28 miles) in relation to the entire Phase 3 of the bike path (approximately 3 miles). Project implementation would still allow for the San Fernando Bike Path to connect to the Downtown Burbank Metrolink Station, which is being designed to accommodate the bike path. In addition, PR-MM#4 (see attachment) would be implemented to require that the Authority consult with the official with jurisdiction to identify an alternative route for the continuation of the lost use and functionality of the resource, including maintaining connectivity. Therefore, the project would not adversely affect the activities, features, or attributes of the property. If the planned Phase 3 of the San Fernando Bike Path does not exist at the time of construction, the Authority will be required to consult with the official with jurisdiction to identify an alternative route for the implementation of the planned resource, but not construct nor fund the construction of the alternative route. Therefore, no permanent easements or acquisitions would be required if the planned Phase 3 portion of the bike path is rerouted prior to HSR construction.

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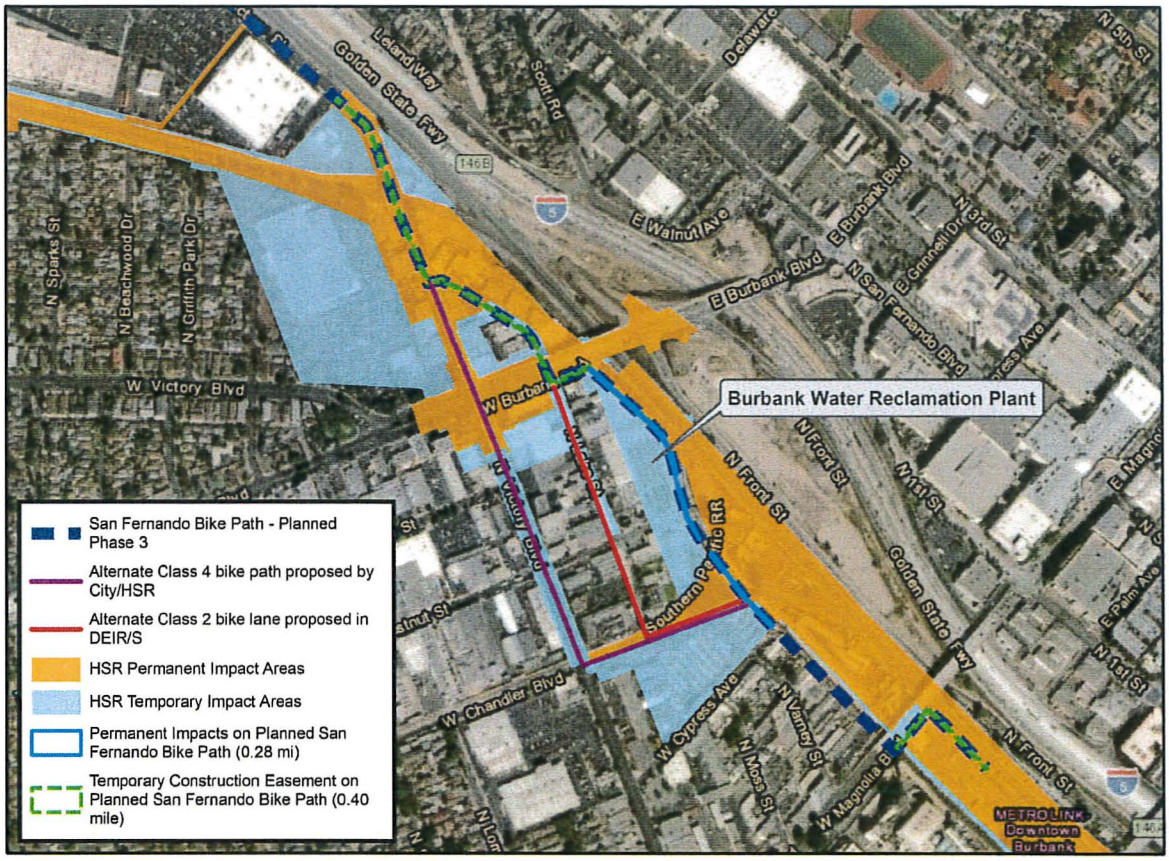
[1] A Class IV separated bikeway, often referred to as a cycle track or protected bike lane, is for the exclusive use of bicycles, physically separated from motor traffic with a vertical feature. The separation may include, but is not limited to, grade separation, flexible posts, inflexible barriers, or on-street parking. Separated bikeways can provide for one-way or two-way travel. By providing physical separation from motor traffic, Class IV bikeways can reduce the level of stress, improve comfort for more types of bicyclists, and contribute to an increase in bicycle volumes and mode share. (REFERENCE: CALTRANS DESIGN INFORMATION BULLETIN 89 – CLASS IV BIKEWAY GUIDANCE; FHWA SEPARATED BIKE LANE PLANNING AND DESIGN GUIDE; NACTO URBAN BIKEWAY DESIGN GUIDE/ CYCLE TRACK)

The HSR Build Alternative would also require a temporary construction easement on a 0.4-mile portion of the planned Phase 3 of the San Fernando Bike Path. The construction proposed in this area would consist of lowering Victory Place, reconstructing the existing Burbank Boulevard overcrossing, relocating utilities, and partially relocating Lockheed Channel along Front Street. Magnolia Boulevard would not be modified, but the existing piers may need to be modified with crash barriers for HSR operations. The remaining portion of the bike path outside of the construction area would remain open for public use during construction.

If Phase 3 of the San Fernando Bike Path is existing at the time of HSR construction, construction activities would temporarily interrupt connectivity and use of the bike path. However, detours would be implemented during construction, in coordination with the official with jurisdiction over the bike path, so that access around the construction area would be maintained. PR-MM#3 and PR-MM#5 (see attachment) would be implemented to reduce the size of

Figure 1: Proposed Replacement Class IV Separated Bikeway for the San Fernando Bike Path (Planned Phase 3)



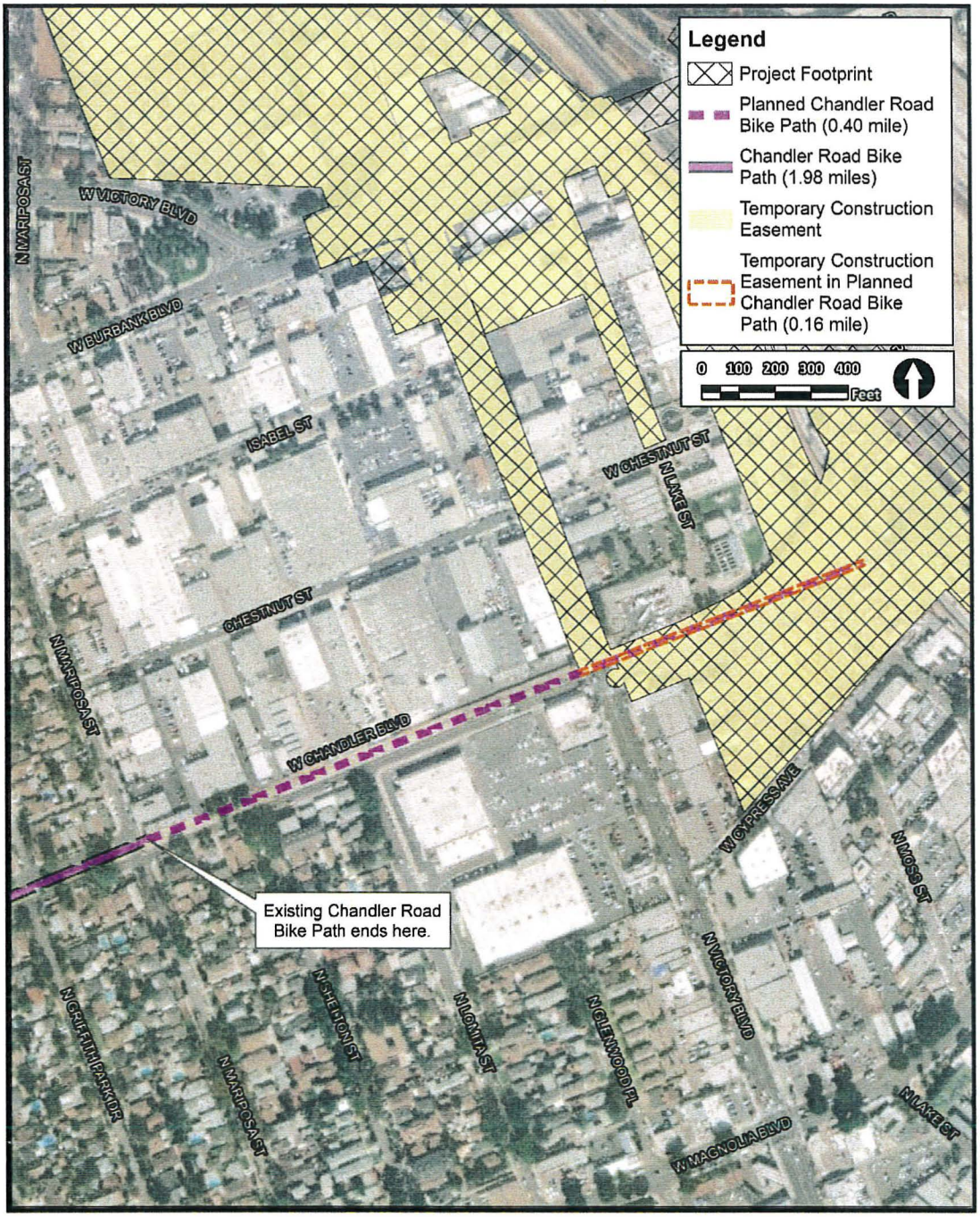
temporary impact areas, restrict access to temporary impact areas for public safety, provide signing at fenced-off areas with information on the completion date of the use of the land, consult with the property owner/operator on the temporary replacement of recreational uses, and return the land used for each temporary impact area to the owner in its original or better condition when construction in an area has been completed and the temporary impact area is no longer needed.

For the reasons stated above, the HSR Build Alternative would not adversely affect the activities, features, or attributes that qualify the San Fernando Bike Path for protection under Section 4(f). Therefore, the HSR Build Alternative would result in a *de minimis* impact on this resource. The Notice of Completion/Notice of Availability for the Draft Environmental Impact Report/Environmental Impact Statement was published on May 29, 2020. The Section 4(f) Evaluation was made publicly available for public comments from May 29, 2020, to August 31, 2020 (https://hsr.ca.gov/programs/environmental/eis_eir/draft_burbank_los_angeles.aspx).

Chandler Bikeway (Planned Extension)

The Chandler Bikeway is an approximately 2-mile existing Class I bike path within the city of Burbank, with a planned extension of 0.7 mile from N Mariposa Street to the Burbank Western Channel. The HSR Build Alternative would require a temporary construction easement on a 0.16-mile portion of the proposed alignment for the planned Chandler Bikeway extension (See Figure 2). The temporary construction easement would be required for temporary staging activities during the removal of existing industrial tracks adjacent to the Chandler Bikeway.

Figure 2: Temporary Occupancy of Chandler Bikeway (Planned Extension)



After project implementation, HSR trains would run approximately 350 feet east of the planned extension of the Chandler Bikeway. If the planned Chandler Bikeway extension is existing at the time of HSR construction, the Authority has determined that the HSR Build Alternative would meet all of the following five conditions under 23 C.F.R. Section 774.13(d), and the temporary occupancy would therefore not constitute a use under Section 4(f):

1. *Duration of occupancy must be temporary, i.e., less than the time needed for construction of the project, and there should be no change in ownership of the land;*

   The duration of construction in the temporary construction easement area would be temporary (i.e., a maximum of 2 years) and would be less time than the total time needed to construct the entire HSR Build Alternative. If the planned extension is constructed prior to HSR project construction, the City of Burbank would continue to own the land. Therefore, the duration of the occupancy would be temporary.

2. *Scope of the work must be minor, i.e., both the nature and magnitude of the changes to the 4(f) resource must be minimal;*

   Construction staging, materials storage, parking of construction equipment and worker vehicles, and other similar activities would be conducted on the planned extension of the Chandler Bikeway, which is adjacent to the existing resource just east of N Victory Boulevard. No grading or other construction activities, such as HSR track construction, would take place within the temporary construction easement. Therefore, the scope of work associated with the temporary occupancy would be minor.

3. *There are no anticipated permanent adverse physical impacts, nor will there be interference with the activities or purposes of the resource, on either a temporary or permanent basis;*

   No grading or other construction activities, such as HSR track construction, would take place within the temporary construction easement. If the planned extension of the Chandler Bikeway is existing at the time of HSR construction, construction activities could temporarily interrupt connectivity and use of the bike path. However, detours would be implemented during construction, in coordination with the official with jurisdiction over the bike path, so that access would be maintained around the construction area. In addition, the design/build contractor would be required to return the planned extension of the bikeway to its original or better condition after completion of construction. Therefore, there would be no temporary or permanent adverse changes to the activities, features, or attributes of the planned extension of the Chandler Bikeway.

4. *The land being used must be fully restored, i.e., the resource must be returned to a condition which is at least as good as that which existed prior to the project; and*

   As discussed in responses #2 and #3, the planned extension of the Chandler Bikeway would be restored to a condition at least as good or better as that which existed prior to the project. The design/build contractor would be required to return the planned extension of the bikeway to its original or better condition after completion of construction. In addition, the Authority's project engineer would require the design/build contractor to document that access to and connectivity of the bikeway were restored.

5. *There must be documented agreement of the appropriate federal, state, or local officials having jurisdiction over the resource regarding the above conditions.*

   The City of Burbank is the official with jurisdiction over the planned extension of the Chandler Bikeway. Prior to applying the Section 4(f) exception, the City or Burbank must agree in writing that the project meets the conditions outlined above. A signature block is provided on the next page for the City of Burbank's concurrence.

Should you have questions concerning this matter, please contact Andrew Bayne, Senior Environmental Planner, at (916) 384-0580 or andrew.bayne@hsr.ca.gov, or me at (916) 403-0061 or brett.rushing@hsr.ca.gov.

Sincerely,

BRETT RUSHING
Cultural Resources Program Manager
California High-Speed Rail Authority

Attachment: Mitigation Measures

City of Burbank Concurrence: San Fernando Bike Path (Planned Phase 3)

The provisions of Section 4(f) require documented agreement from the City of Burbank that states that the permanent incorporation of the San Fernando Bike Path (Planned Phase 3) constitutes a Section 4(f) use that meets the requirements of *de minimis* impact. In addition, temporary occupancy of the San Fernando Bike Path (Planned Phase 3) would meet all five conditions of the temporary occupancy exception and does not constitute a Section 4(f) use. The Authority met with the City of Burbank Parks and Recreation Department and Community Development Department to discuss the Authority's determination on June 24, 2020. The Authority requests that the City of Burbank provide their concurrence of a *de minimis* impact and temporary occupancy exception for the San Fernando Bike Path (Planned Phase 3) by signing below.

Concurrence: _____ Date 10/15/21

Justin Hess, City Manager
City of Burbank

City of Burbank Concurrence: Chandler Bikeway (Planned Extension)

The provisions of Section 4(f) require documented agreement from the City of Burbank that states that the temporary occupancy of the Chandler Bikeway (Planned Extension) would meet all five conditions of the temporary occupancy exception and does not constitute a Section 4(f) use. The Authority met with the City of Burbank Parks and Recreation Department and Community Development Department to discuss the Authority's determination on June 24, 2020. The Authority requests that the City of Burbank provide their concurrence with the Authority's temporary occupancy exception determination by signing below.

Concurrence: _____ Date 10/15/21

Justin Hess, City Manager
City of Burbank

Attachment: Mitigation Measures

PR-MM#3: Temporary Closures and Detours of Existing Trails and Bicycle Lanes

- **Trail and Bicycle Lane Facilities Plan**—During final design, the Authority's project engineer will require the design/build contractor to develop a Trail and Bicycle Lane Facilities Plan addressing the short-term project impacts on existing trails and bicycle lanes within the construction limits of the project. That plan will address:
  - Identifying trails and bicycle lanes that will be closed temporarily and detoured during construction
  - Preparing a public awareness and notification plan
  - Temporarily closing trails and bicycle lanes during construction
  - Developing and implementing detours for temporarily closed trails and bicycle lanes
  - Phasing of temporary trail and bicycle lane closures to allow for effective detours to maintain connectivity of these facilities around the construction areas
  - Coordinating the trail and bicycle lane closures and detours with the local jurisdictions with authority over those facilities
  - Criteria for identifying detour routes and facilities
  - Information signing for closures and detours
  - Requirements for compliance with the Americans with Disabilities Act during construction
  - Maintaining signing for closures and detours throughout the closure period and replacing lost or damaged signing
  - Restoring trails and bicycle lanes to their original or better condition at the completion of project construction
- **Temporary Closures of Trails and Bicycle Lanes**—Prior to any temporary closures of trails and bicycle lanes, the Authority's project engineer will require the design/build contractor to coordinate with the directors of the appropriate jurisdictions' public works and/or parks departments, or their representatives, to review the location of and need for each temporary trail or bicycle lane closure. The Authority's Project Engineer will require the design/build contractor to develop detours for each closure in consultation with the public works and/or parks department directors or their representatives. Prior to and during construction activities that will require the temporary closure of a trail or bicycle lane, the Authority's project engineer will require the design/build contractor to comply with and implement the procedures in the Trail and Bicycle Lane Facilities Plan, described above, for the affected trails and bicycle lanes.
- **Signing for Trail and Bicycle Lane Detours and Closures**—The Authority's project engineer will require the design/build contractor to develop detour signs, in consultation with the appropriate jurisdictions' public works and/or parks departments, notifying trail and bike lane users of the upcoming temporary facility closure and directing the trail and bicycle lane users to the temporary detour routes with estimated timeframes. Appropriate directional and informational signage will be provided by the project design/build contractor prior to each closure and far enough in advance of the closure so trail and bicycle lane users will not have to backtrack to get to the detour routes.
- **Contact Information at Trail and Bicycle Lane Detours**—The Authority's project engineer will require the design/build contractor to provide detour signing that includes contact information for the Authority's project engineer and the design/build contractor, and that informs trail users to contact the project engineer and/or the design/build contractor with questions or concerns regarding upcoming or active temporary trail and bicycle lane closures.

- **Restoration of Impacted Trail and Bicycle Lane Segments**—The Authority's project engineer will require the design/build contractor to return trail and bike path segments closed temporarily during construction to their original, or better, condition after completion of construction, prior to their return to the control of the applicable public works or parks department. After project construction, the Authority's project engineer will require the design/build contractor to document that access to and connectivity of the affected trails and bicycle lanes were restored.
- **Compliance with the Trails and Bicycle Lane Facilities Plan**—Compliance with the Trails and Bicycle Lane Facilities Plan will be documented in the environmental commitments record with text, photographs, maps, and correspondence, as appropriate.

PR-MM#4: Replacement of Property Acquired from Existing or Planned Bicycle Routes

During the right-of-way acquisition process, the Authority will consult with the public agency with jurisdiction over any existing or planned bicycle routes regarding the specific conditions of acquisition and replacement of the land that will be acquired.

Where property that contains existing or planned bicycle paths required for HSR improvements involves the establishment of a permanent easement or permanent conversion to rail right-of-way from lands owned by the Metro, the Authority will consult with the officials with jurisdiction to identify an alternative route for the continuation of the lost use and functionality of the resource, including maintaining connectivity. The identification of the alternative route must be determined to be feasible for the intended use by the respective Public Works Department, or Parks and Recreation Department or other equivalent authority within the affected City prior to the establishment of the permanent easement or permanent conversion of the Metro-owned lands.

PR-MM#5: Temporary Use of Land from Park, Recreation, or School Play Areas during Construction

- **Temporary Impact Areas**—During final design, the California High-Speed Rail Authority's (Authority) Project Engineer will evaluate all proposed temporary impact areas in parks, recreational resources, and school play areas and will identify opportunities to further reduce the sizes of those temporary impact areas. All temporary impact areas in parks, recreational resources, and school play areas shown on the project plans and specifications will include notes that the design/build contractor cannot increase the size of any of those areas without consultation with and approval by the project engineer and appropriate subsequent environmental review.
- **Compensation for Temporary Impact Areas**—During final design**,** the Authority's project engineer will consult with the affected jurisdictions and property owners to discuss the temporary impact areas needed for construction of the High-Speed Rail (HSR) Build Alternative and to determine the appropriate level of compensation for the use of land from park, recreation, or school play areas for the established temporary impact areas. It is anticipated that the compensation would be payments for the temporary use of land from those resources for the period of time that land is used for temporary impact areas during project construction.
- **Access Restrictions at Temporary Impact Areas**—The Authority's project engineer will require the design/build contractor to fence and gate all land in parks, recreation facilities, and school play areas used for temporary impact areas. The temporary impact areas will be appropriately signed to restrict access to those areas by park and recreational resource patrons and users of school play areas. The Authority's project engineer will require the design/build contractor to maintain the fencing throughout the time period each temporary impact area is used and to remove the fencing only after all construction activity in an area is completed, the temporary impact area is no longer needed, and the land is ready to be returned to the property owner.

- **Signing of Fenced Temporary Impact Areas**—The Authority's project engineer will require the design/build contractor to provide signing at each temporary impact area explaining why the area is fenced and access to the temporary impact area is restricted, the anticipated completion date of the use of the land for the temporary impact area, and contact information (for both the Authority's project engineer and the design/build contractor) for the public to solicit further information regarding the temporary impact area and the project.
- **Modifications to Recreation Uses**—In the event a temporary impact area requires the temporary use of land at a park, recreational resource, or school play area that is used for recreation purposes, the Authority's project engineer will consult with the property owner/operator on: (1) whether the property owner/operator wants those recreation uses replaced temporarily elsewhere on the property, and (2) if temporary replacement of those recreation uses is desired, modifications that could be made to the remaining recreation area on the property to temporarily replace the recreation uses displaced by the temporary impact area. Any modifications to recreation areas outside the limits of a temporary impact area will be constructed/implemented prior to fencing and use of the temporary impact area.
- **Return of Land Used by Temporary Impact Areas to the Property Owners**—The Authority's project engineer will require the design/build contractor to return the land used for each temporary impact area to the owner in its original or better condition when construction in an area has been completed and the temporary impact area is no longer needed. The Authority's project engineer will require the design/build contractor to coordinate the restoration of the affected land with the property owner and the project engineer.

CALIFORNIA
High-Speed Rail Authority

August 31, 2021

Mr. Darryl Ford
Superintendent
Department of Recreation and Parks
City of Los Angeles
1149 S. Broadway, Suite 600
Los Angeles, CA 90015

Subject: Request for *De Minimis* Concurrences with Section 4(f) Determinations: Albion Riverside Park

Dear Mr. Ford:

The California High-Speed Rail Authority's (Authority) is currently preparing an Environmental Impact Report/Environmental Impact Statement (EIR/EIS) for the Burbank to Los Angeles Project Section of the California High-Speed Rail (HSR). The purpose of this letter is to request your concurrence with the Authority's determination that permanent impacts and temporary closures of Albion Riverside Park for construction of the Burbank to Los Angeles Project Section would not constitute a "use" of these properties as defined by Section 4(f) of the United States Department of Transportation Act.

Under Section 4(f) (49 U.S.C. 303), an operating agency of the United States Department of Transportation may not approve a project that uses protected properties unless there are no prudent or feasible alternatives to such use and the project includes all possible planning to minimize harm to such properties. Section 4(f) properties are publicly owned lands of a park, recreation area, wildlife and waterfowl refuge, or land of a historical site of national, state, or local significance and listed on or determined to be eligible for the National Register of Historic Places, as determined by the federal, state, regional, or local officials having jurisdiction over the resource.

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

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

- The occupancy must be of temporary duration (e.g., shorter than the period of construction) and must not involve a change in ownership of the property.
- The scope of work must be minor, with only minimal changes to the protected resource.
- There must be no permanent adverse physical impacts on the protected resource or interference with activities or purpose of the resource.
- The property being used must be fully restored to a condition that is at least as good as that which existed before project construction.
- There must be documented agreement of the appropriate officials having jurisdiction over the resource regarding the foregoing requirements.

For parks, recreation areas, and wildlife and waterfowl refuges, a *de minimis* impact determination may be made for permanent impacts if the Authority concludes the transportation project will not adversely affect the activities, features, and attributes qualifying the property for protection under Section 4(f) after mitigation. In addition, to make a *de minimis* impact determination there must be:

- Public notice and opportunity for public review and comment. (For this project, the public notice and public review was concurrent with circulation of the Draft Environmental Impact Report/Environmental Impact Statement [EIR/EIS], which was a 90-day review period.)
- Concurrence on the effect finding is received from the official(s) with jurisdiction over the property.

Albion Riverside Park

The Albion Riverside Park is a 10.6-acre public park located adjacent to the Los Angeles River in the neighborhood of Lincoln Heights in the city of Los Angeles. The Albion Riverside Park was completed in March 2019. The park was created by renaming and expanding the Downing Park an additional 6.3 acres onto a site that was previously used for dairy warehousing and distribution. This included constructing a new multipurpose athletic field, walking and bike paths, fitness zone and equipment, children's play area, picnic area, outdoor amphitheater, open space, seasonal bioswale, parking lot, lighting, and landscaping.

The HSR Build Alternative would require a permanent easement on a 0.12-acre portion of land in the southern corner of Albion Riverside Park. The permanent easement would be required to accommodate pier walls to support a new Main Street roadway bridge. The new bridge would be an elevated structure spanning the tracks on the west bank of the Los Angeles River and the nonelectrified tracks on the east bank of the river. A permanent aerial easement would also be required in this same area for bridge access. After project implementation, HSR trains would run along the west bank of the Los Angeles River, approximately 300 feet west of the park (see Figure 1).

The land in this area currently functions as a paved area with an existing cell tower. Although the piers would be placed within the park property boundary, this impact area would not alter the function of the park because the land required to support the new Main Street roadway bridge would be in a portion of the park where no recreational amenities exist or are planned. Access to the park along the southern portion of Albion Street may be temporarily affected during construction and the southern entrance into the park's parking lot along Albion Street would be temporarily closed. However, the parking lot would still be accessible from the entrance near Albion Street and S Avenue 17. In addition, all other recreation areas of the park would remain open for park users during construction. Following construction, access would be restored. In addition, implementation of measures to minimize harm that were identified in the EIR/EIS would ensure recreational uses at the park would not be adversely affected by the Build Alternative.

For the reasons stated above, the HSR Build Alternative would not adversely affect the activities, features, or attributes that qualify Albion Riverside Park for protection under Section 4(f). The Notice of Completion/Notice of Availability for the Draft EIR/EIS was published on May 29, 2020. The Section 4(f) Evaluation was made publicly available for public comments from May 29, 2020, to August 31, 2020 (https://hsr.ca.gov/programs/environmental/eis_eir/draft_burbank_los_angeles.aspx).

Should you have questions concerning this matter, please contact Andrew Bayne, Senior Environmental Planner, at (916) 384-0580 or andrew.bayne@hsr.ca.gov, or me at (916) 403-0061 or brett.rushing@hsr.ca.gov.

Sincerely,

BRETT RUSHING
Cultural Resources Program Manager
California High-Speed Rail Authority

Figure 1: Albion Riverside Park

City of Los Angeles Concurrence – Albion Riverside Park

The provisions of Section 4(f) require documented agreement from the City of Los Angeles that states that the permanent incorporation of 0.12 acres of Albion Riverside Park meets the requirements of *de minimis* impacts and would not constitute a Section 4(f) use. The Authority met with the City of Los Angeles Department of Recreation and Parks to discuss the Authority's determination on June 24, 2020. The Authority requests that the City of Los Angeles Department of Recreation and Parks provide their concurrence of this determination by signing below.

Concurrence: _____ Date 9-22-21

Mr. Darryl Ford, Superintendent
City of Los Angeles, Department of Recreation and Parks

CALIFORNIA
High-Speed Rail Authority

October 19, 2021

Jerry West
Acting District Superintendent
California Department of Parks and Recreation, Angeles District
1925 Las Virgenes Road
Calabasas, CA 91302-1909

Subject: Request for a *De Minimis* Concurrence with Section 4(f) Determination: Rio de Los Angeles State Park

Dear Mr. West:

The California High-Speed Rail Authority (Authority) is currently preparing an Environmental Impact Report/Environmental Impact Statement (EIR/EIS) for the Burbank to Los Angeles Project Section of the California High-Speed Rail. The purpose of this letter is to request your concurrence with the Authority's determination that permanent impacts and temporary closure of a portion of the Rio de Los Angeles State Park during construction of the Burbank to Los Angeles Project Section of the California High-Speed Rail (HSR) Project would not constitute a "use" of the park as defined by Section 4(f) of the United States Department of Transportation Act.

Under Section 4(f) (49 U.S.C. 303), an operating agency of the United States Department of Transportation may not approve a project that uses protected properties unless there are no prudent or feasible alternatives to such use and the project includes all possible planning to minimize harm to such properties. Section 4(f) properties are publicly owned lands of a park, recreation area, wildlife and waterfowl refuge, or land of a historical site of national, state, or local significance and listed on or determined to be eligible for the National Register of Historic Places, as determined by the federal, state, regional, or local officials having jurisdiction over the resource.

There are three main types of uses under Section 4(f): permanent incorporation, temporary occupancy, and constructive use. A permanent incorporation of a Section 4(f) property occurs when property is permanently incorporated into a proposed transportation facility. This might occur as a result of partial or full acquisition, permanent easements, or temporary easements that exceed limits for temporary occupancy.

A temporary occupancy of property does not constitute a use of a Section 4(f) resource when the following conditions are satisfied as stated in 23 CFR Section 774.13(d):

- The occupancy must be of temporary duration (e.g., shorter than the period of construction) and must not involve a change in ownership of the property.
- The scope of work must be minor, with only minimal changes to the protected resource.
- There must be no permanent adverse physical impacts on the protected resource or interference with the protected activities or purpose of the resource.
- The property being used must be fully restored, i.e. to a condition that is at least as good as that which existed before project construction.
- There must be documented agreement of the appropriate officials having jurisdiction over the resource regarding the foregoing requirements.

A constructive use of a Section 4(f) resource occurs when a transportation project does not permanently incorporate the property of a protected resource, but the proximity of the project results in impacts (e.g., noise,

vibration, visual, access, ecological) after incorporation of mitigation that are so severe that the protected activities, features, or attributes that qualify the resource for protection under Section 4(f) are substantially impaired. Substantial impairment occurs only if the protected activities, features, or attributes of the resource are substantially diminished. This determination is made after taking the following steps:

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

Once it is determined that a proposed project would "use" a Section 4(f) property, there are three methods available to document and approve the "use" of the property: individual Section 4(f) evaluations, programmatic Section 4(f) evaluations,[1] and *de minimis* impact determinations.

A *de minimis* impact determination may be made for a permanent incorporation or temporary occupancy, but not for a constructive use.[2] For parks, recreation areas, and wildlife and waterfowl refuges, a *de minimis* impact determination may be made for permanent impacts if the Authority concludes the transportation project will not adversely affect the activities, features, and attributes qualifying the property for protection under Section 4(f) after mitigation. In addition, to make a *de minimis* impact determination there must be:

- Public notice and opportunity for public review and comment. (For this project, the public notice and public review was concurrent with circulation of the Draft Environmental Impact Report/Environmental Impact Statement [EIR/EIS], which was a 90-day review period.)
- Concurrence on the effect finding is received from the official(s) with jurisdiction over the property.

Rio de Los Angeles State Park

Rio de Los Angeles State Park was constructed on Parcel D of the former 247-acre Taylor Yard complex. The existing park is an approximately 39.4-acre park in the city of Los Angeles that includes a natural play area, soccer fields, a running track, basketball courts, baseball fields, bike paths, tennis courts, picnic areas, an amphitheater, hiking trails, and a community building.

The California Department of Parks and Recreation, Angeles District (State Parks) is the official with jurisdiction over the Rio de Los Angeles State Park. In 2003, State Parks purchased parcel G-1 of the Taylor Yard (referred to as "Bowtie Parcel"), which the Department considers as phase 2 of the Rio de Los Angeles State Park. To aid in the impact analysis, the Authority has evaluated potential impacts to each of these parcels separately in the Burbank to Los Angeles Project Section Final EIR/EIS.

As discussed during our meetings with State Parks on June 26, 2020, August 3, 2021, and October 12, 2021, the Authority has determined that there would be no "use" or "constructive use" of the Bowtie Parcel, and the Authority is enclosing a copy of the Bowtie Parcel excerpt from the Final EIR/EIS with this letter for your reference (attachment).

Kerr Road is an existing access road for Metrolink's Central Maintenance Facility along the southern perimeter of the Rio de Los Angeles State Park (Parcel D) (see Figure 1). This road is a private street that is owned dually by the

[1] Effective January 7, 2021, the Federal Railroad Administration and Federal Transit Administration have adopted Federal Highway Administration's nationwide programmatic Section 4(f) evaluations for certain transportation projects having a net benefit to Section 4(f) properties (Nationwide Net Benefit Programmatic Evaluation) and for certain transportation projects that use historic bridges (Nationwide Historic Bridges Programmatic Evaluation).

[2] U.S. Department of Transportation, *Section 4(f) Policy Paper* (2012), available at https://www.environment.fhwa.dot.gov/legislation/section4f/4fpolicy.aspx.

Los Angeles County Metropolitan Transportation Authority and California State Parks. Kerr Road also provides access to residential housing developments east of Kerr Road. For purposes of the Section 4(f) Evaluation, the park boundary was defined as the current edge of the sidewalk adjacent to Kerr Road (see Figure 1).

The HSR Build Alternative requires lowering Kerr Road for construction vehicles. Lowering the existing road would require removing vegetation and regrading an existing slope between the road and the perimeter fence of the park during construction. The current right-of-way for the road would not be widened. There would be no change in ownership of the property and all improvements would be outside the park's existing fence line. The area that would be regraded is currently sloped with some ornamental landscaping but is not currently developed with any recreational amenities. As depicted in Figure 1, the construction footprint of the HSR Build Alternative would temporarily occupy the park within the park boundary but outside the park's fence line adjacent to Kerr Road.

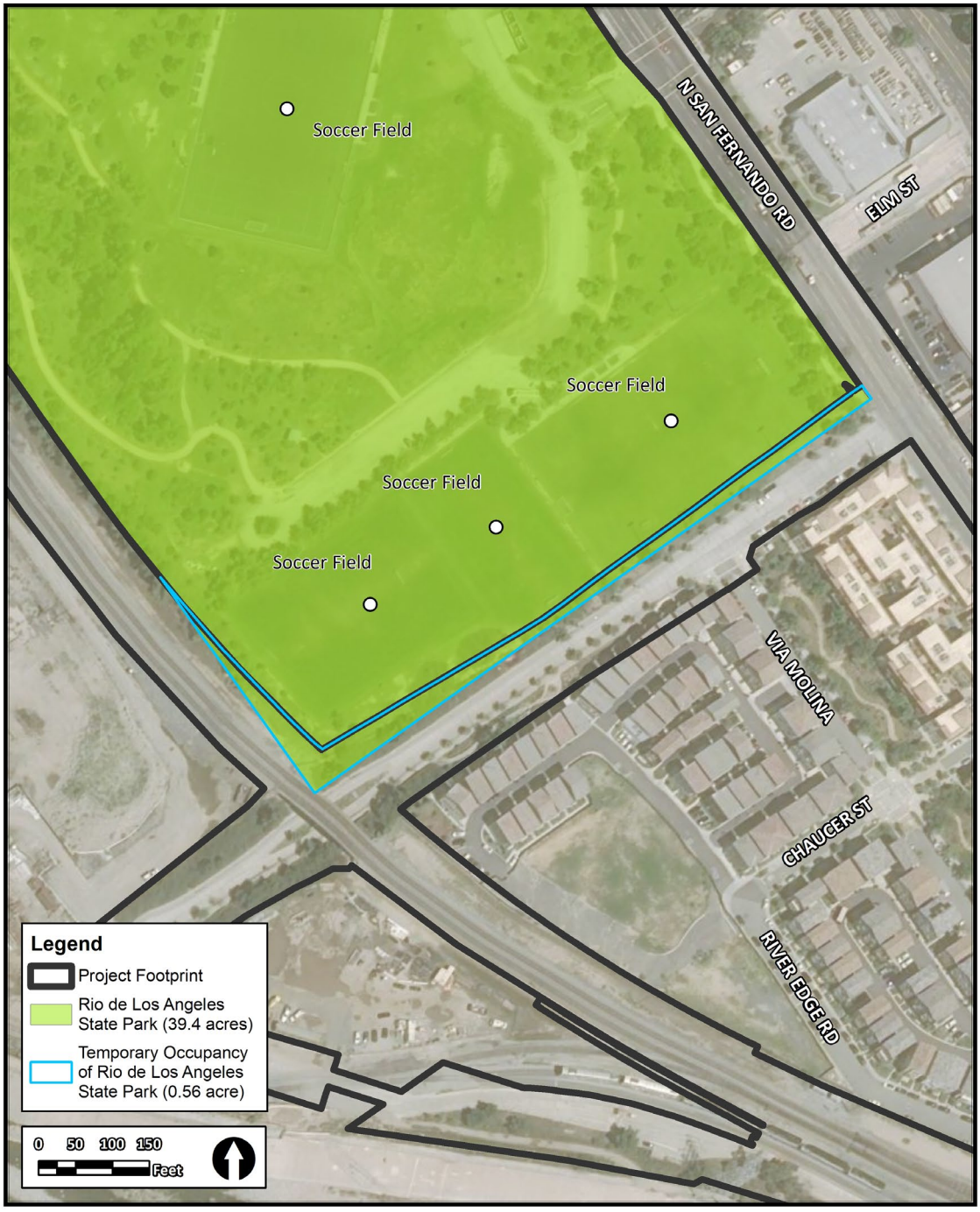
As discussed in the October 12, 2021, meeting, a 2- to 5-foot-high retaining wall would be constructed adjacent to the western perimeter of Rio de Los Angeles State Park (Parcel D). Upon further review, this wall would be constructed completely within railroad right-of-way and will not require a temporary construction easement within the Rio de Los Angeles State Park. Additionally, during operations, there would not be a need for permanent maintenance easements within the Rio de Los Angeles State Park. After project implementation, HSR trains would run along the existing railroad corridor adjacent to and west of the park.

The occupancy of the Rio de Los Angeles State Park would be temporary in duration and there would be no change in the underlying ownership or access to the recreational facilities. The affected area consists of an existing vegetated slope that is adjacent to grass soccer fields but is not developed with any other recreational amenities, nor does it provide access to the park for visitors. The existing slope would be regraded and the angle would be adjusted to align with the new roadway.

Implementation of measures to minimize harm would ensure recreational uses in the park would not be adversely affected by the proposed improvements. These measures are provided in Section 4.8 of the Burbank to Los Angeles Project Section Final EIR/EIS and are also summarized below:

> A 0.56-acre portion of the park would be required for temporary construction activities within the park boundary but outside the park's fence line. The affected area consists of an existing vegetated slope that is adjacent to grass fields but is not developed with any other recreational amenities. The remaining portion of the recreation area outside of the construction area would remain open for public use during construction. TR-IAMF#2, TR-IAMF#4, and TR-IAMF#5 would be implemented to minimize construction traffic impacts and to maintain pedestrian and bicycle access during construction. PR-MM#1 would further address access impacts at the park during construction, ensuring that access to the park is maintained throughout the construction period. PK-IAMF#1 would require the Contractor to prepare and submit to the Authority a technical memorandum that identifies project design features to be implemented to minimize impacts to the Park. The Authority will provide this memorandum to the Department for review and comment before approval. PR-MM#2 would ensure that connections to the unaffected park portions or nearby roadways are maintained after construction.
>
> AQ-IAMF#1 requires the contractor to prepare a fugitive dust control plan that identifies measures such as covering all materials transported on public roads, watering exposed graded surfaces, and stabilizing all disturbed graded areas. Prior to construction, the contractor would prepare a noise and vibration technical memorandum documenting how the FTA and FRA guidelines for minimizing construction noise and vibration impacts would be employed when work is being conducted within 1,000 feet of sensitive

Figure 1: Rio de Los Angeles State Park



receptors, per the requirements included in NV-IAMF#1. NV-MM#1 requires the contractor to prepare a construction noise monitoring program for Authority approval and will be shared with the Department. The construction contractor would prepare a technical memorandum identifying how it would minimize construction-related aesthetic and visual quality disruption, per the requirements included in AVQ-MM#1.

The FEIR/S noise technical analysis finds that, with implementation of these measures, there will be no adverse noise effects under NEPA or significant noise impacts under CEQA to the Rio de Los Angeles Park. Therefore, with implementation of the measures identified in Section 4.8 of the Final EIR/EIS, the HSR Build Alternative would not adversely affect the activities, features, and attributes of the Rio de Los Angeles State Park, and the Authority has preliminarily determined that the proposed temporary occupancy related to the HSR Build Alternative would result in a *de minimis* impact on this property.

Should you have questions concerning this matter, please contact Andrew Bayne, Senior Environmental Planner, at (916) 384-0580 or andrew.bayne@hsr.ca.gov, or me at (916) 403-0061 or brett.rushing@hsr.ca.gov.

Sincerely,

BRETT RUSHING
Cultural Resources Program Manager
California High-Speed Rail Authority

California Department of Parks and Recreation Concurrence

The provisions of Section 4(f) require documented agreement from the California Department of Parks and Recreation that states that the temporary occupancy of Rio de Los Angeles State Park are so minimal so as to not constitute a use and meets the requirements of a *de minimis* impact. The Authority met with the California Department of Parks and Recreation to discuss the Authority's determination on June 26, 2020, August 3, 2021, and October 12, 2021. The Authority requests that the Department of Parks and Recreation provide their *de minimis* impact concurrence, i.e. that effects on protected activities are minimal, for Rio de Los Angeles State Park by signing below.

Concurrence: Jerry West Date 10/21/21

Jerry West, Acting Angeles District Superintendent
California Department of Parks and Recreation

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APPENDIX E: GENERAL CONFORMITY DETERMINATION FOR AIR QUALITY, DECEMBER 9, 2021

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California High-Speed Rail Authority

Burbank to Los Angeles Project Section

Final General Conformity Determination

November 2021

CALIFORNIA High-Speed Rail Authority

The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being or have been carried out by the State of California pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated July 23, 2019, and executed by the Federal Railroad Administration and the State of California.

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Appendix

Appendix A: General Conformity Determination Letter between Authority and South Coast Air Quality Management District

ACRONYMS AND ABBREVIATIONS

$\mu g/m^3$	micrograms per cubic meter
AQMP	Air Quality Management Plan
Authority	California High-Speed Rail Authority
CAA	Clean Air Act
CalEEMod	California Emissions Estimator Model
CARB	California Air Resources Board
CEQA	California Environmental Quality Act
C.F.R.	Code of Federal Regulations
CO	carbon monoxide
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EMFAC2014	EMission FACtors 2014
EMMA	Environmental Mitigation Management and Assessment
FRA	Federal Railroad Administration
HSR	high-speed rail
IAMFs	impact avoidance and minimization features
max.	maximum
mph	miles per hour
N/A	not available
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NM	not monitored
NO_2	nitrogen dioxide
NO_x	nitrogen oxides
NZE	near zero-emission
O_3	ozone
$PM_{2.5}$	particulate matter 2.5 microns or less in diameter
PM_{10}	particulate matter 10 microns or less in diameter
ppm	parts per million
RECLAIM	Regional Clean Air Incentive Market
RSA	resource study area
SIP	State Implementation Plan
SCAQMD	South Coast Air Quality Management District
SO_2	sulfur dioxide
SO_x	sulfur oxides

tpy	tons per year
USEPA	United States Environmental Protection Agency
ZE	zero emission

EXECUTIVE SUMMARY

The California High-Speed Rail (HSR) System, proposed by the California High-Speed Rail Authority (Authority), will provide intercity, high-speed service on more than 800 miles of guideway throughout California, connecting the major population centers of Sacramento, the San Francisco Bay Area, the Central Valley, Los Angeles, the Inland Empire, Orange County, and San Diego. The Burbank to Los Angeles HSR Section (" "Project"), which is the focus of this General Conformity Determination, is a critical link in Phase 1 of the California HSR System connecting the San Francisco Bay Area to the Los Angeles Basin.[1]

The General Conformity Rule, as codified in Title 40 Code of Federal Regulations (C.F.R.) Part 93, Subpart B, establishes the process by which federal agencies determine conformance of proposed projects that are federally funded or require federal approval with applicable air quality standards. This determination must demonstrate that a Project would not cause or contribute to new violations of air quality standards, exacerbate existing violations, or interfere with timely attainment or required interim emissions reductions towards attainment.

FRA prepared a Draft General Conformity Determination, pursuant to 40 C.F.R. part 93, subpart B, which establishes the process for complying with the General Conformity requirements of the Clean Air Act. FRA published a notice in the Federal Register on September 20, 2021 advising the public of the availability of the Draft Conformity Determination for a 30-day review and comment period. The draft Conformity Determination was published at http://www.regulations.gov, Docket No. FRA-2021-0082. The comment period of the Draft Conformity Determination closed on October 20, 2021. FRA received one comment expressing support for the project and Draft General Conformity Determination.

This Final General Conformity Determination documents the FRA's finding that the Project complies with the General Conformity Rule, that it conforms to the purposes of the area's approved State Implementation Plan, and that it is consistent with all applicable requirements. The Final General Conformity Determination is available at http://www.regulations.gov, Docket No. FRA-2021-0082, and on FRA's website at https://railroads.dot.gov/environment/environmental-reviews/clean-air-act-california-general-conformity-determinations. This Final General Conformity Determination is based on the impact avoidance and minimization features and mitigation measures described in Section 3.3.4.3 and Section 3.3.7, respectively, of the *Burbank to Los Angeles Section Final Environmental Impact Report/Environmental Impact Statement* (Authority 2021) and that will be implemented for the Project. This compliance is demonstrated as follows:

- The operation of the Project would result in a reduction of regional emissions of all applicable air pollutants and would not cause a localized exceedance of an air quality standard; and
- Whereas emissions generated during the construction of the Project would exceed the General Conformity annual *de minimis* level, the Authority is committing to purchase the necessary offsets to bring all criteria pollutant emissions below the General Conformity *de minimis* levels. To implement this commitment, the Authority has executed an agreement with SCAQMD providing that after receipt of construction funding, but prior to the start of construction, the Authority and SCAQMD will enter into an agreement to ensure all construction emissions exceeding the *de minimis* levels will be offset through contributions to emissions reduction programs. The agreement will specify the applicable emissions reduction programs, which will be funded by the Authority, and administered by SCAQMD.

[1] As part of its first phase, the California HSR system is currently planned as eight distinct sections from San Francisco in the north to Los Angeles and Anaheim in the south.

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1 INTRODUCTION

This Final General Conformity Determination for the Burbank to Los Angeles Section of the California High-Speed Rail (HSR) System ("project" or "Project) was prepared consistent with the implementing regulations of Section 176 of the Clean Air Act (CAA). Section 176(c)(1) of the CAA prohibits federal agencies from engaging in, supporting, or providing financial assistance for licensing, permitting or approving any activities that do not conform to an approved CAA implementation plan. That approved plan may be a federal, state or tribal implementation plan.

The CAA defines nonattainment areas as geographic regions that have been designated as failing to meet one or more of the National Ambient Air Quality Standards (NAAQS). The CAA requires that each state prepare a State Implementation Plan (SIP) for each nonattainment area, and that a maintenance plan be prepared for each former non-attainment area that subsequently demonstrated compliance with the standards. The SIP is a state's plan for how it will meet the NAAQS by the deadlines established by the CAA.

The General Conformity Rule is codified in Title 40 Code of Federal Regulations (C.F.R.) Part 93, Subpart B, "Determining Conformity of General Federal Actions to State or Federal Implementation Plans." Conformity is defined as "upholding an implementation plan's purpose of eliminating or reducing the severity and number of violations of the NAAQS and achieving expeditious attainment of such standards." 40 C.F.R. Part 93 also establishes the process by which federal agencies determine conformity. This determination must demonstrate that the Project would not cause or contribute to new violations of air quality standards, exacerbate existing violations, or interfere with timely attainment or required interim emissions reductions towards attainment. Because the Project is receiving federal funds through grants with the Federal Railroad Administration (FRA) and may also receive safety approvals from FRA, it is an action that may be subject to the General Conformity Rule.

FRA prepared this Final General Conformity Determination after the release of the *Burbank to Los Angeles Final Environmental Impact Report/Environmental Impact Statement* (FEIR/FEIS), which complies with the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA). Because the analysis used for the EIR/EIS also generated the information necessary for the General Conformity Determination, specific analysis may be incorporated herein by reference.

1.1 Regulatory Status of Study Area

By way of background, in addition to the regulations covering the General Conformity Rule, on November 24, 1993, the U.S. Environmental Protection Agency (USEPA) promulgated final conformity regulations to address transportation plans, programs, and projects developed, funded or approved under title 23 U.S. Code or the Federal Transit Act, 49 U.S. Code 1601 et seq. (40 C.F.R. Part 93 Subpart A). These regulations have been revised several times since they were first issued. Although the transportation conformity regulations do not apply to this Project (see Section 1.2), many of the transportation planning documents developed under those regulations are helpful in understanding the regional air quality and planning status of the resource study area (RSA).

The RSA for the Burbank to Los Angeles Project Section is the South Coast Air Basin. Planning documents for pollutants for which the RSA is classified as federal nonattainment or maintenance are developed by the South Coast Air Quality Management District (SCAQMD) and California Air Resources Board (CARB), and are approved by the USEPA. Table 1 lists the planning documents relevant to the Project's RSA.

Table 1 Planning Documents Relevant to the Resource Study Area

Type of Plan	Status
SCAQMD 2016 Air Quality Management Plan	Approved by the SCAQMD Board of Directors in March 2017, the 2016 AQMP demonstrates attainment for the 8-hour ozone NAAQS established in 2008, the annual $PM_{2.5}$ NAAQS established in 2012, and the 24-hour $PM_{2.5}$ NAAQS established in 2006. In addition, the 2016 AQMP includes revisions to the attainment demonstrations for the 1997 8-hour ozone NAAQS and the 1979 1-hour ozone NAAQS. The 2016 AQMP was submitted to USEPA on April 27, 2017, but no clean air determination has been made to date.
SCAQMD 2012 Air Quality Management Plan	Approved by the SCAQMD Board of Directors in February 2013, the 2012 AQMP was submitted to demonstrate attainment for the 24-hour $PM_{2.5}$ NAAQS established in 2006. On September 30, 2015, the USEPA proposed to approve elements of the South Coast 2012 $PM_{2.5}$ Plan and 2015 Supplement, which addressed Clean Air Act requirements for the 2006 $PM_{2.5}$ NAAQS, and proposed to reclassify the area as a 'Serious' nonattainment area for the 2006 $PM_{2.5}$ standard. The USEPA provided a 30-day public comment period from the date of publication in the Federal Register. On March 15, 2016, the USEPA approved in part and disapproved in part those portions of the SCAQMD's 2012 Air Quality Management Plan (2012 $PM_{2.5}$ Plan) that address attainment of the 2006 24-hour $PM_{2.5}$ standards and the 2015 Supplement to the 2012 $PM_{2.5}$ Plan. To correct these deficiencies, the state was required to submit to the USEPA a demonstration that the NO_x RECLAIM program, either as adopted in 2010 or as subsequently amended, ensures emissions reductions equivalent, in the aggregate, to the reductions anticipated from the direct application of reasonably available control technology on covered sources.
2010 South Coast Air Basin Request for PM_{10} Redesignation Request and Maintenance Plan	On April 28, 2010, the CARB submitted Request for PM_{10} Redesignation and Maintenance Plan to the USEPA. On June 12, 2013, the USEPA's Regional Administrator signed a final rule to approve the South Coast PM_{10} Redesignation Request and Maintenance Plan. The plan was developed and adopted by SCAQMD, and showed how the area would maintain the PM_{10} standard for at least the next 10 years.
2005 South Coast Air Basin Request for CO Maintenance Plan and Redesignation Request	On February 24, 2006, the CARB transmitted the Redesignation Request and Maintenance Plan (including the CO budgets) to the USEPA for approval. In addition, on August 11, 2006, the CARB provided information to the USEPA that demonstrates the Smog Check program satisfies federal I&M requirements for CO and provides emission reductions necessary for continued improvement in CO air quality. On April 24, 2007, USEPA's Regional Administrator signed a final rule to approve the South Coast Maintenance Plan and Redesignation Request for Carbon Monoxide.

Sources: South Coast Air Quality Management District, 2006, 2011, 2013, 2017

CAA = Clean Air Act
CARB = California Air Resources Board
CO = carbon monoxide
I&M = inspection and maintenance
NAAQS = National Ambient Air Quality Standards
PM_{10} = particulate matter smaller than or equal to 10 microns in diameter
$PM_{2.5}$ = particulate matter smaller than or equal to 2.5 microns in diameter
RECLAIM = Regional Clean Air Incentive Market
SCAQMD = South Coast Air Quality Management District
SIP = State Implementation Plan
USEPA = U.S. Environmental Protection Agency

1.2 General Conformity Requirements

On November 30, 1993, the USEPA promulgated final General Conformity regulations at 40 C.F.R. Part 93 Subpart B for all federal activities except highways and transit programs covered by Transportation Conformity. The regulations in Subpart B were subsequently amended in March of 2010. Because the Project will not be funded or require approval(s) under Title 23 U.S.

Code or the Federal Transit Act, 49 U.S. Code 1601 et seq., the General Conformity requirements are applicable, rather than Transportation Conformity. In general terms, unless a project is exempt under 40 C.F.R. § 93.153(c) or is not on the agency's presumed–to-conform list pursuant to 40 C.F.R. § 93.153(f), a General Conformity Determination is required where a federal action in a nonattainment or maintenance area causes an increase in the total of direct and indirect emissions of the relevant criteria pollutants and precursor pollutants that are equal to or exceed certain *de minimis* rates.

During the applicability analysis, the federal agency determines:

- Whether the action will occur in a nonattainment or maintenance area;
- Whether one or more of the specific exemptions apply to the action;
- Whether the federal agency has included the action on its list of presumed-to-conform actions;
- Whether the total direct and indirect emissions are below or above the *de minimis* levels; and/or
- Where a facility has an emissions budget approved by the State or Tribe as part of the SIP or transportation improvement plan, the federal agency determines that the emissions from the Project are within the budget (USEPA 2010).

The USEPA Guidance states that the applicability analysis can be (but is not required to be) completed concurrently with any analysis required under NEPA. The applicability analysis for this Project is described in Section 7. If after the applicability analysis, the Federal agency concludes it should conduct a conformity determination, it may demonstrate conformity by one or more of several prescribed methods. These methods include:

- Demonstrating that the direct and indirect emissions are specifically identified in the relevant implementation plan;
- Obtaining a written statement from the entity responsible for the implementation plan that the total indirect and direct emissions from the action, along with other emissions in the area, will not exceed the total implementation plan emission budget; or
- Fully offsetting the total direct and indirect emissions by reducing emissions of the same pollutant in the same nonattainment or maintenance area.

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2 CALIFORNIA HIGH SPEED RAIL PROJECT

2.1 California High Speed Rail System

The Authority, a state governing board formed in 1996, is responsible for planning, designing, constructing, and operating the HSR System. Its mandate is to develop a high-speed rail system connecting the state's major population centers and coordinating with the state's existing transportation network, which includes intercity rail and bus lines, regional commuter rail lines, urban rail and bus transit lines, highways, and airports.

The HSR System will provide intercity, high-speed service on more than 800 miles of railroad throughout California, connecting the major population centers of Sacramento, the San Francisco Bay Area, the Central Valley, Los Angeles, the Inland Empire, Orange County, and San Diego. It will use state-of-the-art, electrically powered, high-speed, steel-wheel-on-steel-rail technology, including contemporary safety, signaling, and automated train-control systems, with trains capable of operating up to 220 miles per hour over a fully grade-separated, dedicated guideway alignment.

The FRA is responsible for oversight and regulation of railroad safety and is also charged with the implementation of the High-Speed Intercity Passenger Rail financial assistance program. As part of the High-Speed Intercity Passenger Rail Program, FRA is providing partial funding for the environmental analysis and documentation required under NEPA, CEQA and other related environmental laws. Pursuant to U.S. Code Title 23 Section 327, under the NEPA Assignment Memorandum of Understanding between the FRA and the State of California, effective July 23, 2019, the Authority is the federal lead agency for environmental reviews for all Authority Phase 1 and Phase 2 California HSR System projects. The FRA performs Clean Air Act Conformity determinations and other federal approvals retained by the FRA under the NEPA Assignment Memorandum of Understanding.

2.2 California High Speed Rail System – Burbank to Los Angeles Section

The Burbank to Los Angeles Project Section of the California HSR System is approximately 14 miles long, crossing the cities of Burbank, Glendale, and Los Angeles on an existing railroad corridor. HSR for this project section would be within a narrow and constrained urban environment, crossing major streets and highways and, in some portions, adjacent to the Los Angeles River. The Los Angeles County Metropolitan Transportation Authority owns the railroad right-of-way, the Southern California Regional Rail Authority owns the track and operates the Metrolink commuter rail service, the National Railroad Passenger Corporation (Amtrak) provides intercity passenger service, and the Union Pacific Railroad holds track access rights and operates freight trains.

The Burbank to Los Angeles Project Section includes new and upgraded track, maintenance facilities, grade separations, drainage improvements, communications towers, security fencing, passenger train stations, and other necessary facilities to introduce HSR service into the Los Angeles-San Diego-San Luis Obispo corridor from near Hollywood Burbank Airport to Los Angeles Union Station. In portions of the alignment, new and upgraded tracks would allow other passenger trains to share tracks with the HSR system. HSR stations would be located near Hollywood Burbank Airport and at Los Angeles Union Station. The alignment would be entirely grade-separated at crossings, meaning that roads, railroads, and other transport facilities would be at different heights so the HSR system would not interrupt or interface with other modes of transport, including vehicle, bicycle, and pedestrian.

For most of the project section, the HSR alignment would be within the existing railroad right-of-way, which is typically 70 to 100 feet wide. The HSR alignment includes northbound and southbound electrified tracks for high-speed trains. The right-of-way would be fenced to prohibit pedestrian and public or unauthorized vehicle access.

The project footprint (the area required to build, operate, and maintain HSR service) is based on the following elements of design: station areas, hydrology, track, roadway, structures, systems, and utilities.

The Burbank to Los Angeles Project Section includes a combination of at-grade, below-grade, and retained-fill track, depending on corridor and design constraints. The at-grade and retained-fill portions of the alignment would be designed with structural flexibility to accommodate shared operations with other passenger rail operators. Throughout most of the project section (between Alameda Avenue and State Route 110), two new electrified tracks would be placed along the west side of the existing railroad right-of-way and would be useable for HSR and other passenger rail operators. The existing non-electrified tracks would be realigned closer to the east side of the existing right-of-way, for a total of four tracks; these realigned, non-electrified tracks would be usable for freight and other passenger rail operators, but not for HSR.

Throughout most of the Burbank to Los Angeles Project Section, the electrified track centerline and the non-electrified track centerline would have a minimum separation of 23.5 feet, and the northbound and southbound electrified tracks would have a separation of 16.5 feet, following the Authority and FRA's *Technical Memorandum 1.1.21 Typical Cross Sections for 15% Design* (2013).

However, in several areas of the corridor, the right-of-way is less than 100 feet wide, a threshold that constrains the design. As a result, reduced track separations were used in these constrained areas in order to stay within the existing right-of-way to the greatest extent possible and thus minimize property impacts. The reduced separations between the electrified and non-electrified track centerlines would be a minimum of 16.5 feet, and between the two electrified track centerlines would be 15 feet.

3 AIR QUALITY CONDITIONS IN THE STUDY AREA

3.1 Meteorology and Climate

Air quality is affected by both the rate and location of pollutant emissions, and by meteorological conditions that influence movement and dispersal of pollutants in the atmosphere. Atmospheric conditions, such as wind speed, wind direction, and air temperature gradients, along with local topography, provide the link between air pollutant emissions and local air quality levels. Elevation and topography can affect localized air quality.

The South Coast Air Basin covers 6,745 square miles and includes all of Orange County, Los Angeles County except for the Antelope Valley, the non-desert portion of western San Bernardino County, and the western and Coachella Valley portions of Riverside County.

Low average wind speeds, together with a persistent temperature inversion, limit the vertical dispersion of air pollutants throughout the South Coast Air Basin. Strong, dry, north or northeasterly winds, known as Santa Ana winds, occur during the fall and winter months, dispersing air contaminants. The Santa Ana conditions tend to last for several days at a time.

The combination of stagnant wind conditions and low inversions produces the greatest pollutant concentrations. On days of no inversion or high wind speeds, ambient air pollutant concentrations are the lowest. During periods of low inversions and low wind speeds, air pollutants generated in urbanized areas are transported into Riverside and San Bernardino Counties. In the winter, the greatest pollution problems are carbon monoxide (CO) and nitrogen oxides (NO_X) because of extremely low inversions and air stagnation during the night and early morning hours. In the summer, the longer daylight hours and the brighter sunshine combine to cause a reaction between hydrocarbons and NO_X to form photochemical smog.

The annual average temperature varies little throughout the South Coast Air Basin, ranging from the low- to middle-60s degrees Fahrenheit. With a more pronounced oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas. Much of the annual rainfall in the South Coast Air Basin occurs between November and April. Summer rainfall is minimal and is generally limited to scattered thundershowers in coastal regions and slightly heavier showers in the eastern portion of the South Coast Air Basin and along the coastal side of the mountains. Average monthly rainfall during that period varies from 3.80 inches in February to 0.01 inch or less between June and July, with an annual total of 16.35 inches. Patterns in monthly and yearly rainfall totals are unpredictable due to fluctuations in the weather.

The South Coast Air Basin intermittently experiences a temperature inversion (increasing temperature with increasing altitude) because of the Pacific High. This inversion limits the vertical dispersion of air contaminants, holding them relatively near the ground. As the sun warms the ground and the lower air layer, the temperature of the lower air layer approaches the temperature of the base of the inversion (upper) layer until the inversion layer finally breaks, allowing vertical mixing with the lower layer. This phenomenon is observed in mid-afternoon to late afternoon on hot summer days when the smog appears to clear up suddenly. Winter inversions frequently break by midmorning.

3.2 Ambient Air Quality in the Study Area

CARB maintains ambient air monitoring stations for criteria pollutants throughout California. The stations nearest to the local RSA are the 1630 N Main Street station in the city of Los Angeles and the 752 Wilson Avenue station in the city of Pasadena. Monitoring data from these stations are shown in Table 2. The stations monitor CO, ozone (O_3), nitrogen dioxide (NO_2), particulate matter 10 microns or less in diameter (PM_{10}), particulate matter 2.5 microns or less in diameter ($PM_{2.5}$), and sulfur dioxide (SO_2). Locations for the monitoring stations are shown on Figure 1. A summary of the monitoring data includes the following:

- Monitored data from 2016 through 2018 do not exceed either the state or federal standards for CO.

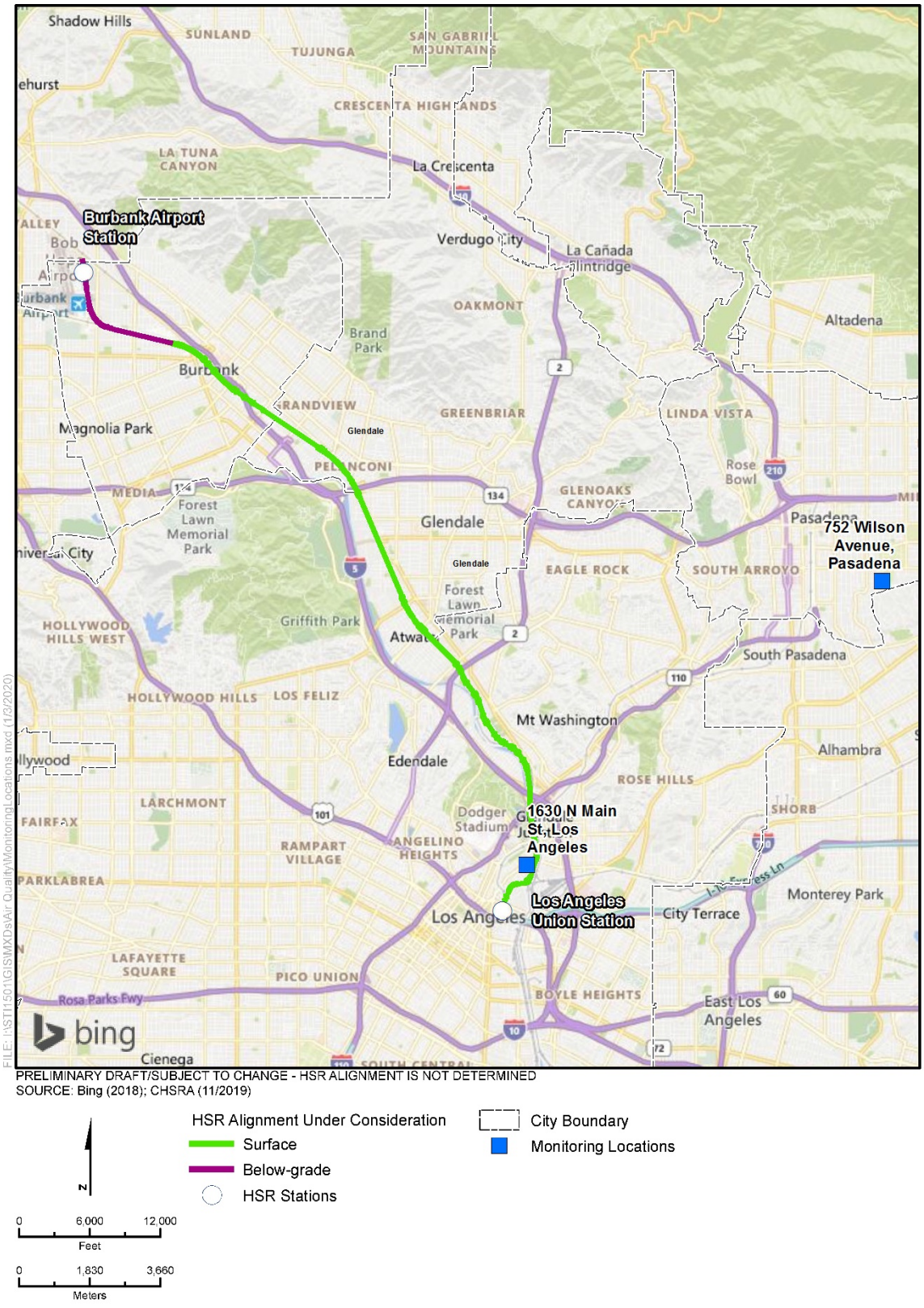

Figure 1 Air Quality Monitoring Stations Closest to the Project

Table 2 Ambient Criterial Pollutant Concentration Data at Air Quality Monitoring Stations Closest to the Project

Air Pollutant	Standard/Exceedance	1630 N Main Street Los Angeles			752 Wilson Avenue Pasadena		
		2016	2017	2018	2016	2017	2018
Carbon Monoxide (CO)[3]	Year Coverage	NM	NM	NM	NM	NM	NM
	Max. 1-hour Concentration (ppm)	1.9	2.0	2.0	1.5	2.2	2.0
	Max. 8-hour Concentration (ppm)	1.4	1.8	1.7	1.0	1.7	1.4
	Number of Days>Federal 1-hour Standard of >35 ppm	0	0	0	0	0	0
	Number of Days>Federal 8-hour Standard of >9 ppm	0	0	0	0	0	0
	Number of Days>California 8-hour Standard of >9 ppm	0	0	0	0	0	0
Ozone (O_3)	Year Coverage[1]	98%	96%	96%	95%	96%	98%
	Max. 1-hour Concentration (ppm)	0.103	0.116	0.098	0.126	0.139	0.112
	Max. 8-hour Concentration (ppm)	0.078	0.086	0.073	0.090	0.100	0.090
	Number of Days>Federal 8-hour Standard of >0.075 ppm	4	14	4	18	36	19
	Number of Days>California 1-hour Standard of >0.09 ppm	2	6	2	12	18	8
	Number of Days>California 8-hour Standard of >0.07 ppm	4	16	4	19	38	20
Nitrogen Dioxide (NO_2)	Year Coverage	97%	95%	97%	96%	94%	95%
	Max. 1-hour Concentration (ppm)	64.7	80.6	70.1	71.9	72.3	68.2
	Annual Average (ppm)	21	21	19	15	15	14
	Number of Days>Federal 1-hour Standard of >100 ppm	0	0	0	0	0	0
Sulfur Dioxide (SO_2)	Year Coverage	13.4	5.7	17.9	NM	NM	NM
	Max. 24-hour Concentration (ppm)	1.3	1.5	1.3	NM	NM	NM
	Annual Average (ppm)	0.30	0.36	0.34	NM	NM	NM
	Number of Days>California 24-hour Standard of >0.04 ppm	0	0	0	NM	NM	NM

Air Pollutant	Standard/Exceedance	1630 N Main Street Los Angeles			752 Wilson Avenue Pasadena		
		2016	2017	2018	2016	2017	2018
Respirable Particulate Matter (PM_{10})	Year Coverage	98%	94%	90%	NM	NM	NM
	Max. 24-hour Concentration (µg/m^3)[2]	74.6	96.2	81.2	NM	NM	NM
	Number of Days>Federal 24-hour Standard of >150 µg/m^3	0	0	0	NM	NM	NM
	Number of Days>California 24-hour Standard of >50 µg/m^3	21	40	31	NM	NM	NM
	Annual Average[2] (µg/m^3)	25.8	25.7	30.2	NM	NM	NM
Fine Particulate Matter ($PM_{2.5}$)	Year Coverage	98%	98%	95%	98%	100%	99%
	Max. 24-hour Concentration (µg/m^3)	49.4	61.7	65.3	29.2	22.8	32.5
	State Annual Average (µg/m^3)	12.0	16.3	16.0	9.5	9.7	10.3
	Number of Days>Federal 24-hour Standard of >35 µg/m^3	2	6	6	0	0	0
	Annual Average[2] (µg/m^3)	11.7	12.0	12.8	9.5	9.6	10.2

Source: California Air Resources Board, 2019 and U.S. Environmental Protection Agency, 2019
[1] Coverage is for the 8-hour standard.
[2] Coverage is for the national standard.
[3] CO data for the 752 Wilson Avenue, Pasadena station monitoring site.
> = greater than
µg/m^3 = micrograms per cubic meter
CARB = California Air Resources Board
Max. = maximum
NM = not monitored
$PM_{2.5}$ = particulate matter 2.5 microns or less in diameter
PM_{10} = particulate matter 10 microns or less in diameter
ppm = parts per million

- O_3 values for the region exceed the national 8-hour O_3 standards at all stations for every year. O_3 values exceed the state 8-hour O_3 standards at both stations every year from 2016 through 2018. O_3 values for the region also exceed the state 1-hour O_3 standard at both stations for every year from 2016 through 2018.
- The PM_{10} values for the region did not exceed the national 24-hour PM_{10} standard. The state 24-hour PM_{10} standard was exceeded at the Los Angeles station for every year. PM_{10} emissions were not measured at the Pasadena station from 2016 through 2018.
- The $PM_{2.5}$ values for the region exceed the national 24-hour $PM_{2.5}$ standard for the Los Angeles station for the years 2016, 2017, and 2018. The Los Angeles station exceeded the national 24-hour $PM_{2.5}$ standard between 2016 and 2018.
- SO_2 values were not exceeded at any of the two stations between 2016 and 2018. SO_2 emissions were not measured at the Pasadena station from 2016 through 2018.
- The 1-hour and annual NO_2 values were not exceeded at any of the two stations between 2016 and 2018.

3.3 Study Area Emissions

CARB maintains an annual emission inventory for select counties and air basins in the state. The inventory for the South Coast Air Basin consists of data submitted to CARB by the SCAQMD plus estimates for certain source categories, which are provided by CARB staff. Table 3 summarizes the 2019 inventory data for the SCAQMD. Note that Table 3 shows tons per day, whereas the emissions estimates for the Project are shown in tons per year.

In the SCAQMD, mobile-source emissions account for more than 90 and 80 percent of the South Coast Air Basin's CO and NO_X emissions, respectively. Mobile-source emissions also account for more than 40 percent of the South Coast Air Basin's reactive organic gas emissions. Area-source emissions account for approximately 80 percent of the South Coast Air Basin's PM, and stationary sources account for more than 70 and 50 percent, respectively, of the South Coast Air Basin's total organic gases and SO_X emissions.

3.4 Project Study Area Designations

Under the federal criteria, the South Coast Air Basin is currently designated as nonattainment for the federal 8-hour O_3, $PM_{2.5}$, and lead standards; unclassified for the federal NO_2 and SO_2 standards; attainment/maintenance for the federal PM_{10} and CO standards; and attainment/unclassified for all other standards. The South Coast Air Basin is considered in nonattainment for the state 1-hour O_3, 8-hour O_3, $PM_{2.5}$, and PM_{10} standards; unclassified for the state CO standards; in attainment for the state NO_2, SO_2, and lead standards; and in attainment/unclassified for all other state standards.

Table 3 Estimated 2019 Annual Average Emissions for the South Coast Air Quality Management District (tons/day)

Source Category	TOG	ROG	CO	NO_X	SO_X	PM	PM_{10}	$PM_{2.5}$
Stationary Sources								
Fuel Combustion	53.06	11.56	49.18	44.23	6.27	5.82	5.65	5.55
Waste Disposal	696.57	14.65	1.12	2.47	0.59	0.36	0.25	0.23
Cleaning and Surface Coatings	106.16	43.66	0.07	0.04	0.00	1.84	1.77	1.71
Petroleum Production and Marketing	68.20	21.17	5.20	1.30	2.09	2.66	1.74	1.53
Total Industrial Processes	14.10	11.96	0.52	0.46	0.26	18.11	12.29	7.27
Total Stationary Sources	**938.09**	**102.99**	**56.08**	**48.51**	**9.22**	**28.80**	**21.70**	**16.28**
Stationary Sources Percentage of Total	***72.2%***	***26.5%***	***3.8%***	***12.8%***	***58.0%***	***9.5%***	***12.0%***	***24.2%***
Area-wide Sources								
Solvent Evaporation	124.82	105.60	–	–	–	0.03	0.03	0.03
Miscellaneous Processes	47.30	13.40	58.37	14.88	0.54	240.51	125.68	33.51
Total Area-wide Sources	**172.11**	**119.00**	**58.37**	**14.88**	**0.54**	**240.54**	**125.71**	**33.54**
Area-wide Sources Percentage of Total	***13.3%***	***30.6%***	***3.9%***	***3.9%***	***3.4%***	***79.4%***	***69.8%***	***49.8%***
Mobile Sources								
On-Road Motor Vehicles	96.59	85.90	659.96	179.15	1.92	25.89	25.38	11.27
Other Mobile Sources	91.63	81.25	717.48	136.96	4.23	7.71	7.35	6.25
Total Mobile Sources	**188.21**	**167.15**	**1377.45**	**316.10**	**6.15**	**33.60**	**32.72**	**17.52**
Mobile Sources Percentage of Total	***14.5%***	***43.0%***	***92.3%***	***83.3%***	***38.7%***	***11.1%***	***18.2%***	***26.0%***
Grand Total	**1,298.41**	**389.14**	**1,491.90**	**379.49**	**15.91**	**302.93**	**180.13**	**67.34**

Source: California Air Resources Board, 2018
Rounded to the nearest percentage; category percentages do not sum to 100 percent due to rounding.
CO = carbon monoxide
NO_X = nitrogen oxides
PM = particulate matter
PM_{10} = particulate matter smaller than or equal to 10 microns in diameter
$PM_{2.5}$ = particulate matter smaller than or equal to 2.5 microns in diameter
ROG = reactive organic gas
SCAQMD = South Coast Air Quality Management District
SO_X = sulfur oxides
TOG = total organic gas

4 RELATIONSHIP TO NEPA

The *Burbank to Los Angeles Project Section Final EIR/EIS* identifies potential environmental impacts of the Project, both adverse and beneficial, identifies appropriate measures to mitigate adverse impacts, and identifies the agencies' preferred alternative. The EIR/EIS was prepared to comply with both NEPA and CEQA.

The General Conformity regulations establish certain procedural requirements that must be followed when preparing a General Conformity evaluation and are similar but not identical to those for conducting an air quality impact analysis under NEPA regulations. NEPA requires that the air quality impacts of the Project's implementation be analyzed and disclosed. For purposes of NEPA, the air quality impacts of the Project were determined by identifying the Project's associated incremental emissions and air pollutant concentrations and comparing them, respectively, to emissions thresholds and state and national ambient air quality standards. The air quality impacts of the Project under future Build conditions were also compared in the EIR/EIS to the future No-Build conditions for NEPA purposes (they were also compared to existing conditions). The General Conformity Determination process and general findings are discussed in Sections 3.3.2.1, 3.3.4.5, 3.3.6.3, 3.3.7, and 3.3.8 of the EIR/EIS.

To appropriately identify and offset, where necessary, the emissions resulting from the Burbank to Los Angeles section of the HSR system, the FRA is issuing this final General Conformity Determination. The Authority is committing to the purchase of additional offsets to net all criteria pollutant emissions to levels that are below the General Conformity *de minimis* level for each calendar year that exceedances occur.

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5 AVOIDANCE AND MITIGATION MEASURES TO REDUCE EMISSIONS TO BE INCORPORATED IN THE PROJECT

To reduce impacts on the environment and as required by NEPA and CEQA, the construction of the Project will include impact avoidance and minimization features and mitigation measures that will be implemented as part of the Project to minimize, avoid, and mitigate air quality impacts. These impact avoidance and minimization features (IAMF) and mitigation measures will be required components of the Project. They will be included in the Mitigation Monitoring and Enforcement Program, which will be issued concurrently with the Authority's Record of Decision and would be enforceable commitments undertaken by the Authority. Construction of the Project is anticipated to take place through a design/build contract. The Authority will include all of the IAMFs and mitigation measures into the construction contract, which will create binding and enforceable commitments to implement these design features and mitigation measures.

The Authority will be responsible for implementing and overseeing a mitigation monitoring program to ensure that the contractor meets all air quality design features and mitigation measures.

- **AQ-IAMF#1: Fugitive Dust Emissions –** During construction, the Contractor shall employ the following measures to minimize and control fugitive dust emissions. The Contractor shall prepare a fugitive dust control plan for each distinct construction segment. At a minimum, the plan shall describe how each measure would be employed and identify an individual responsible for ensuring implementation. At a minimum, the plan shall address the following components unless alternative measures are approved by the applicable air quality management district.
  - Cover all vehicle loads transported on public roads to limit visible dust emissions, and maintain at least 6 inches of freeboard space from the top of the container or truck bed.
  - Clean all trucks and equipment before exiting the construction site using an appropriate cleaning station that does not allow runoff to leave the site or mud to be carried on tires off the site.
  - Water exposed surfaces and unpaved roads at a minimum three times daily with adequate volume to result in wetting of the top 1 inch of soil but avoiding overland flow. Rain events may result in adequate wetting of top 1 inch of soil thereby alleviating the need to manually apply water.
  - Limit vehicle travel speed on unpaved roads to 15 miles per hour (mph).
  - Suspend any dust-generating activities when average wind speed exceeds 25 mph.
  - Stabilize all disturbed areas, including storage piles that are not being used on a daily basis for construction purposes, by using water, a chemical stabilizer/suppressant, hydro mulch or by covering with a tarp or other suitable cover or vegetative ground cover to control fugitive dust emissions effectively. In areas adjacent to organic farms, the Authority would use non-chemical means of dust suppression.
  - Stabilize all on-site unpaved roads and off-site unpaved access roads using water or a chemical stabilizer/suppressant, to effectively control fugitive dust emissions. In areas adjacent to organic farms, the Authority would use non-chemical means of dust suppression.
  - Carry out watering or presoaking for all land clearing, grubbing, scraping, excavation, land leveling, grading, cut-and-fill, and demolition activities.
  - For buildings up to 6 stories in height, wet all exterior surfaces of buildings during demolition.

  - Limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at a minimum of once daily, using a vacuum type sweeper.
  - After the addition of materials to or the removal of materials from surface or outdoor storage piles, apply sufficient water or a chemical stabilizer/suppressant.

- **AQ-IAMF#2: Selection of Coatings –** During construction, the Contractor shall use:
  - Low-volatile organic compound (VOC) paint that contains less than 10 percent of VOC contents (VOC, 10%).
  - Super-compliant or Clean Air paint that has a lower VOC content than that required by South Coast Air Quality Management District Rule 1113, when available. If not available, the Contractor shall document the lack of availability, recommend alternative measure(s) to comply with by South Coast Air Quality Management District Rule 1113, or disclose absence of measure(s) for full compliance and obtain concurrence from the Authority.
- **AQ-IAMF#3: Renewable Diesel –** During construction, the Contractor would use renewable diesel fuel to minimize and control exhaust emissions from all heavy-duty diesel-fueled construction diesel equipment and on-road diesel trucks. Renewable diesel must meet the most recent ASTM D975 specification for Ultra Low Sulfur Diesel and have a carbon intensity no greater than 50 percent of diesel with the lowest carbon intensity among petroleum fuels sold in California. The Contractor would provide the Authority with monthly and annual reports, through the Environmental Mitigation Management and Application (EMMA) system, of renewable diesel purchase records and equipment and vehicle fuel consumption. Exemptions to use traditional diesel can be made where renewable diesel is not available from suppliers within 200 miles of the project site. The construction contract must identify the quantity of traditional diesel purchased and fully document the availability and price of renewable diesel to meet project demand.
- **AQ-IAMF#4: Reduce Criteria Exhaust Emissions from Construction Equipment –** Prior to issuance of construction contracts, the Authority would incorporate the following construction equipment exhaust emissions requirements into the contract specifications:
  1. All heavy-duty off-road construction diesel equipment used during the construction phase would meet Tier 4 engine requirements.
  2. A copy of each unit's certified tier specification and any required CARB or air pollution control district operating permit would be made available to the Authority at the time of mobilization of each piece of equipment.
  3. The contractor would keep a written record (supported by equipment-hour meters where available) of equipment usage during project construction for each piece of equipment.
  4. The contractor would provide the Authority with monthly reports of equipment operating hours (through the Environmental Mitigation Management and Assessment [EMMA] system) and annual reports documenting compliance.
- **AQ-IAMF#5: Reduce Criteria Exhaust Emissions from On-Road Construction Equipment –** Prior to issuance of construction contracts, the Authority would incorporate the following material-hauling truck fleet mix requirements into the contract specifications:
  1. All on-road trucks used to haul construction materials, including fill, ballast, rail ties, and steel, would consist of a fleet mix of equipment model year 2010 or newer, but no less than the average fleet mix for the current calendar year as set forth in the CARB's EMFAC 2014 database.
  2. The contractor would provide documentation to the Authority of efforts to secure such a fleet mix.

3. The contractor would keep a written record of equipment usage during project construction for each piece of equipment and provide the Authority with monthly reports of vehicle miles traveled (through EMMA) and annual reports documenting compliance.

- **AQ-IAMF#6: Reduce the Potential Impact of Concrete Batch Plants –** Prior to construction of any concrete batch plant, the contractor would provide the Authority with a technical memorandum documenting consistency with the Authority's concrete batch plant siting criteria and utilization of typical control measures. Concrete batch plants would be sited at least 1,000 feet from sensitive receptors, including places such as daycare centers, hospitals, senior care facilities, residences, parks, and other areas where people may congregate. The concrete batch plant would implement typical control measures to reduce fugitive dust such as water sprays, enclosures, hoods, curtains, shrouds, movable and telescoping chutes, central dust collection systems, and other suitable technology to reduce emissions to be equivalent to the USEPA AP-42 controlled emission factors for concrete batch plants. The contractor would provide to the Authority documentation that each batch plant meets this standard during operation.

AQ-MM#1: Offset Project Construction Emissions through Off-Site Emission Reduction Programs

The project's construction emissions that cannot be reduced by IAMFs and any other mitigation measures, will be offset through a South Coast Air Quality Management District (SCAQMD) rule or contractual agreement by funding equivalent emissions reductions that achieve reductions in the same years as construction emissions occur, thus offsetting project-related air quality impacts in real time. The project will implement measures and best practices to minimize emissions from project construction. After implementation of these measures, emission levels that still exceed thresholds will be offset to the extent necessary to satisfy General Conformity. The Authority's Sustainability Policy has a goal to achieve net zero emissions from construction. As this project section advances through project delivery towards construction, the Authority will work with SCAQMD to assess the estimated emissions, availability of offsets, and cost for achieving the Authority's Sustainability Policy goal to the extent possible.

AQ-MM#2: Construction Emissions Reduction – Requirements for use of Zero Emission and/or Near Zero Emission Vehicles and Off-Road Equipment

This mitigation measure would reduce the impact of construction emissions from project-related on-road vehicles and off-road equipment. All remaining emissions after implementation of this measure would be offset with emission credits required under Mitigation Measure AQ-MM#1.

The Authority and all project construction contractors will require that a minimum of 25 percent, with a goal of 100 percent, of all light-duty on-road vehicles (e.g., passenger cars, light-duty trucks) associated with the project (e.g., on-site vehicles, contractor vehicles) use zero-emission (ZE) or near-zero emission (NZE) technology.

The Authority and all project construction contractors will have the goal that a minimum of 25 percent of all heavy-duty on-road vehicles (e.g., for hauling, material delivery and soil import/export) associated with the project use ZE or NZE technology.

The Authority and all project construction contractors will have the goal that a minimum of 10 percent of off-road construction equipment use ZE or NZE vehicles.

If local or state regulations mandate a faster transition to using ZE and/or NZE vehicles at the time of construction, the more stringent regulations will be applied. For example, Executive Order (EO) N-79-20, issued by California Governor Newsom on September 23, 2020, currently states the following:

- Light duty and passenger car sales be 100 percent ZEV by 2035
- Full transition to ZEV short haul/drayage trucks by 2035
- Full transition to ZEV heavy-duty long-haul trucks, where feasible, by 2045
- Full transition to ZE off-road equipment by 2035, where feasible.

The project will have a goal of surpassing the requirements of these or other future regulations as a mitigation measure.

6 REGULATORY PROCEDURES

The General Conformity regulations establish certain procedural requirements that must be followed when preparing a General Conformity evaluation. This section addresses the major applicable procedural issues and specifies how these requirements are met for the evaluation of the Project. The procedures required for the General Conformity evaluation are similar but not identical to those for conducting an air quality impact analysis pursuant to NEPA regulations. This Final General Conformity Determination will be published concurrent with the Authority's Record of Decision for the Burbank to Los Angeles section of the HSR system. This Final General Conformity Determination is being released for public and agency review pursuant to 40 C.F.R. §93.156.

The Authority identified the appropriate emission estimation techniques and planning assumptions in close consultation with the state entities charged with regulating air pollution in the South Coast Air Basin.

6.1 Use of Latest Planning Assumptions

The General Conformity regulations require the use of the latest planning assumptions for the area encompassing the Project, derived from the estimates of population, employment, travel, and congestion most recently approved by the area's metropolitan planning organization (40 C.F.R. §93.159(a)).

The traffic data used in the air quality analysis (see EIR/EIS, Section 3.2) are consistent with the most recent estimates made by the metropolitan planning organizations for traffic volume growth rates, including forecast changes in vehicle miles traveled and vehicle hours traveled. The Authority developed these estimates based on the metropolitan planning organizations' traffic assignment models using the baseline and future population, employment, and travel and congestion information available at the time the analysis was prepared. These assumptions are consistent with those in the current conformity determinations for the region's Transportation Plan and Transportation Improvement Plan.

6.2 Use of Latest Emission Estimation Techniques

The General Conformity regulations require the use of the latest and most accurate emission estimation techniques available, unless such techniques are inappropriate (40 C.F.R. § 93.159(b)). Operational phase vehicular emission factors were estimated by using the CARB emission factor program, EMission FACtors 2014 (EMFAC2014). Parameters were set in EMFAC2014 for each individual county to reflect conditions within each county, and statewide parameters were used to reflect statewide conditions. Operational phase aircraft emissions were estimated using the Federal Aviation Administration's Aviation Environmental Design Tool. In addition, electrical demands caused by propulsion of the trains, and of the trains at terminal stations and in storage depots and maintenance facilities were estimated using average emission factors for each kilowatt-hour required from CARB statewide emission inventories of electrical and cogeneration facilities data along with USEPA eGRID2012 (released October 20, 2015) electrical generation data. The energy estimates used for the propulsion of the HSR system include the use of regenerative braking power.

Emissions from regional building demolition and construction of the at-grade rail segments, roadway and rail bridges, retained-fill rail segments, and HSR stations (including parking areas and platform facilities) were calculated using the California Emissions Estimator Model (CalEEMod), which uses emission factors from the OFFROAD2011 model. The OFFROAD2011 model provides the latest emission factors for construction off-road equipment and accounts for lower fleet population and growth factors because of the economic recession and updated load factors based on feedback from engine manufacturers. For emission rates not available in OFFROAD2011, rates from OFFROAD2007 were conservatively applied. The use of emission rates from the OFFROAD models reflects the recommendation of CARB to capture the latest off-road construction assumptions. OFFROAD2011 default load factors (the ratio of average equipment horsepower used to maximum equipment horsepower) and useful life parameters

were used for emission estimates. Mobile-source emission burdens from worker vehicle trips and truck trips were calculated using vehicle miles traveled estimates and appropriate emission factors from EMFAC2014. Fugitive dust emissions from dirt and aggregate handling were calculated in CalEEMod, which uses emission factors derived from equations from the USEPA's AP-42 (USEPA 2006).

Construction exhaust emissions from equipment, fugitive dust emissions from earthmoving activities, and emissions from worker vehicle trips, deliveries, and materials hauling were calculated and compiled in a spreadsheet tool specific to the HSR Build Alternative for each year of construction. Project-specific data, including construction equipment lists and the construction schedule, were used for construction associated with the HSR Build Alternative. Construction exhaust emissions were modeled using Tier 4 emission rates (AQ-IAMF#4) from CalEEMod. Fugitive dust reductions from earthmoving best management practices were applied in CalEEMod (AQ-IAMF#1)[2]. PM exhaust and greenhouse gas emission reductions (30 percent and 99.1 percent, respectively) would occur from use of renewable diesel (AQ-IAMF#3) in all off-road diesel-powered engines (not applied in CalEEMod, instead applied by manual calculations in the Tables).

Mobile-source emission burdens from worker trips and truck trips were calculated using vehicle miles traveled estimates and appropriate emission factors from EMFAC2014. Model year 2010 or newer on-road engines in heavy-duty, diesel powered truck emissions (AQ-IAMF#5) were modeled using emission rates derived from the CalEEMod.

6.3 Major Construction-Phase Activities

Project-specific data, including construction equipment lists and the construction schedule, were used for construction associated with the alignment/guideway. Calculations were performed for each year of construction.

Major activities were grouped into the following categories (described in more detail in Section 8 of this report):

- Land Clearing
- Land Clearing Haul Roads
- Earthmoving
- Tunneling Cut-and-Cover
- Materials Handling
- Laying Track At Grade
- System Facilities
- Buildings Demolition
- Bridge Demolition
- Elevated Structures Roads
- Elevated Structures Rail
- Roadway Construction
- Burbank Airport Station Construction
- Maintenance Station Facilities
- Los Angeles Union Station Platform Construction

These major construction activities are used in the construction emission estimates. Construction exhaust emissions were modeled using Tier 4 construction equipment emission rates (AQ-IAMF#4) from CalEEMod. Fugitive dust reductions from earthmoving best management practices were applied in CalEEMod (AQ-IAMF#1). PM exhaust and GHG emission reductions (30 percent and 99.1 percent, respectively) would occur from use of renewable diesel (AQ-IAMF#3) in all off-road diesel-powered engines (not applied in CalEEMod, instead applied by manual calculations in the Tables). Mobile-source emission burdens from worker trips and truck trips were calculated

[2] The IAMF requires watering on all unpaved surfaces, which would achieve additional reductions (up to 61 percent).

using VMT estimates and appropriate emission factors from EMFAC2014. Model year 2010 or newer on-road engines in heavy-duty, diesel powered truck emissions (AQ-IAMF#5) were modeled using emission rates derived from the CalEEMod. Section 9.0 provides details of the construction emission calculations.

6.4 Emission Scenarios

The General Conformity regulations require that the evaluation reflect certain emission scenarios (40 C.F.R. §93.159(d)). Specifically, these scenarios generally include the evaluation of the direct and indirect emissions from a Project for the following years: (1) for nonattainment areas, the attainment year specified in the SIP or, if the SIP does not specify an attainment year, the latest attainment year possible under the CAA, and for maintenance areas, the farthest year for which emissions are projected in the approved maintenance plan; (2) the year during which the total of direct and indirect emissions for the federal action are projected to be the greatest on an annual basis; and (3) any year for which the applicable SIP specifies an emissions budget. Both the operational and construction phases of the action have to be analyzed, and the following applies to the Project.

- Emissions generated during the operational phase of the HSR would meet the emission requirements for the years associated with Items 1 and 3, because the emissions generated during the operational phase of the Project would be less than those emitted in the No-Build scenario. In addition, microscale analyses conducted for the EIR/EIS demonstrate that the operational phase of the HSR would not cause or exacerbate a violation of the NAAQS for all applicable pollutants.
- Emissions generated during HSR's construction phase, which would include the year with the greatest amount of total direct and indirect emissions, may be subject to General Conformity regulations because regional emissions would increase and, as such, have the potential to cause or exacerbate an exceedance of an NAAQS. Therefore, analyses were conducted to estimate the amounts of emissions that would be generated during the construction phase (for comparison with the General Conformity applicability rates) and the potential impacts of these emissions on local air quality levels. Emissions generated at the construction sites (e.g., tailpipe emissions from the on-site heavy-duty diesel equipment and fugitive dust emissions generated by vehicles traveling within the construction sites) and on the area's roadways by vehicles traveling to and from these sites (by vehicles transporting materials and the workers traveling to and from work) were considered.
- Air quality dispersion modeling would be required for this conformity analysis to estimate the Project's localized impacts on $PM_{2.5}$ and CO concentrations if the annual emissions of the pollutants generated during construction were to exceed the General Conformity *de minimis* levels.

Annual emissions were estimated for each year of the Project's construction period. These emissions, which are the maximum values for the Project, are described in more detail in Section 9 of this report.

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7 APPLICABILITY ANALYSIS

The first step in a General Conformity evaluation is an analysis of whether the requirements apply to a proposed federal action in a nonattainment or a maintenance area. Unless exempted by the regulations or otherwise presumed to conform, a Federal action requires a General Conformity Determination for each pollutant where the total of direct and indirect emissions caused by the federal action would equal or exceed an annual *de minimis* emission rate.

7.1 Attainment Status of Project Area

The USEPA and the CARB designate each county (or portions of counties) within California as attainment, maintenance, or nonattainment based on the area's ability to meet ambient air quality standards. Regions are designated as attainment for a criteria pollutant when the concentration of that pollutant is below the ambient air standard. If a criteria pollutant concentration is above the ambient air standard, the area is in nonattainment for that pollutant. Areas previously designated as nonattainment that subsequently demonstrated compliance with the ambient air quality standards are designated as a maintenance area. Table 4 summarizes the federal (under NAAQS) and state (under California Ambient Air Quality Standards) attainment status for the South Coast Air Basin.

Table 4 Federal and State Attainment Status

Pollutant	Federal Classification	State Classification
O_3 1-hour	N/A	Nonattainment
O_3 8-hour	Nonattainment	Nonattainment
$PM_{2.5}$	Nonattainment	Nonattainment
PM_{10}	Attainment/Maintenance	Nonattainment
CO	Attainment/Maintenance	Attainment
NO_2	Attainment/Unclassified	Attainment
SO_2	Attainment/Unclassified	Attainment/Unclassified
Lead	Nonattainment	Attainment
All Others	Attainment/Unclassified	Attainment/Unclassified

Source: California Air Resources Board, 2019

CO = carbon monoxide
NO_2 = nitrogen dioxide
NO_X = nitrogen oxides
O_3 = ozone
$PM_{2.5}$ = particulate matter 2.5 microns or less in diameter
PM_{10} = particulate matter 10 microns or less in diameter
SO_2 = sulfur dioxide

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8 CONSTRUCTION ACTIVITIES CONSIDERED

As shown in Section 3.3.6.3 of the EIR/EIS, the results of the regional analyses conducted for the Project demonstrate that emissions generated during the operational phase would be less than those emitted in the No-Build and existing conditions scenarios and that the microscale analyses demonstrate that the Project would not cause or exacerbate a violation of the NAAQS for these pollutants. As such, no further analysis of the operational period emissions is necessary for this General Conformity determination. Section 9 focuses on the emissions generated from the construction period emissions for the Burbank to Los Angeles Project Section.

The analysis conducted for the EIR/EIS to estimate potential air quality impacts caused by on-site (e.g., demolition activities, construction equipment operations, and truck movements) and off-site (e.g., motor vehicle traffic effects due to truck trips) construction-phase activities included:

- Estimation of emissions generated by the construction activities (e.g., deconstruction, concrete and steel construction), including fugitive dust emissions and emissions released from diesel-powered equipment and trucks based on the hours of operation of each piece of equipment
- Identification of heavily traveled truck routes to estimate the cumulative effects of on-site construction activity emissions and off-site traffic emissions
- An on-site dispersion modeling analysis of the major construction areas
- An off-site dispersion modeling analysis of the roadway intersections/interchanges adjacent to the construction areas using traffic data that include construction-related vehicles and background traffic
- A comparison of the on-site and off-site modeling results to the applicable NAAQS for the applicable pollutants

Emission rates for these activities were estimated based on the following:

- The number of hours per day and duration of each construction activity;
- The number and type of construction equipment to be used;
- Horsepower and utilization rates (hours per day) for each piece of equipment;
- The quantities of construction/demolition material produced and removed from each site; and
- The number of truck trips needed to remove construction/demolition material, and to bring the supply materials to each site.

The following discusses of the major activities considered, the timing of these activities, and the procedures used to estimate emission rates.

A full description of construction analysis methodology can be found in Section 6.9 of the *Burbank to Los Angeles Project Section: Air Quality and Global Climate Change Technical Report* for this Project (Authority 2020).

Construction activities associated with the Project would result in criteria pollutant and greenhouse gas emissions. Construction emissions for the Project are quantified and analyzed in Section 3.3.6.3 of the EIR/EIS. The analysis assumed that project construction would take place from 2020 to 2028. Although the construction schedule has been updated, the analysis is still valid as the equipment quantities and annual emission rates would remain unchanged.

8.1 Site Preparation

8.1.1 Demolition

For purposes of this air quality analysis, demolition of existing structures along the HSR alignment and HSR stations would take place from December 2020 through October 2021. Demolition emissions were calculated using CalEEMod using the project specific equipment list.

In addition to the fugitive dust emissions resulting from the destruction of existing buildings, emissions were estimated for worker trips, construction equipment exhaust, and truck-hauling exhaust.

8.1.2 Land Clearing/Grubbing

Land grubbing refers to the site preparation activities for the HSR alignment construction. Emissions from land grubbing were estimated using OFFROAD 2011 emission factors as well as a site-specific equipment list. For purposes of this air quality analysis, land clearing and grubbing was assumed to take place along the route ahead of earthmoving and to construct haul roads from January 2020 to July 2025. Fugitive dust from land-grubbing activities includes that from worker trips, construction equipment exhaust, and truck-hauling exhaust.

8.2 Earthmoving

The earthmoving activities include grading, trenching, and cut/fill activities for the alignment construction. For purposes of this air quality analysis, earthmoving would take place from January 2020 to January 2025. The emissions associated with the earthmoving activities were estimated using CalEEMod with OFFROAD 2011 emission factors, in conjunction with the site-specific equipment list. Fugitive dust from earthmoving activities includes that from worker trips, construction equipment exhaust, and truck-hauling exhaust.

8.3 Trenching/Tunneling

The trenching and tunneling activities include excavation, cut/fill activities, and concrete installation for the below-grade portion of the HSR alignment. Cut-and-cover equipment would be used to cut through the ground, progressively installing concrete linings to support the excavated trench. The excavated material would be transported through the machine to the surface for removal by trucks. For purposes of this air quality analysis, the sequential excavation method and cut-and-cover activities would take place from January 2020 to January 2026. The emissions associated with the cut-and-cover activities were estimated using CalEEMod with OFFROAD 2011 emission factors, in conjunction with the site-specific equipment list. Fugitive dust includes that from worker trips, construction equipment exhaust, and truck-hauling exhaust.

8.4 High-Speed Rail Alignment Construction

For purposes of this air quality analysis, the HSR alignment construction is expected to take place from January 2020 to January 2027. Although the construction schedule has been updated, the analysis is still valid, as the equipment quantities and annual emission rates would remain unchanged. The construction analysis includes the following construction phases:

- Constructing roadway and rail bridges
- Laying cut-and-cover rail, retained-fill rail, and at-grade rail

Emissions from construction of the track were calculated using CalEEMod. Equipment counts, horsepower, hours of operation, and load factors used in CalEEMod are included in Appendix A of the *Burbank to Los Angeles Project Section: Air Quality and Global Climate Change Technical Report* for this Project (Authority 2020).

8.4.1 Material Hauling

Emissions from the exhaust of trucks used to haul material (including concrete slabs and ballast materials) to the construction site were calculated using heavy-duty truck emission factors from EMFAC2014 and anticipated travel distances of haul trucks within the South Coast Air Basin.

Quarries with 200 or more acres of permitted area are considered to be of sufficient size to effectively serve the demand (URS et al. 2011). At least three quarries in the vicinity of the project met this criterion; however, it was assumed that the smallest number of quarries would be used for efficiency. Therefore, one quarry with the largest acreage nearest to the project vicinity was selected for this analysis. Ballast-hauling activities would take place with the use of locomotives. Locomotive activity would take place in two working days.

8.4.2 System Facilities

For purposes of this air quality analysis, system facilities construction is expected from January 2022 to July 2028.

8.5 Station Construction

Emissions from Burbank Airport Station construction would result from mass site grading and excavation, underground and above-ground facility construction (i.e., train-boarding platforms, the station building, pick-up/drop-off facilities for private automobiles, and the transit center for buses and shuttles), asphalt paving activates for surface roadways and parking areas, and architectural coatings. Emissions from Los Angeles Union Station would be a result of construction activities for raising the existing platforms and installation of the overhead catenary system. Where applicable, emissions resulting from worker trips, vendor trips, and construction equipment exhaust were included. CalEEMod was used to estimate emissions from the construction phases of the HSR stations.

8.6 Roadway Crossing Construction

The HSR Build Alternative would include the relocation and the expansion of local roads and roadway undercrossings and overcrossings, and reconstruction of several intersections to provide grade separations between roads and the HSR Alignment. Roadway demolition emissions are included in the CalEEMod analysis using the project-specific equipment list. Roadway project construction would begin in July 2021 and be completed by January 2027. Based on project-specific data, a simplified construction schedule was used to estimate construction emissions.

8.7 Early Action Project Construction

As described in Chapter 2 of the EIR/EIS, early action projects would be completed in collaboration with local and regional agencies, and they include grade separations and improvements at regional passenger rail stations. These early action projects are analyzed in further detail to allow the agencies to adopt the findings and mitigation measures as needed to construct the projects. The early action projects would include four roadway undercrossing grade separations (i.e., Sonora Avenue, Grandview Avenue, Flower Street, and Goodwin Avenue/Chevy Chase Drive), one roadway overcrossing grade separation (i.e., Main Street) and improvements at a regional passenger rail station (Burbank Metrolink Station). The projects are described in more detail in Section 2.6 of the *Burbank to Los Angeles Project Section: Air Quality and Global Climate Change Technical Report* for this Project [Authority 2020].

Construction emissions include exhaust emissions from heavy equipment used during the construction phase of each of the project components. The bulk of the construction activities would occur simultaneously and were broken down on a project-by-project component basis to evaluate the construction activities that would take place at a particular location during a peak day and average calendar year period. The construction schedule analysis was used to identify the type and number of equipment that would operate on a typical workday during the period of maximum construction activity. The number of each type of equipment was entered into a spreadsheet. Emission factors from the CARB's OFFROAD2011, EMFAC2014, and HSR inventory of air emissions were identified for each type of equipment and for heavy-duty trucks. Peak day and annual average emissions then were determined by summing emissions from overlapping construction activities as indicated in the proposed construction schedule.

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9 ESTIMATED EMISSIONS RATES AND COMPARISON TO *DE MINIMIS* THRESHOLDS – BURBANK-LOS ANGELES

Total annual estimated emissions generated within the South Coast Air Basin during the Project's construction period, as presented in the HSR EIR/EIS, are provided in Table 5. As shown in the table, direct emissions from the construction phase of the Burbank to Los Angeles Project Section would exceed the GC applicability level for NO_x in certain calendar years in which construction would take place. The following shows the maximum estimated annual values of each pollutant, by non-attainment or maintenance area, and the percentage of the 2019 estimated emission rates in the South Coast Air Basin (see Table 3) for Burbank to Los Angeles Project Section construction:

- VOC: 3.09 tons per year (tpy) (<0.01%)
- CO: 72.16 tpy (0.01%)
- NO_x: 22.07 tpy (<0.01%)
- SO_x: 0.18 tpy (<0.01%)
- PM_{10}: 16.07 tpy (0.02%)
- $PM_{2.5}$: 2.94 tpy (0.01%)

Table 5 Estimated Annual Average Emissions

Pollutants	Emissions (Tons/Year)[3]									Conformity Applicability Level (tons/year)[2]
	2020	2021	2022	2023	2024	2025	2026	2027	2028	
VOC	1.21	2.55	3.09	2.57	2.87	0.05	0.05	0.06	0.05	10
CO	28.95	57.34	65.28	63.29	72.16	1.85	1.84	1.85	1.86	100
NO_x	**11.88**	**22.07**	**20.88**	**16.49**	**20.46**	0.22	0.22	0.22	0.22	10
SO_x	0.07	0.15	0.16	0.16	0.18	0.00	0.00	0.00	0.00	N/A
PM_{10}[1]	9.57	13.02	13.69	13.58	16.07	0.20	0.20	0.20	0.20	100
$PM_{2.5}$[1]	1.66	2.50	2.68	2.62	2.94	0.03	0.03	0.03	0.03	70

Source: California High-Speed Rail Authority, 2020
Note: **Bold** values exceed applicability thresholds
[1] The PM_{10} and $PM_{2.5}$ emissions consist of exhaust and fugitive dust emissions.
[2] Pursuant to NEPA, effects on air quality would be considered an impact if the HSR Build Alternative criteria pollutant emissions would be equal to or exceed the general conformity *de minimis* levels in a nonattainment or maintenance area. It is currently assumed that general conformity would apply only to construction of the HSR Build Alternative, as operation of the HSR Build Alternative is expected to decrease regional emissions of criteria pollutants.
[3] The emissions presented in this table reflect the impact of the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule, per the California Air Resources Board's "EMFAC Off-Model Adjustment Factors to Account for the SAFE Vehicles Rule Part One" issued on November 20, 2019 (https://ww3.arb.ca.gov/msei/emfac_off_model_adjustment_factors_final_draft.pdf).

CO = carbon monoxide
HSR = high-speed rail
N/A = not applicable
NEPA = National Environmental Policy Act
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter 2.5 microns or less in diameter
PM_{10} = particulate matter 10 microns or less in diameter
SCAQMD = South Coast Air Quality Management District
SO_X = sulfur oxides
tons/year = tons per year
VOC = volatile organic compound

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10 REGIONAL EFFECTS

As shown in Section 3.3.6.3 of the EIR/EIS, the total regional emissions for all of the applicable pollutants are lower during the operations phase of the Project than under No-Build conditions (and will therefore not exceed the *de minimis* emission level). As such, only emissions generated during the construction phase were compared to the conformity levels to determine conformity compliance. As shown in Table 5, construction-phase emissions, compared to the General Conformity applicability rates, are discussed below

- Annual estimated VOC emissions in the South Coast Air Basin are less than the applicability rate of 10 tons per year for construction in 2020 through 2028 for the HSR Project Alternative.
- Annual estimated CO emissions in the South Coast Air Basin are less than the applicability rate of 100 tons per year for construction in 2020 through 2028 for the HSR Project Alternative.
- Annual estimated NO_x emissions are greater than the applicability rate of 10 tons per year in years 2020 through 2024 for the HSR Project Alternative.
- Annual estimated PM_{10} emissions are less than the applicability rate of 100 tons per year for construction in 2020 through 2028 for the HSR Project Alternative.
- Annual estimated $PM_{2.5}$ emissions are less than the applicability rate of 70 tons per year for construction in 2020 through 2028 for the HSR Project Alternative.
- There are no applicable thresholds for SO_x annual emissions.

As such, a General Conformity Determination is required for this Project for NO_x for the years during construction where the emissions would exceed the *de minimis* levels and do not meet any of the exceptions cited in 40 C.F.R. § 93.154(c). This Final Conformity Determination identifies the Authority's commitment to the purchase of additional offsets to net all criteria pollutant emissions to levels that are below the General Conformity *de minimis* level for each calendar year that exceedances occur, as explained in Section 13.

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11 GENERAL CONFORMITY EVALUATION

For federal actions subject to a General Conformity evaluation, the regulations delineate several ways an agency can demonstrate conformity (40 C.F.R. § 93.158). This section summarizes the findings used to make the determination for the Project.

11.1 Conformity Requirements of Project

Based on the results shown in Table 5, conformity determinations are required for construction-phase emissions for NO_x because annual estimated emissions are greater than the applicability rates of 10 tpy for NO_x in the South Coast Air Basin.

11.2 Compliance with Conformity Requirements

NO_x emissions caused by the construction of the Project that would exceed the General Conformity *de minimis* levels are considered to have the potential to cause air quality impacts. The Authority has committed to the purchase of additional offsets to net all criteria pollutant emissions to levels that are below the General Conformity *de minimis* level for each calendar year that exceedances occur.

The requirements for offsets would be implemented as part of the Project as described in the mitigation measures from the Final EIR/EIS:

AQ-MM#1: Offset Project Construction Emissions through Off-Site Emission Reduction Programs

Emissions that cannot be reduced by IAMFs and any other mitigation measures, would be fully offset within the South Coast Air Basin through a South Coast Air Quality Management District (SCAQMD) rule or contractual agreement by funding equivalent emissions reductions that achieve reductions in the same years as construction emissions occur, thus offsetting project-related air quality impacts in real time. The project will implement measures and best practices to minimize emissions from project construction. After implementation of these measures, emission levels that still exceed thresholds will be offset to the extent necessary to satisfy General Conformity. The Authority's Sustainability Policy has a goal to achieve net zero emissions from construction. As this project section advances through project delivery towards construction, the Authority will work with SCAQMD to assess the estimated emissions, availability of offsets, and cost for achieving the Authority's Sustainability Policy goal to the extent possible.

AQ-MM#2: Construction Emissions Reduction – Requirements for use of Zero Emission and/or Near Zero Emission Vehicles and Off-Road Equipment

This mitigation measure would reduce the impact of construction emissions from project-related on-road vehicles and off-road equipment. All remaining emissions after implementation of this measure would be offset with emission credits required under Mitigation Measure AQ-MM#1.

The Authority and all project construction contractors will require that a minimum of 25 percent, with a goal of 100 percent, of all light-duty on-road vehicles (e.g., passenger cars, light-duty trucks) associated with the project (e.g., on-site vehicles, contractor vehicles) use zero emission (ZE) or near-zero emission (NZE) technology.

The Authority and all project construction contractors will have the goal that a minimum of 25 percent of all heavy-duty on-road vehicles (e.g., for hauling, material delivery and soil import/export) associated with the project use ZE or NZE technology.

The Authority and all project construction contractors will have the goal that a minimum of 10 percent of off-road construction equipment use ZE or NZE vehicles.

If local or state regulations mandate a faster transition to using ZE and/or NZE vehicles at the time of construction, the more stringent regulations will be applied. For example, Executive Order (EO) N-79-20, issued by California Governor Newsom on September 23, 2020, currently states the following:

- Light duty and passenger car sales be 100 percent ZEV by 2035
- Full transition to ZEV short-haul/drayage trucks by 2035
- Full transition to ZEV heavy-duty long-haul trucks, where feasible, by 2045
- Full transition to ZE off-road equipment by 2035, where feasible.

The project will have a goal of surpassing the requirements of these or other future regulations as a mitigation measure.

11.3 Consistency with Requirements and Milestones in Applicable SIP

The General Conformity regulations state that notwithstanding the other requirements of the rule, a federal action may not be determined to conform unless the total of direct and indirect emissions from the federal action is in compliance or consistent with all relevant requirements and milestones in the applicable SIP (40 C.F.R. § 93.158(c)). This includes but is not limited to such issues as reasonable further progress schedules, assumptions specified in the attainment or maintenance demonstration, prohibitions, numerical emission limits, and work practice standards. This section briefly addresses how the construction emissions for the Project were assessed for SIP consistency for this evaluation.

11.3.1 Applicable Requirements from the USEPA

The USEPA has already promulgated, and will continue to promulgate, numerous requirements to support the goals of the Clean Air Act with respect to the NAAQS. Typically, these requirements take the form of rules regulating emissions from significant new sources, including emission standards for major stationary point sources and classes of mobile sources, as well as permitting requirements for new major stationary point sources. Because states have the primary responsibility for implementation and enforcement of requirements under the Clean Air Act and can impose stricter limitations than the USEPA, the USEPA requirements often serve as guidance to the states in formulating their air quality management strategies.

11.3.2 Applicable Requirements from the CARB

In California, to support the attainment and maintenance of the NAAQS, CARB is primarily responsible for regulating emissions from mobile sources. In fact, the USEPA has delegated authority to the CARB to establish emission standards for on-road and some non-road vehicles separate from the USEPA vehicle emission standards, although the CARB is preempted by the Clean Air Act from regulating emissions from many non-road mobile sources, including marine craft. Only the USEPA can set emission standards for preempted equipment.

11.3.3 Applicable Requirements from SCAQMD

To support the attainment and maintenance of the NAAQS in the South Coast Air Basin, SCAQMD is primarily responsible for regulating emissions from stationary sources. SCAQMD develops and updates its Air Quality Management Plan regularly to support the California SIP. While the Air Quality Management Plan contains rules and regulations geared to attain and maintain the NAAQS, these rules and regulations also have the much more difficult goal of attaining and maintaining the California ambient air quality standards.

11.3.4 Consistency with Applicable Requirements for the Authority

The Authority already complies with, and will continue to comply with, a number of rules and regulations implemented and enforced by federal, state, regional, and local agencies to protect and enhance ambient air quality in the South Coast Air Basin.

The Authority will continue to comply with all existing applicable air quality regulatory requirements for activities over which it has direct control and will meet in a timely manner all regulatory requirements that become applicable in the future.

These are appropriate USEPA, CARB, and SCAQMD rules that are standard practice and best management practices for construction in the SCAQMD and include control of emissions and exhaust:

- SCAQMD Rule 402, Nuisance: This rule restricts the discharge of any contaminant in quantities that cause, or have a natural ability to cause, injury, damage, nuisance, or annoyance to businesses, property, or the public. The proposed project does not plan to discharge any contaminants in quantities that would cause injury to the public or property.
- SCAQMD Rule 403, Fugitive Dust: This rule requires the prevention, reduction, or mitigation of fugitive dust emissions from a project site. Rule 403 restricts visible fugitive dust to a project property line, restricts the net PM_{10} emissions to less than 50 micrograms per cubic meter and restricts the tracking out of bulk materials onto public roads. Additionally, Rule 403 requires an applicant to use one or more of the best available control measures (identified in the tables within the rule). Mitigation measures may include adding freeboard to haul vehicles, covering loose material on haul vehicles, using dust suppressants such as watering or chemical soil stabilizers, and/or ceasing all activities.
- SCAQMD Rule 1113, Architectural Coatings: This rule limits the amount of VOCs from architectural coatings and solvents, which lowers the emissions of odorous compounds.

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12 REPORTING AND PUBLIC COMMENTS

To support a decision concerning the Project, the FRA issued a Draft General Conformity determination for public and agency review for a 30-day period as required by 40 C.F.R §§ 93.155 and 93.156. In developing the analysis underlying this general conformity determination, the Authority has consulted with SCAQMD on a variety of technical and modeling issues. The Authority has also consulted with the USEPA and the CARB on the overall approach to general conformity.

12.1 Availability of Final General Conformity Determination

The FRA will provide copies of this Final General Conformity Determination to the appropriate regional offices of USEPA, CARB, and SCAQMD. The Final General Conformity Determination is available at the FRA website (https://railroads.dot.gov/environment/environmental-reviews/clean-air-act-california-general-conformity-determinations) and on FRA's docket at https://www.regulations.gov/, Docket FRA-2021-0082.

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13 FINDINGS AND CONCLUSIONS

FRA conducted a General Conformity evaluation pursuant to 40 C.F.R. Part 93 Subpart B, and based on the Authority's coordination with USEPA, SCAQMD, and CARB. The General Conformity regulations apply at this time to this Project because the Project is in an area that is currently designated as nonattainment for the federal 8-hour O_3, $PM_{2.5}$, and lead standards; unclassified for the federal NO_2 and SO_2 standards; attainment/maintenance for the federal PM_{10} and CO standards; and attainment/unclassified for all other standards. The FRA has determined that the Project will conform to the approved SIP, based on an agreement between the Authority and SCAQMD to ensure that construction-phase NO_x emissions will be offset to levels that are below the General Conformity *de minimis* level. The agreement between the Authority and SCAQMD (Appendix A to this document) provides, in part, for the following:

- The Authority will work with SCAQMD to ensure the lowest levels of construction emissions are generated through the use of IAMFs and mitigation measures, outlined in this report, and rolling review of best available technologies, with priority given first to the use of zero emission (ZE) technology such as electric construction equipment and then to near-zero emission (NZE) technology.
- After receipt of construction funding but prior to construction start, the Authority will
    - review emission estimates, revise if warranted, and present a final estimate for review and use by SCAQMD; and
    - if emissions exceed General Conformity *de minimis* thresholds, ensure all remaining emissions, after implementation of the IAMFs and onsite mitigation measures, will be offset. Through a contractual agreement with SCAQMD, the Authority and SCAQMD will specify the applicable emissions reduction program(s), which will be funded by the Authority and administered by SCAQMD. Applicable emission reduction programs may include state or federal incentive programs that achieve emissions reductions by providing incentive funds for the incremental cost of cleaner than required engines and equipment.
    - The Authority will not start construction until any necessary agreements are executed.

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15 PREPARER QUALIFICATIONS

Amy Fischer, Senior Air Quality Scientist. Ms. Fischer has a B.S. in Environmental Policy Analysis from the University of Nevada, Reno. With 20 years of experience, Amy Fischer serves as a senior air quality and greenhouse gas emissions specialist qualified to conduct analyses for a variety of infrastructure projects. Ms. Fischer is the technical lead on air quality and climate change impact analyses documents and oversees the research and preparation of technical reports. She is skilled in air quality assessment models, including CalEEMod, Emission Factor models (EMFAC/OFFROAD), Road Construction Estimator Model (RoadMod) and Line Dispersion Models (CALINE).

Cara Carlucci, Planner. Ms. Carlucci holds a B.S. in City & Regional Planning with a minor in Real Property Development from California Polytechnic State University, San Luis Obispo. At LSA, she provides planning and technical assistance to project managers on a variety of planning and environmental documents including environmental assessments, initial studies, and Environmental Impact Reports. She has contributed to the CEQA air quality analyses for residential, commercial, and infrastructure projects, as well as stand-alone air quality impact studies.

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APPENDIX A: GENERAL CONFORMITY DETERMINATION LETTER BETWEEN AUTHORITY AND SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

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CALIFORNIA
High-Speed Rail Authority

November 9, 2021

Mr. Ben Benoit, Chair
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

Re: General Conformity for the Burbank to Los Angeles Section of California High-Speed Rail

Dear Mr. Benoit:

Thank you for your active participation with the California High-Speed Rail Authority (Authority) to address the General Conformity requirements of the California High-Speed Rail Burbank to Los Angeles Project Section of the California High-Speed Rail (HSR) System, which is located within the jurisdiction of the South Coast Air Quality Management District (South Coast AQMD or District). The High-Speed Rail (HSR) System will provide intercity, high-speed service on more than 800 miles of guideway throughout California, connecting the major population centers of Sacramento, the San Francisco Bay Area, the southern Central Valley, Los Angeles, the Inland Empire, Orange County and San Diego.

Air Quality and Public Health Benefits of the High-Speed Rail System

The HSR System will use 100 percent renewable electrically-powered, zero emission high-speed trains and is identified in the California Air Resources Board's 2017 Scoping Plan as part of a sustainable statewide transportation system necessary to achieve the state's climate goals. With HSR, the Authority states that total statewide greenhouse gas (GHG) emissions in 2040 would be less than 2015 GHG levels, with HSR predicted to help achieve that goal by reducing 2040 GHG emissions by approximately 1.1 to 1.7 million metric tons. The Authority also states that the HSR System would result in a net reduction of criteria pollutant emissions. Phase 1 of the HSR System, which consists of distinct sections from San Francisco in the north to Los Angeles and Anaheim in the south, is expected to result in reductions to nitrogen oxides (NOx) emissions of approximately 1,140-1,150 tons per year, , particulate matter (PM) emissions of approximately 500-700 tons per year, and reactive organic gases (ROG) emissions of 130-150 tons per year compared to the No HSR System Project Alternative in 2040.

As part of its first phase, the Burbank to Los Angeles Project Section (also referred to as the Project) is critical to bringing the HSR System to Southern California. Operation of the HSR System within the South Coast region would result in a net regional decrease in emissions of criteria pollutants and associated public health impacts, and emission levels would be less than the general conformity *de minimis* levels. This overall net decrease in operational emissions would help the South Coast Air Basin (Basin) meet its attainment goals of federal ambient air quality

standards for Ozone (03) by reducing precursor emissions ofNOx, ROG and PM and will result in long-term air quality and public health benefits.

However, the construction of the HSR System is expected to result in a net increase in criteria pollutant emissions ofNOx beyond de minimis thresholds during construction years. As such, the Authority and the South Coast AQMD have agreed to the commitments in this letter to track and mitigate construction emissions from the Project to meet General Conformity Requirements.

General Conformity Rule

The General Conformity Rule, as codified in Title 40 Code of Federal Regulations Part 93, Subpart B, establishes the process by which federal agencies determine conformance of proposed projects that are federally funded or require federal approval with applicable air quality standards. This determination must demonstrate that a Proposed Project would not cause or contribute to new violations of air quality standards, exacerbate existing violations, or interfere with timely attainment or required interim emissions reductions towards attaimnent. The Authority, as the Project proponent, is receiving federal grant funds through the Federal Railroad Administration's (FRA) High-Speed Intercity Passenger Rail program. The Project may also receive FRA safety approvals. Because of the federal funding and potential safety approvals, the Project in relation to the Burbank to Los Angeles Section of the HSR System is subject to the General Confonnity Rule; and because construction-phase emissions (without mitigation) would exceed General Conformity *de minimis* emission thresholds, the Project is not exempt and must demonstrate conformity.

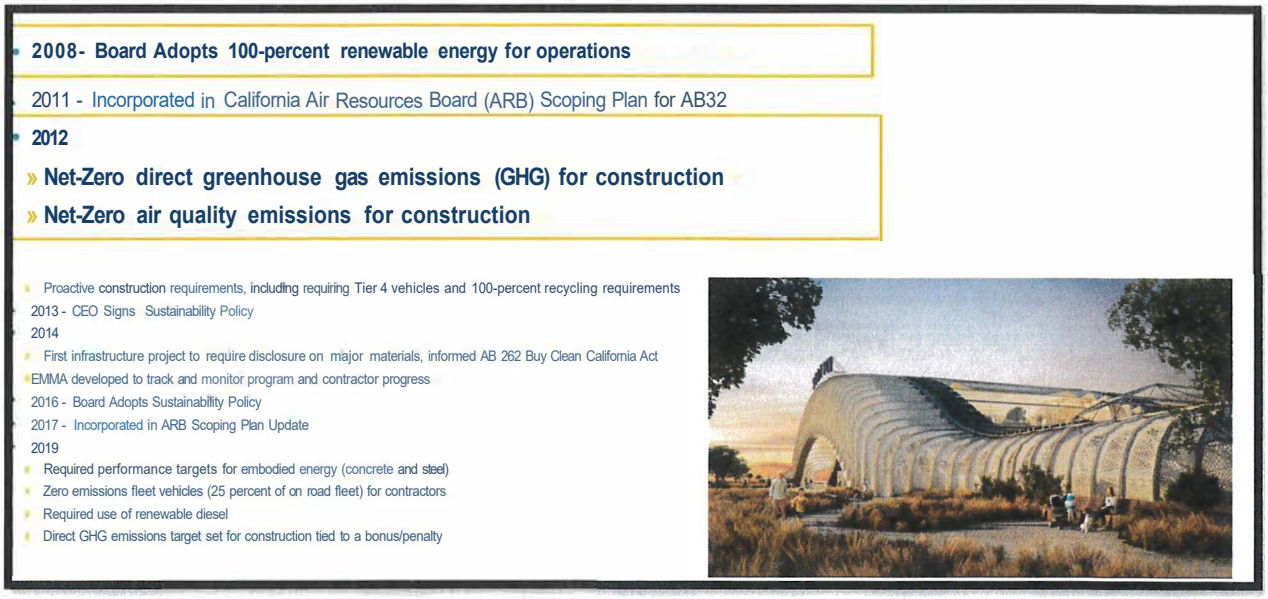
Emission Reductions vs. Emission Mitigation

The Authority has not yet secured construction funding for the Burbank to Los Angeles Section of the HSR System and has not yet set a finn construction schedule for this section. The Authority explains that the emission numbers provided in the Authority's EIR/EISs are reasonable estimates based on the available inf01mation to date. The methodology used in creating these estimates is similar to what was used for estimating the emissions for the Merced to Fresno and Fresno to Bakersfield project section environmental documents. After seven years of construction in the central valley it has become clear that the estimates in the EIR/EIS are conservative and actual emissions from constrnction are currently lower than estimates by 50-70%. It is therefore difficult for the Authority to cmTently engage with South Coast AQMD on implementing available or future mechanisms for the reduction of construction emissions. While the construction schedule has not been firmly established for this section, the Authority agrees with South Coast AQMD's encouragement to reduce emissions locally by avoiding and minimizing emissions from construction, before funding incentive programs to fully mitigate remaining construction emissions.

The Authority has a long history of being proactive towards reducing construction emissions. As shown in

Figure 1, the Authority has continually updated its policies and procedures to ensure that the project embraces and pushes the boundaiies towards reducing emissions.

Figure 1 - History of Environmental Commitments Designed to Reduce Emissions



Impact Avoidance and Minimization Features

Avoiding and minimizing emissions is a strategy that is consistent with the net-zero greenhouse gas objectives of the Authority's Sustainability Policy. As such, based on the Draft Environmental Impact Report/Draft Environmental Impact Statement, the Authority has incorporated the following Impact Avoidance and Minimization Features (IAMFs) into the Burbank to Los Angeles Section of the HSR System:

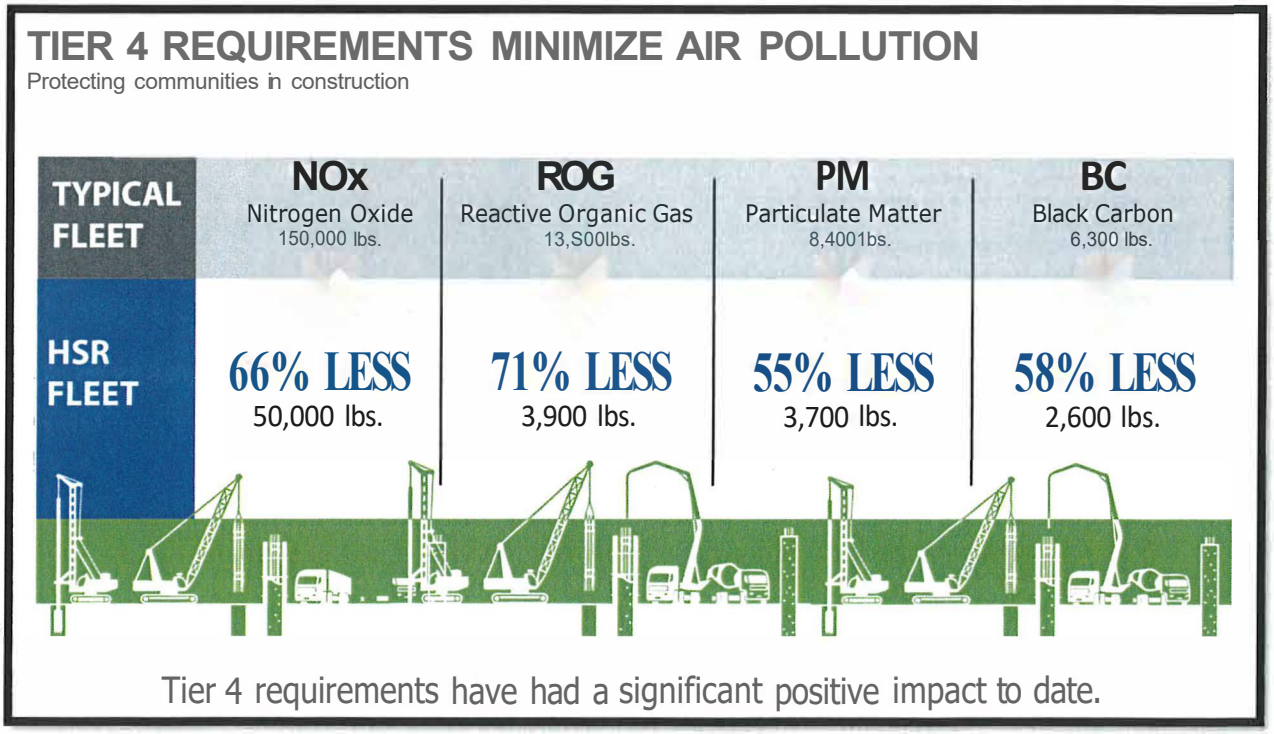
- **AQ-IAMF#2: Selection of Coatings:** The contractor would use lower VOC content paint than that required by South Coast AQMD Rule 1113.
- **AQ-IAMF#4: Reduce Criteria Exhaust Emissions from Construction Equipment:** All heavy-duty off-road construction diesel equipment used during the construction phase would meet Tier 4 engine requirements.
- **AQ-IAMF#S: Reduce Criteria Exhaust Emissions from On-Road Construction Equipment:** All on-road trucks would consist of model year 2010 or newer.
- **AQ-IAMF#6: Reduce the Potential Impact of Concrete Batch Plants:** The contractor would prepare a technical memorandum documenting the concrete batch plant siting criteria, including locating the plant at least 1,000 feet from sensitive receptors, and utilization of typical control measures.

- **AQ-IAMF#l: Fugitive Dust Emissions:** The contractor would employ several control measures to minimize and control fugitive dust emissions and prepare a fugitive dust control plan for each distinct construction segment.

- **AQ-IAMF#3: Renewable Diesel:** The contractor would use renewable diesel fuel to minimize and control exhaust emissions from all heavy-duty diesel-fueled construction diesel equipment and on-road diesel tlucks.

According to the Authority, these IAMFs have helped to reduce the constrnction emissions generated by the HSR project sections that are located outside the South Coast AQMD's jurisdiction. For example, Figure 2 highlights the significant criteria pollutant emission reductions demonstrated by the project due to the IAMF#4.

Figure 2 - Emission Savings due to Tier 4 Equipment in 2020



Mitigation Measures

The Authority is continually incorporating mitigation measures that would reduce the generation of constrnction emissions in constrnction contracts and practices. For example, the Authority redently incorporated the following mitigation measure into the environmental documentation and is already incorporating portions of this measure into existing contracts.

AQ-MM - Construction Emissions Reductions - Requirements for use of Zero Emission (ZE) and/or Near Zero Emission (NZE) vehicles and off-road equipment

This mitigation measure would reduce the impact of construction emissions from the use of on-road vehicles and off-road equipment for the Burbank to Los Angeles Section of the HSR System. All remaining emissions after implementation of this measure would be mitigated with emission reduction programs required under Mitigation Measure AQ-MM#1.

The Authority and all project construction contractors shall require that by the start of construction a minimum of 25 percent, with a goal of 100 percent, of all light-duty on-road vehicles (e.g., passenger cars, light-duty trucks) associated with the construction activities for the Burbank to Los Angeles Section of the HSR System (e.g., on-site vehicles, contractor vehicles) use zero emission (ZE) or near-zero emission (NZE) technology.

The Authority and all project construction contractors shall have the goal that by the start of construction a minimum of 25 percent of all heavy-duty on-road vehicles (e.g., for hauling, material delivery and soil import/export) associated with the construction activities for the Burbank to Los Angeles Section of the HSR System use ZE or NZE technology.

The Authority and all project construction contractors shall have the goal that by the start of construction a minimum of 10 percent of off-road construction equipment be ZE which includes electric technologies or NZE during the construction activities for the Burbank to Los Angeles Section of the HSR System.

If local or state regulations mandate a faster transition to ZE and/or NZE vehicles and off-road equipment at the time of construction for the Burbank to Los Angeles Section of the HSR System, the more stringent regulations will be required and applied. For example, Executive Order (EO) N-79-20 currently states the following:

- Light duty and passenger car sales be 100% ZEV by 2035
- Full transition to ZEV short haul/drayage trucks by 2035
- Full transition to ZEV heavy-duty long-haul trucks, where feasible, by 2045
- Full transition to ZE off-road equipment by 2035, where feasible.

The Authority has a goal of surpassing the requirements of these or other future regulations as a mitigation measure.

The Authority claims that it already mandates that all such equipment meet the highest emission standard codified by the U.S. Environmental Protection Agency (EPA)-Tier 4. This has had a significant positive impact on emission reductions, as 172,000 pounds of criteria air pollutants to date would have otherwise been released. This implementation strategy will go further, mandating that by 2030, 10 percent of off-road equipment be ZEV, not just Tier 4, at start of construction, and sets the goal of 100 percent ZEV for such equipment by 2035.

This is the most recent step the Authority is taking to ensure California High-Speed Rail System is the greenest infrastructure project in both operation and construction. The Authority has captured or avoided more than 180,000 tons of greenhouse gas emissions through planting more than 6,000 trees and other forest projects. The HSR System has also prevented more than 180,000 tons of construction materials from being sent to landfills with its 97 percent construction waste recycling rate.

The Authority will continue to work with contractors to encourage and mandate the use of ZE vehicles and off-road equipment. In addition, the Authority will encourage contractors to utilize available tools that will aid decision makers in their purchases of new equipment and include the use of ZE technologies in applicable bid documents, purchase orders, and contracts with contractors. For example, a current tool that the Authority has presented to contractors is Argonne National Laboratory's Alternative Fuel Life-Cycle Enviromnental and Economic Transportation (AFLEET) Tool (https://greet.es.anl.gov/afleet). This tool examines both the environmental and economic costs and benefits of alternative fuel and advanced vehicles and provides output to the user quantifying specific case scenarios based on user input (Figure 3).

Figure 3 - AFLEET Sample Output

Annual Simple Payback Calculator Output - Energy Use and Emissions

	Gasoline	Diesel	Gasoline HEV	Gasoline PHEV	Gasoline EREV	EV
Annual Well-to-Wheels Petroleum Use (bar-rels)						
Small Equipment Petroleum Use						
Large Equipment Petroleum Use						
Annual Well-to-Wheels GHGs_(short tons)						
Small Equipment GHGs						
Large Equipment GHGs						
Annual Vehicle OP.eration Air Pollutants (lb)						
Small Equipment - Commercial Turf Equipment						
CO						
NOx						
PMIO						
PM2.5						
VOC						
SOx						
Large Equipment - Forklifts						
CO						
NOx						
PMI0						
PM2.5						
VOC						
SOX						

Future Steps

The Authority will continue to pursue construction methods, materials and equipment that will reduce the generation of air pollutants. Even with these measures however, some pollution will be emitted during the construction phase. To ensure that the Burbank to Los Angeles Section of the HSR System meets all the General Conformity requirements, the following steps will be taken once construction funding is established.

- A construction schedule will be developed.
- Based on the new schedule, a construction plan will be developed and analyzed to detennine the emission burdens generated by construction.
- At the time of the analysis, the IAMFs and mitigation measures will be revisited and updated as discussed above, and in consultation with the South Coast AQMD, to include technologies and methodologies that were not considered in the earlier analysis. This review and implementation of updated measures will aid the Burbank to Los Angeles Section of the HSR System in reducing the generation of emissions due to construction.
- Once emission estimates are calculated using the revised IAMFs and mitigation measures, it will be determined if the estimates are above the applicable General Conformity *de minimis* tlu·esholds.
- The South Coast AQMD will be notified via email or letter of the emission levels and consulted to determine if emission reduction programs could be applied as needed prior to the start of construction activities for the Burbank to Los Angeles Section of the HSR System.

If emission reduction programs are required, the Authority will present a detailed plan, developed with the South Coast AQMD, to ensure that the program has in place a procedure to adequately account for and reduce emissions generated by the Burbank to Los Angeles Section of the HSR System. The emission accounting program the Authority currently uses to track emissions for the segments currently being constructed will be presented as a possible mechanism to quantify the construction emissions generated by the Burbank to Los Angeles Section of the HSR System.

Emissions Tracking and Mitigation

The Authority has stated its intent to reduce and/or mitigate construction emissions in the environmental document for the Burbank to Los Angeles Section of the HSR System in the mitigation section of the EIR/EIS with the following mitigation measure:

> **AQ-MM: Mitigate Project Construction Emissions through Off-Site Emission Reduction Programs-The** Authority will enter into contracted agreements with the South Coast AQMD to mitigate projected emissions from construction equipment and vehicle exhaust emissions of volatile organic compound (VOC), and Oxides of Nitrogen

(NOx) from constrnction activities for the Burbank to Los Angeles Section of the HSR System, based on calculations presented to the South Coast AQMD after receipt by the Authority of constrnction funding but prior to the staii of constrnction.

The Authority currently mitigates emissions in the San Joaquin Valley through a Voluntary Emission Reduction Agreement (VERA) with the San Joaquin Valley Air Pollution Control Distiict (SJVAPCD). Through the use of the Enviromnental Mitigation Management Application (EMMA) tool, developed by the Authority, construction activity is input by the contractor and , applicable emission rates are applied to calculate the emission burdens generated by off-road and on-road constrnction equipment and activity. Figure 4 highlights some of the data input and calculated through EMMA. As previously noted, actual emission burdens have been significantly lower than the burdens estimated in the con-esponding EIR/EIS.

Figure 4 - EMMA tracking tool - Sample data and Infographics

Conclusion

The Authority is committed to serving as a model of sustainable development. The HSR System was recently recognized with a Platinum Envision level award. The Platinum Envision award achieved by the Authority and its program partners demonstrates that sustainability is achievable across large-scale and complex transportation systems.

Given the documented history of the HSR System's successful implementation of emission reduction strategies that the Authority has demonstrated for sections outside the South Coast AQMD's jurisdiction, the robust emission tracking and mitigation program, along with the Authority's vision for the California High-Speed Rail System being the greenest infrastructure project in operation and construction in the country, it is the Authority's firm commitment to partner with the air district to ensure that all General Conformity requirements are met.

By signing this letter, the South Coast AQMD agrees to work with the Authority, using available mechanisms as appropriate, to reduce construction emissions and satisfy General Conformity for the Burbank to Los Angeles Section of the HSR System.

- The Authority will work with the South Coast AQMD in order to ensure that the lowest levels of construction emissions are generated through the use of IAMFs and mitigation measures outlined in this document and rolling review of best available technologies, with priority given first to the use of zero emission (ZE) technology such as electric construction equipment and then to near-zero emission (NZE) technology.

- After receipt of construction funding but prior to construction start, the Authority will review emission estimates, revise if warranted, and present a final estimate for review and use by the District for pmposes of emission reduction contiibutions and monitoring for the Burbank to Los Angeles Section.

- If emissions exceed General Conformity *de minimis* thresholds, all remaining emissions after implementation of the IAMFs and onsite mitigation measures will be completely mitigated to zero through the District's emission reduction programs. Applicable emission reduction programs may include state or federal incentive programs that achieve emissions reductions by providing incentive funds for the incremental cost of cleaner than required engines and equipment. The Authority agrees to provide funding at the cost-effectiveness level or amount established by the program(s) mutually selected by the District and the Authority.

- After receipt of construction funding but prior to construction start, the Authority and the District will enter into a contractual agreement to fully mitigate construction emissions exceedances to zero for the Burbank to Los Angeles Section, as required by General Conformity regulations, by providing funds for the selected emission reduction program(s) to fund grants for projects that achieve the necessary emission reductions.

- The Authority and the District will work together to identify opportunities and mechanisms to prioritize use of Authority funds for emission reductions local to where the construction activities for the Burbank to Los Angeles Section takes place; and, to the extent local emission reductions are unavailable, the parties will work together to develop other strategies.

- The Authority will contribute to the District's actual costs of administration for implementation of the necessary emissions reductions for the HSR Burbank to Los Angeles Section, and the District will seek and implement the necessary emission-reduction measures, using Authority funds;

- The District will serve in the role of administrator of the emission reduction projects and verifier of the successful mitigation effort; respective Authority and District responsibilities in that effort and related emission quantification/verification needs will be defined in a contractual agreement.

- The commitments in this letter are independent of any requirements related to any future District facility-based mobile source measure regulating freight rail yards or other, similar non-zero emission rail operations.

- The contractual agreement developed pursuant to this letter will be limited to the HSR System's Burbank to Los Angeles Section general conformity determination.

Thank you for your continuing partnership with the Authority to advance the California High-Speed Rail System.

Ben Benoit, Chair

South Coast AQMD

Date: November 17, 2021

Brian Kelly, CEO

California High Speed Rail Authority

Date: November 9, 2021

APPROVED AS TO FORM

BAYRON T. GILCHRIST, GENERAL COUNSEL

By: Vera Tycoy

Date: 11/12/2021

APPENDIX F: U.S. FISH AND WILDLIFE SERVICE DETERMINATION, APRIL 12, 2021

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United States Department of the Interior
U.S. FISH AND WILDLIFE SERVICE
Ecological Services
Carlsbad Fish and Wildlife Office
2177 Salk Avenue, Suite 250
Carlsbad, California 92008

In Reply Refer to:
FWS-LA-17B0380-21I0716

April 12, 2021
Sent Electronically

Serge Stanich
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California High Speed Rail Authority
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U. S. Army Corps of Engineers – Los Angeles District
915 Wilshire Blvd.
Los Angeles, California 90017

Subject: Informal Section 7 Consultation for the California High Speed Rail Burbank to Los Angeles Section, Los Angeles County, California

Dear Mark McLoughlin and David Castanon:

This is in response to your April 3, 2020, letter requesting our concurrence with your determination that the subject project is not likely to adversely affect the federally endangered least Bell's vireo (*Vireo bellii pusillus*; vireo) in accordance with section 7 of the Endangered Species Act of 1973 (Act), as amended (16 U.S.C. 1531 *et seq*.). The California High Speed Rail Authority (Authority or applicant) has assumed the Federal Railroad Administration's (FRA) responsibilities under the Act for this consultation in accordance with Section 1313, Surface Transportation Project Delivery Program, of the Moving Ahead for Progress in the 21st Century Act (MAP-21) of 2012, as described in the National Environmental Policy Act (NEPA) assignment Memorandum of Understanding between FRA and the State of California (effective July 23, 2019) and codified in 23 U.S.C. 327. We initiated consultation on November 10, 2020, the day we received the revised Biological Assessment. Additional information on the noise effects of the project was provided in March of 2021.

Project Description

The project will construct the approximately 14 mile Burbank to Los Angeles section of the proposed 800 mile California high speed rail (HSR) system, with electric propulsion and steel-wheel-on-steel-rail trains capable of operating speeds up to 220 miles per hour on a dedicated system of fully grade-separated, access-controlled steel tracks. The action area is located within a narrow and constrained urban environment partially adjacent to the Los Angeles River, with a crossing on the existing Downey Bridge. The project will construct new and

upgraded track, maintenance facilities, grade separations, drainage improvements, communications towers, security fencing, passenger train stations, and HSR stations located near Hollywood Burbank Airport and at Los Angeles Union Station (Figure 1; CHSRA 2020).

The project will not result in the removal of any naturally occurring riparian habitat; however, some planted riparian trees will be trimmed within mixed ornamental habitat at Rio de Los Angeles State Park, and riparian habitat suitable for vireo nesting, dispersal, and foraging is present adjacent to the project footprint at this location (Figure 2). There is an eBird record for vireos that were presumed to be nesting at Rio de Los Angeles State Park within habitat adjacent to the action area in 2020 (15 sightings between March 28, 2020, and June 10, 2020; eBird 2020). In addition, during a conference call on August 4, 2020, project biologists stated that they had documented the territories of two male vireos within the riparian plantings at Rio Los Angeles State Park during a survey on June 19, 2020. Habitat suitable for vireo is also present adjacent to the project footprint along the Los Angeles River at Oros Street, and vireos were observed at this location in 2016 (Figure 3; CHSRA 2020; eBird 2020).

There is potential for the project to result in construction disturbance to nesting vireos. Construction is scheduled to commence sometime after the Authority approves the Final Environmental Impact Report/Environmental Impact Statement and the Record of Decision, and be completed by August of 2028. Project construction may extend over 4 breeding seasons within this timeframe (CHSRA 2020).

There is potential for the project to result in operational disturbance to nesting vireos. The Burbank to Los Angeles Section of the High Speed Rail project is under speed restrictions and will operate at speeds up to 125 miles per hour, which will generate noise levels of approximately 100 dBA at 30 feet (single event noise level), for 196 trains per day, including 174 trains per day during the daytime hours (7 a.m. to 10 p.m.), 22 trains per day during the nighttime hours (10 p.m. to 7 a.m.), and 15 trains during the peak hour.

Conservation Measures

The applicant has agreed to implement avoidance and minimization measures in association with the project (Appendix). We consider the measures in the Appendix to be part of the action, and our analysis assumes they will be implemented.

Baseline Conditions

The action area is located within a narrow and constrained urban environment, partially adjacent to the Los Angeles River. Riparian habitat suitable for vireo nesting, dispersal, and foraging is present adjacent to the action area at Rio de Los Angeles State Park and along the Los Angeles River at Oros Street (Figures 2 and 3, CHSRA 2020). Vireos were observed within suitable habitat at Rio de Los Angeles State Park in 2020 and at Oros Street in 2016 (CHSRA 2020; eBird 2020). In addition, project biologists documented the territories of two male vireos within the riparian plantings at Rio de Los Angeles State Park during a survey on June 19, 2020.

Effects Analysis

The project will not result in the removal of any naturally occurring riparian habitat; however, some planted riparian trees within mixed ornamental habitat at Rio de Los Angeles State Park will be trimmed. These trees may be used for vireo foraging but lack low-growing understory vegetation, making them unsuitable for vireo nesting. Riparian habitat suitable for vireo nesting is present approximately 160 feet from the project footprint at Rio de Los Angeles State Park and approximately 250 feet from the project footprint within the Los Angeles River at Oros Street.

Permanent impacts to vireo habitat are limited to minimal trimming of foraging habitat consisting of planted riparian trees within mixed ornamental habitat (up to 0.68 acre) in a narrow band along the existing railroad west of Rio de Los Angeles State Park. This trimming represents only a small portion of any vireo territories located east and adjacent to the existing railroad tracks and project footprint and is not anticipated to result in an appreciable impact to vireos within the area. As described in more detail below, with incorporation of the conservation measures, potential impacts to vireo breeding, feeding, and sheltering will be minimized to the point where such effects are insignificant.[1]

There is potential for the project to result in construction disturbance to vireos. Construction is scheduled to commence sometime after the Authority approves the Final Environmental Impact Report/Environmental Impact Statement and the Record of Decision and be completed prior to August of 2028. Project construction may extend over 4 breeding seasons within this timeframe (CHSRA 2020).

Noise and vibration associated with project construction has the potential to disrupt vireo breeding, foraging, and sheltering behaviors in adjacent habitat by masking intraspecific communication and startling birds (e.g., see Dooling and Popper 2007 for a discussion of observed effects of highway noise on birds). However, vireos at this location are adjacent to an existing railroad, so they are already exposed to high noise and activity levels. The approximate hourly range of existing noise levels at the documented vireo occurrences is 63-73 dBA Leq (CHSRA 2020). It is anticipated that project construction activities will result in temporary noise levels that considerably exceed the current ambient noise levels.

Conservation measures have been incorporated into the project to minimize construction noise disturbance to vireos. The Authority will schedule construction activities in proximity to vireo habitat at Rio de Los Angeles State Park and along the Los Angeles River at Oros Street between September 1 and March 14, to avoid the vireo breeding season to the greatest extent practicable. If some construction work must be conducted in proximity to vireo habitat during the breeding season, vireo surveys will be conducted in accordance with CM-LBVI-1. If vireo nesting behavior is observed during surveys, noise monitoring will be implemented during the vireo breeding season to ensure that elevated construction noise levels are attenuated at the edge of vireo occupied habitat to a level not to exceed an hourly average of 3 dBA above existing ambient

[1] For the purposes of a section 7 consultation, an insignificant effect is one that is sufficiently small that a person would not be able to meaningfully measure, detect, or evaluate it.

levels at the edge of vireo occupied habitat. Therefore, the approximate hourly range of noise levels within vireo occupied habitat during project construction is anticipated to be 66-76 dBA Leq (CM-LBVI-2). If project construction noise will exceed these limitations, then the construction activities producing the high noise levels will be delayed until after the vireo nesting season, or the Authority will reinitiate consultation with the Service to address unanticipated impacts to the species. In addition, construction activities will be limited to daylight hours during the vireo breeding season (CM-LBVI-2).

Noise and vibration associated with project operations also has the potential to disrupt vireo breeding, foraging, and sheltering behaviors in adjacent habitat by masking intraspecific communication and startling birds (e.g., see Dooling and Popper 2007 for a discussion of observed effects of highway noise on birds). The shift in existing rail tracks proposed under the HSR Build Alternative will increase noise levels approximately 2 dBA (daily and peak hour) within the western portion of Rio de Los Angeles State Park compared to the existing measured conditions. The additional HSR operations will add another 1 to 1.5 dBA, for an overall combined operational noise increase of approximately 3.5-4 dBA at the closest documented least Bell's vireo occurrence along the proposed alignment. Therefore, during project operations the approximate hourly range of noise levels at the documented vireo occurrences is anticipated to be 67-77 dBA (Leq). At Rio de Los Angeles State Park, where the closest documented occurrences of vireos are located, the design speed for the project is 50 miles per hour, and the maximum noise level at a distance of 160 feet, where vireo nesting habitat is located, will be approximately 76.6 dBA (L_{MAX}). Vireos at this location are adjacent to an existing train track and they are already exposed to high noise and activity levels. They are unlikely to be substantially disrupted by this small increase in operational noise levels.

Construction and operational lighting have the potential to affect vireos within the adjacent habitat. Light that alters natural light patterns in ecosystems can lead to increased predation, disorientation, and disruption of inter-specific interactions (Longcore and Rich 2004). The project is located within an urban area by an existing railroad track, so adjacent habitat is already exposed to increased lighting. To avoid construction lighting impacts to vireos, construction activities in proximity to vireo habitat will be limited to daylight hours during the vireo breeding season (CM-LBVI-2).

Measures have been incorporated into the project to minimize operational lighting impacts to vireos, including use of facility lighting that does not attract birds or their prey to project sites. These include using non-steady burning lights (red, dual red-and-white strobe, strobe-like flashing lights) to meet Federal Aviation Administration requirements, using motion or heat sensors and switches to reduce the time when lights are illuminated, using appropriate shielding to reduce horizontal or skyward illumination, and avoiding the use of high-intensity lights (e.g., sodium vapor, quartz, and halogen). In addition, lighting will not be installed under viaduct and bridge structures in riparian habitat areas (CM-GEN-12).

The project has also incorporated measures (Appendix) to prevent the introduction and spread of invasive species (CM-GEN-10, CM-BIO-55), and to minimize construction dust (CM-AQ-1), erosion (CM-GEN-11, CM-HYD-1, CM-HYD-3), sedimentation (CM-GEN-11, CM-HYD-1,

CM-HYD-3), pollution (CM-HYD-1, CM-HYD-3) and human encroachment (CM-GEN-5) into the adjacent habitat. With the proposed measures, any increase in habitat degradation associated with these factors is likely to be insignificant.

Conclusion

Based on the information provided and the conservation measures that have been incorporated into the project description, we concur with your determination that the project is not likely to adversely affect vireo. Therefore, the interagency consultation requirements of section 7 of the Act have been satisfied. Although our concurrence ends informal consultation, obligations under section 7 of the Act will be reconsidered if new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not previously considered or this action is subsequently modified in a manner that was not considered in this assessment.

If you have any questions regarding this letter, please contact Sally Brown[2] of this office at 760-431-9440, extension 278.

Sincerely,

JONATHAN SNYDER

Digitally signed by JONATHAN SNYDER
Date: 2021.04.12 11:33:55 -07'00'

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Source: California High-Speed Rail Authority, 2019

Figure 2-1 Overview of Burbank to Los Angeles Project Section

Figure 1. High Speed Rail Burbank to Los Angeles Project Section (Source: CHSRA 2020).

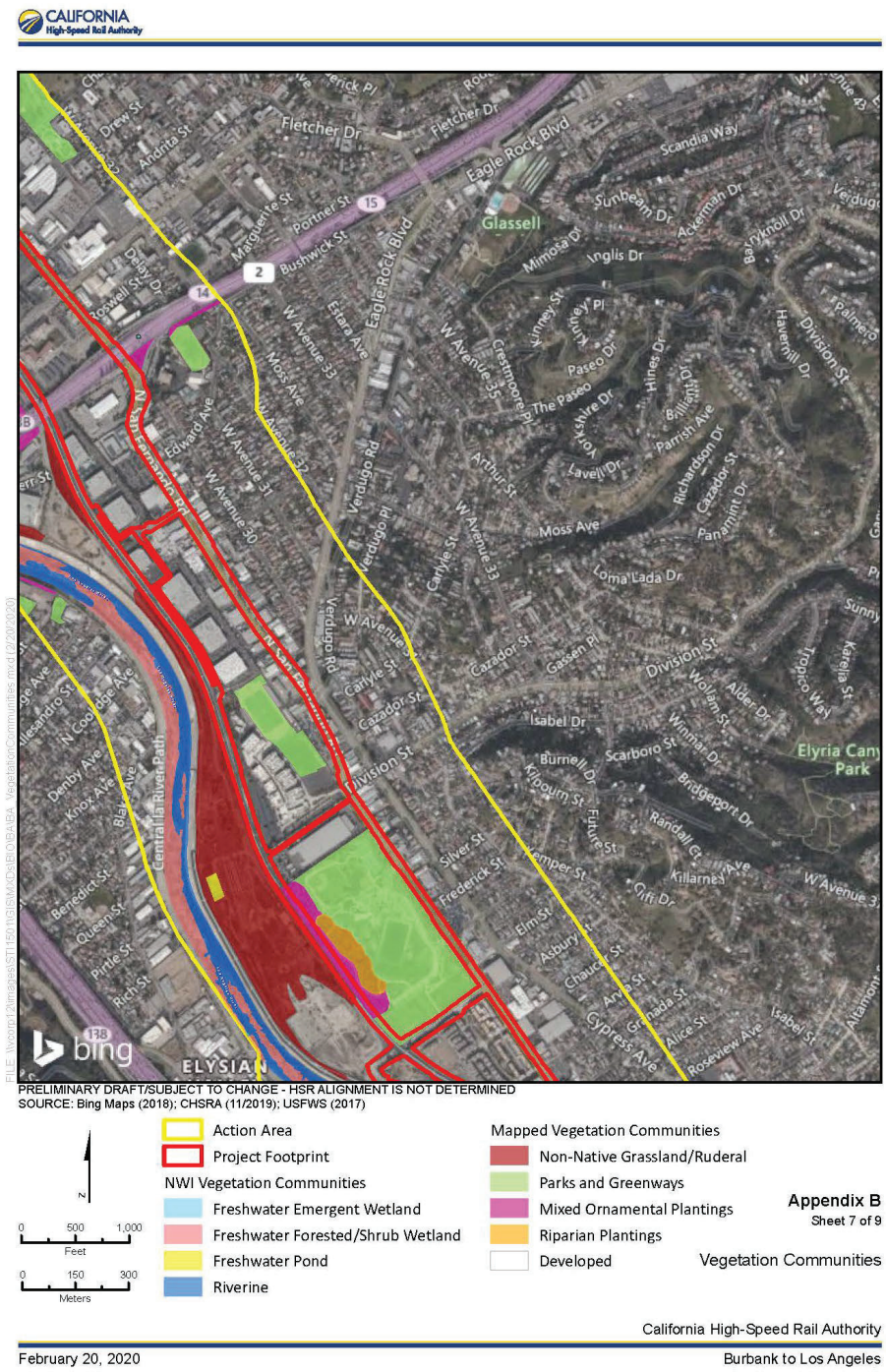

Figure 2. Vireo habitat by Rio de Los Angeles State Park, vireos were observed in the patch of Mixed Ornamental and Riparian Plantings at the bottom center of the figure in 2020 (Source: CHSRA 2020).

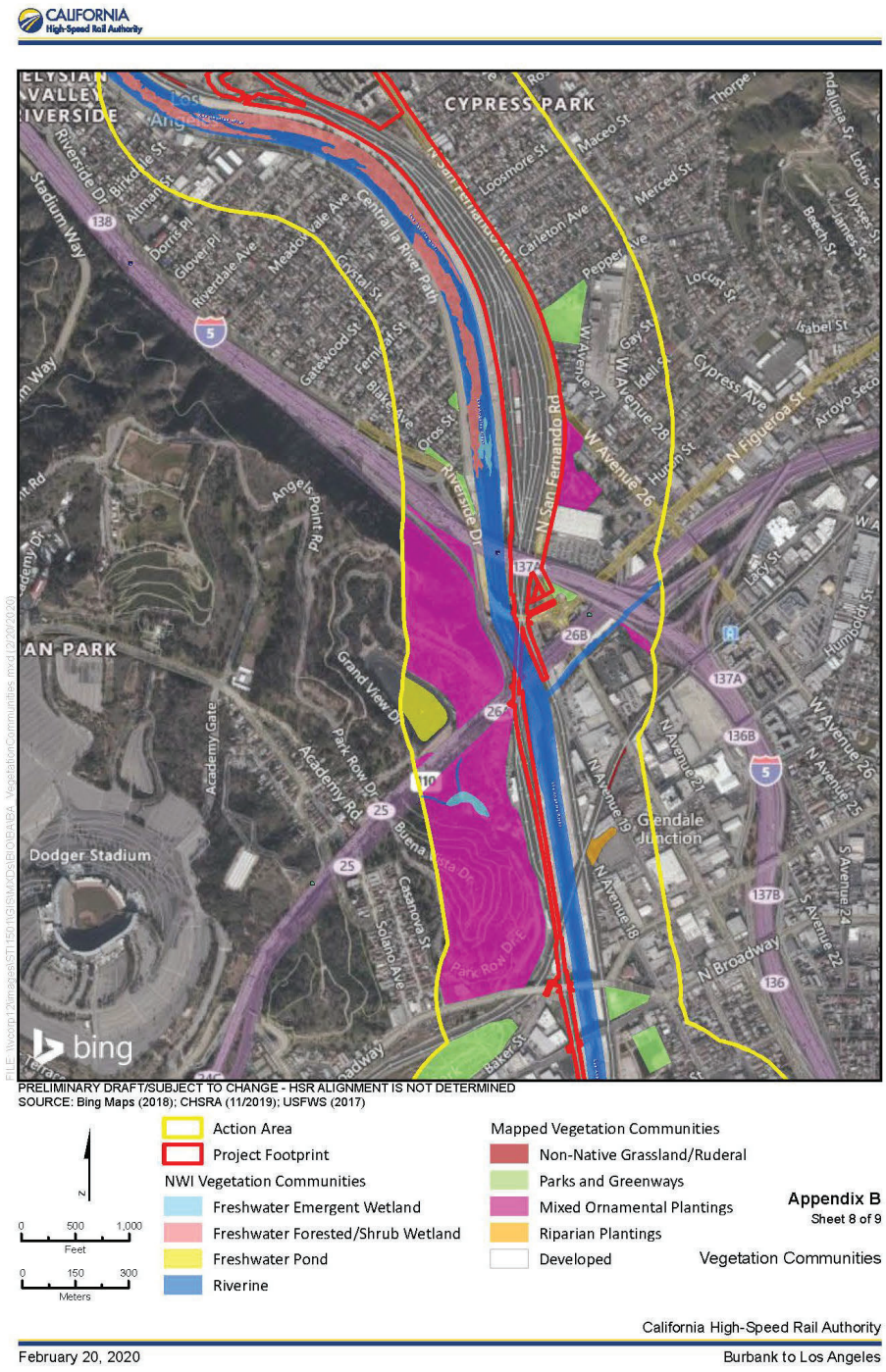

Figure 3. Vireo habitat along the Los Angeles River by Oros Street (Source: CHSRA 2020).

APPENDIX

Conservation Measures for the California High Speed Rail Burbank to Los Angeles Section, Los Angeles County, California[3]

The applicant has agreed to implement the following avoidance and minimization measures in association with the project (CHSRA 2020) to avoid and minimize impacts to United States Fish and Wildlife Service (Service, USFWS) trust resources. We consider these measures to be part of the action, and our analysis assumes they will be implemented.

CM-GEN-1: Qualified Biologists, and Biological Monitors

At least 15 days prior to the onset of ground disturbing activities, including but not limited to geotechnical investigations, utility realignments, creation of staging areas, or initial clearing and grubbing, the Authority will submit, for approval and review by the Service, the name(s), contact information, and relevant qualifications and experience of Project Biologists, Designated Biologists, and Species-Specific Biological Monitors who will conduct activities specified in the conservation measures. No ground-disturbing activities will begin until the Authority has received approval from the Service that the Project Biologists, Designated Biologists, and Species-Specific Biological Monitors are approved to do the work. The selection of General Biological Monitors by the Authority does not require approval by the Service. The roles of Project Biologists, Designated Biologists, and Species-Specific and General Biological Monitors will be as follows:

a. Project Biologist(s). The Project Biologist (inclusive of the term mitigation manager also) will be responsible for the overall implementation of the conservation measures, the scheduling and work of Designated Biologists, Species-Specific and General Biological Monitors, and overall compliance reporting.

b. Designated Biologist(s). Designated Biologists and Designated Botanists (also referred to as contractor's biologist) will be responsible for directly overseeing and reporting the implementation of general and species-specific conservation measures. In some instances, Designated Biologists will only be approved for specific species, in which case they will only be authorized to conduct surveys and implement measures for the species for which they have been approved. The Designated Biologists will have support from Species-Specific and General Biological Monitors. Designated Biologists will submit memoranda and reports to document compliance will conservation measures. In addition, Designated Biologists can also perform the duties of the General Biological Monitor.

c. Species-Specific Biological Monitor(s). Species-Specific Biological Monitor(s) will be responsible for implementation of species-specific measures and will report directly to a Designated Biologist. In addition, Species-Specific Biological Monitors can also perform the duties of the General Biological Monitor.

[3] Many of these measures were included in the Environmental Impact Statement for the proposed project, so they address habitats and biological resources in addition to federally listed species.

d. General Biological Monitor(s). General Biological Monitors will report directly to a Designated Biologist or to the Project Biologist. General Biological Monitors will be responsible for conducting Worker Environmental Awareness Program (WEAP) training, implementing general conservation measures, except where specified that a specific individual with specific qualifications (such as Project or Designated Biologist) must implement them, conducting general compliance monitoring, and reporting on compliance monitoring activities. If any potentially federally-listed species is observed in the construction footprint, the General Biological Monitor will have the authority to halt work as soon as practicable (as described below in *CM-GEN-13: Work Stoppage*) and contact an appropriate Designated Biologist. Work will not resume until the individual leaves the work area, or until a Designated Biologist implements the appropriate species-specific conservation measures or determines that it is not a federally-listed species.

No ground-disturbing project activities (e.g., geotechnical investigations, utility realignments, creation of staging areas, or initial clearing and grubbing) will begin until proponents have received written approval from the Service that the biologists and biological monitors are approved to conduct the work. This approval will be provided in 15 (calendar) days except under unusual or extraordinary cases.

CM-GEN-2: Regulatory Agency Access

If requested before, during, or upon completion of construction activities, the Authority or its designee will allow access by the Service or other resource agency staff to project lands (including mitigation lands) where these lands are under permittee control, with 24-hour notice. To address any safety issues, all visitors will check in with the resident engineer prior to accessing the construction site. The Service will report any noncompliance issues to the Authority within 24 hours.

CM-GEN-3: Prepare and Implement a Worker Environmental Awareness Program

A Worker Environmental Awareness Program (WEAP) will be developed[4] and trainings and training updates conducted by designated biologists or general biological monitors as described below:

a. Develop a Worker Environmental Awareness Program. WEAP training materials will include the following: discussion of the Act and other applicable laws and regulations; consequences and penalties for noncompliance with these laws and regulations and project permits; identification and value of special-status plants, special-status wildlife, jurisdictional waters, and special-status plant communities; the contact person in the event of the discovery of a dead or injured wildlife species; and conservation measures including the location of planned minimization and avoidance measures.

[4] A copy of the WEAP will be provided to the Service (CFWO) to document compliance with conservation measures.

b. Training materials will include a fact sheet handout or wallet-sized card conveying this information to be distributed to all participants in WEAP training sessions.

c. Conduct Worker Environmental Awareness Training for Contractor Personnel. Prior to working on project lands, construction contractor personnel who work onsite will attend a WEAP training session. Upon completion of the WEAP training, construction crews will sign a form stating that they attended the training and understood and will comply with the information presented.

d. Provide Worker Environmental Awareness Training Updates to Contractor Personnel. Updates and a synopsis of the training will be provided during the daily safety ("tailgate") meeting. Maintenance crews will be required to attend a contractor education and environmental training class annually.

CM-GEN-4: Conduct Operation and Maintenance Period WEAP Training

Prior to initiating operation and maintenance (O&M) activities, O&M personnel will attend a WEAP training session arranged by the Authority.

At a minimum, O&M WEAP training materials will include the following information: key provisions of the BRESA, California Endangered Species Act (CESA), the Bald and Golden Eagle Protection Act (BGEPA), the Migratory Bird Treaty Act (MBTA), the Porter-Cologne Water Quality Control Act, and the Clean Water Act (CWA); the consequences and penalties for violation or noncompliance with these laws and regulations and project authorizations; identification and characteristics of special-status plants, special-status wildlife, jurisdictional waters, and special-status plant communities and explanations about their ecological value; hazardous substance spill prevention and containment measures; and the contact person in the event of the discovery of a dead or injured wildlife species. The training will include an overview of provisions of the biological resources management plan, annual vegetation, and management plan, weed control plan and security fencing and wildlife exclusion fencing maintenance plans pertinent to O&M activities. A fact sheet prepared by the Authority environmental compliance staff will be prepared for distribution to the O&M employees. The training will be provided by the Authority environmental compliance staff. The training sessions will be provided to employees prior to their involvement in any O&M activity and will be repeated for all O&M employees on an annual basis. Upon completion of the WEAP training, O&M employees will, in writing, verify their attendance at the training sessions and confirm their willingness to comply with the requirements set out in those sessions.

CM-GEN-5: Prepare and Implement a Biological Resources Management Plan

Prior to any ground-disturbing activity, the Project Biologist will prepare the Biological Resources Management Plan (BRMP),[5] which would include a compilation of the biological resources avoidance and minimization measures applicable to the HSR section. All project environmental plans, such as the Weed Control Plan (WCP), will be included as appendices to

[5] A copy of the BRMP will be provided to the Service (CFWO) to document compliance with CMs. Vireo habitat adjacent to the project will be designated as an Environmentally Sensitive Area and protected with fencing.

the BRMP. The BRMP is intended to serve as a comprehensive document that sets out the range of avoidance and minimization measures to support the appropriate and timely implementation of those measures. The implementation of these measures will be tracked through final design, construction, and operation phases. The BRMP for the Burbank to Los Angeles Project Section will contain, but not be limited to, the following information:

a. A master schedule that shows construction of the project, pre-construction surveys, and establishment of buffers and exclusions zones to protect sensitive biological resources.

b. Specific measures for the protection of special-status species.

c. Identification (on construction plans) of the locations and quantity of habitats to be avoided or removed.

d. Identification of agency-approved Project Biologist(s) and Biological Monitor(s), including those responsible for notification and report of injury or death of federally or state-listed species.

e. Measures to preserve topsoil and control erosion.

f. Design of protective fencing around Environmentally Sensitive Areas and the construction staging areas.

g. Locations of trees to be protected as wildlife habitat (roosting sites) and locations for planting replacement trees, where applicable.

h. Specific measures for the protection of riparian areas. These measures may include erosion and siltation control measures, protective fencing guidelines, dust control measures, grading techniques, construction area limits, and biological monitoring requirements.

i. Provisions for biological monitoring during ground disturbing activities to confirm compliance and success of protective measures. The monitoring will: (i) identify specific locations of wildlife habitat and sensitive species to be monitored; (ii) identify the frequency of monitoring and the monitoring methods (for each habitat and sensitive species to be monitored); (iii) list required qualifications of biological monitor(s); (iv) identify the reporting requirements; and (5) provide an accounting of impacts to special-status species habitat compared to preconstruction impact estimates.

The BRMP will be submitted to the Authority for review and approval prior to any ground disturbing activity.

CM-GEN-6: Monofilament Restrictions

During construction activities, the general biological monitor(s) will verify that the Contractor is not using plastic monofilament netting (erosion-control matting) or similar material in erosion control materials. Non-monofilament substitutes, including coconut coir matting, tackified

hydroseeding compounds, rice straw wattles and reusable erosion, sediment, and wildlife control systems that have been approved by the regulatory agencies may be used.

CM-GEN-7: Avoidance of Entrapment

At the beginning and end of each work day, all excavated, steep-walled holes or trenches that are more than 8 inches deep with sidewalls steeper than a 1:1 (45 degree) slope will be covered at the close of each day with plywood or similar materials, or provided a minimum of one escape ramp constructed of fill earth per 10 feet of trenching. Before such holes or trenches are filled they will be thoroughly inspected for trapped wildlife by the general biological monitor(s). All culverts, pipes, or similar structures with a diameter of 3 inches or greater that are stored at a construction site will be inspected for wildlife before the pipe is subsequently used or moved.

CM-GEN-8: Delineate Equipment Staging Areas and Traffic Routes

Prior to any ground-disturbing activity, the Authority will establish staging areas for construction equipment in areas that minimize effects to sensitive biological resources, including habitat for special-status species and wildlife movement corridors. Staging areas (including any temporary material storage areas) will be located in areas that would be occupied by permanent facilities, where practicable, and will be located at least 100 feet away from riparian habitat. Equipment staging areas will be identified on final project construction plans, which will be provided to USFWS prior to staging areas being used. The Authority will flag and mark access routes to ensure that vehicle traffic within the project footprint is restricted to established roads, construction areas and other designated areas.

CM-GEN-9: Offsite Disposal of Materials

The contractor will dispose of waste materials associated with construction, including soil materials unsuitable for reuse, in local landfills permitted to take these types of materials, and in conformance with the Act.

CM-GEN-10: Clean Construction Equipment

Prior to any ground-disturbing activity, the Authority will ensure that all equipment entering the work area is free of mud and plant materials. The Authority will establish vehicle cleaning locations designed to isolate and contain organic materials and minimize opportunities for weeds and invasive species to move in and out of the project footprint. Cleaning may be done by washing with water, blowing with compressed air, brushing, or other hand cleaning. The cleaning areas will be located so as to avoid impacts to surface waters and appropriate Stormwater Pollution Prevention Plan (SWPPP) best management practices (BMP) will be implemented so as to further control any potential for the spread of weeds or other invasive species. Cleaning stations will be inspected regularly (at least monthly).

CM-GEN-11: Maintain Construction Sites

Prior to any ground-disturbing activity, the Authority will prepare a construction site BMP field manual. The manual will contain standard construction site housekeeping practices required to be

implemented by construction personnel. The manual will identify BMPs for the following topics: temporary soil stabilization, temporary sediment control, wind erosion control, non-stormwater management, waste management and materials control, rodenticide use, and other general construction site cleanliness measures.[6]

All construction personnel will receive training on BMP field manual implementation prior to working within the project footprint. All personnel will acknowledge, in writing, their understanding of the BMP field manual implementation requirements. The BMP field manual will be updated by January 31 of each year. The Authority will provide, on an annual basis, training updates to all construction personnel.

CM-GEN-12: Design the Project to be Bird Safe

Prior to final construction design, the Authority will ensure[7] that the catenary system, masts, and other structures such as fencing, electric lines, communication towers and facilities are designed to be bird and raptor-safe in accordance with the applicable recommendations presented in Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 2006 (APLIC 2006) and Reducing Avian Collisions with Power Lines: State of the Art in 2012 (APLIC 2012). Applicable Avian Power Line Interaction Committee recommendations include, but are not limited to:

a. Ensuring sufficient spacing of phase conductors to prevent bird electrocution.

b. Configuring lines to reduce vertical spread of lines and/or decreasing the span length if such options are feasible.

c. Marking lines and fences (e.g. Bird Flight Diverter for fencing and lines) to increase the visibility of lines and reduce the potential for collision. Where fencing is necessary, using bird compatible design standards to increase visibility of fences to prevent collision and entanglement.

d. Installing perch guards to discourage avian presence on and near project facilities.

e. Minimizing the use of guywires. Where the use of guywires is unavoidable, demarcating guywires using the best available methods to minimize avian strikes (e.g. line markers).

f. Reusing or co-locating new transmission facilities and other ancillary facilities with existing facilities and disturbed areas to minimize habitat impacts and avoid collision risks.

g. Structures will be monopole or dual-pole design versus lattice tower design to minimize perching and nesting opportunities. Communication towers will conform to Recommended Best Practices for Communication Tower Design, Siting, Construction, Operation, Maintenance, and Decommissioning (Service 2018).

[6] These measures will include cleaning up trash daily to avoid attracting vireo predators to the site.
[7] Documentation of this review by a Project Biologist familiar with the biology and ecology of the vireo and the habitats that support this species will be provided to the Service (CFWO) to document compliance with CMs.

h. Use of facility lighting that does not attract birds or their prey to project sites. These include using non-steady burning lights (red, dual red-and-white strobe, strobe-like flashing lights) to meet Federal Aviation Administration requirements, using motion or heat sensors and switches to reduce the time when lights are illuminated, using appropriate shielding to reduce horizontal or skyward illumination, and avoiding the use of high-intensity lights (e.g., sodium vapor, quartz, and halogen). Lighting will not be installed under viaduct and bridge structures in riparian habitat areas.

CM-GEN-13: Work Stoppage

In the event that any special-status wildlife species is found in a work area, the project biologist will have the authority to halt work to prevent the death or injury to the species. Any such work stoppage will be limited to the area necessary to protect the species and work may be resumed once the project biologist determines that the individuals of the species have moved out of harm's way or the project biologist has relocated them out of the work area.

If any fully protected or FESA/CESA-listed species are observed within the work area at any time, work will not occur in the occupied area until appropriate measures to avoid or reduce take of any listed wildlife species are established through consultation with the USFWS and/or the California Department of Fish and Wildlife (CDFW).

Any such work stoppages and the measures taken to facilitate the removal[8] of the species, if any, will be documented in a memorandum prepared by the project biologist and submitted to the Authority within 2 business days of the work stoppage.

CM-AQ-1: Fugitive Dust Emissions

During construction, the Contractor shall employ the following measures to minimize and control fugitive dust emissions. The Contractor shall prepare a fugitive dust control plan for each distinct construction segment. At a minimum, the plan shall describe how each measure would be employed and identify an individual responsible for ensuring implementation. At a minimum, the plan shall address the following components unless alternative measures are approved by the applicable air quality management district.

a. Cover all vehicle loads transported on public roads to limit visible dust emissions, and maintain at least 6 inches of freeboard space from the top of the container or truck bed.

b. Clean all trucks and equipment before exiting the construction site using an appropriate cleaning station that does not allow runoff to leave the site or mud to be carried on tires off the site.

c. Water exposed surfaces and unpaved roads at a minimum three times daily with adequate volume to result in wetting of the top 1 inch of soil but avoiding overland

[8] This consultation does not authorize take of vireos, if they are present in the project footprint the Authority will stop work and reinitiate section 7 consultation to address unanticipated impacts to the species.

flow. Rain events may result in adequate wetting of top 1 inch of soil thereby alleviating the need to manually apply water.

d. Limit vehicle travel speed on unpaved roads to 15 miles per hour (mph).

e. Suspend any dust-generating activities when average wind speed exceeds 25 mph.

f. Stabilize all disturbed areas, including storage piles that are not being used on a daily basis for construction purposes, by using water, a chemical stabilizer/suppressant, hydro mulch or by covering with a tarp or other suitable cover or vegetative ground cover, to control fugitive dust emissions effectively. In areas adjacent to organic farms, the Authority would use nonchemical means of dust suppression.

g. Stabilize all on-site unpaved roads and off-site unpaved access roads, using water or a chemical stabilizer/suppressant, to effectively control fugitive dust emissions. In areas adjacent to organic farms, the Authority would use non-chemical means of dust suppression.

h. Carry out watering or presoaking for all land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and demolition activities.

i. For buildings up to six stories in height, wet all exterior surfaces of buildings during demolition.

j. Limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets a minimum of once per day, using a vacuum-type sweeper. After the addition of materials to or the removal of materials from surface or outdoor storage piles, apply sufficient water or a chemical stabilizer/suppressant.

CM-BIO-55: Prepare and Implement a Weed Control Plan

Prior to any ground-disturbing activity during the construction phase, the project biologist will develop a weed control plan[9] (WCP), subject to review and approval by the Authority. The purpose of the WCP is to establish approaches to minimize and avoid the spread of invasive weeds during ground-disturbing activities during construction and operations and maintenance. The WCP will include, at a minimum, the following:

a. A requirement to delineate Environmentally Sensitive Areas in the field prior to weed control activities.

b. A schedule for weed surveys to be conducted in coordination with the Biological Resources Management Plan.

[9] A copy of the WCP will be provided to the Service (CFWO) to document compliance with CMs. The WCP will specify that weed control will be conducted monthly at a minimum throughout the project footprint for the duration of project construction.

c. Success criteria for invasive weed control. The success criteria would be linked to the Biological Resources Management Plan standards for on-site work during ground-disturbing activities. In particular, the criteria would establish limits on the introduction and spread of invasive species, as defined by the California Invasive Plant Council, to less than or equal to the pre-disturbance conditions in the area temporarily affected by ground-disturbing activities. If invasive species cover is found to exceed pre-disturbance conditions by greater than 10 percent or is 10 percent greater than levels at a similar, nearby reference site, a control effort will be implemented. If the target, or other success criteria identified in the WCP, has not been met by the end of the WCP monitoring and implementation period, the Authority will continue the monitoring and control efforts, and remedial actions will be identified and implemented until the success criteria are met.

d. Identification of weed control treatments, including permitted herbicides and manual and mechanical removal methods.

e. Timeframes for weed control treatment for each plant species.

f. Identification of fire prevention measures.

CM-BIO-56: Conduct Monitoring of Construction Activities

During any initial ground-disturbing activity, the Project Biologist will be present in the work area to verify compliance with avoidance and minimization measures.

CM-BIO-61: Establish and Implement a Compliance Reporting Program

The project biologist will prepare monthly and annual reports documenting compliance with all Impact Avoidance and Minimization Features/Conservation Measures (IAMFs/CMs), mitigation measures, and requirements set forth in regulatory agency authorizations. The Authority will review and approve all compliance reports prior to submittal to the regulatory agencies.[10] Reports will be prepared in compliance with the content requirements outlined in the regulatory agency authorizations. Pre-activity survey reports will be submitted within 15 days of completing the surveys and will include:

a. Location(s) of where pre-activity surveys were completed, including latitude and longitude, Assessor Parcel Number, and HSR parcel number.

b. Written description of the surveyed area. A figure of each surveyed location will be provided that depicts the surveyed area and survey buffers over an aerial image.

c. Date, time, and weather conditions observed at each location.

d. Personnel who conducted the pre-activity surveys.

[10] The Authority will submit monthly and annual reports to the Service (CFWO) within 15 calendar days of receipt.

e. Verification of the accuracy of the Authority's habitat mapping at each location, provided in writing and on a figure.

f. Observations made during the survey, including the type and locations (written and GIS) of any sensitive resources detected.

g. Identification of relevant measures from the Biological Resources Management Plan to be implemented as a result of the survey observations.

Daily compliance reports will be submitted to the Authority via Environmental Mitigation Management and Assessment (EMMA) within 24 hours of each monitoring day. Noncompliance events will be reported to the Authority the day of the occurrence. Daily compliance reports will include:

a. Date, time, and weather conditions observed at each location where monitoring occurred.

b. Personnel who conducted compliance monitoring.

c. Project activities monitored, including construction equipment in use.

d. Compliance conditions implemented successfully.

e. Noncompliance events observed.

Daily compliance reports will also be included in the monthly compliance reports, which will be submitted to the Authority by the 10th of each month and will include:

a. Summary of construction activities and locations during the reporting month, including any noncompliance events and their resolution, work stoppages, and take of threatened or endangered species.

b. Summary of anticipated project activities and work areas for the upcoming month.

c. Tracking of impacts on suitable habitats for each threatened and endangered species identified in USFWS and CDFW authorizations, including:

    i. An accounting of the number of acres of habitats for which the Authority provides compensatory mitigation that has been disturbed during the reporting month, and

    ii. An accounting of the cumulative total number of acres of threatened and endangered species habitat that has been disturbed during the project period.

d. Up-to-date GIS layers, associated metadata, and photo documentation used to track acreages disturbed.

e. Copies of all pre-activity survey reports, daily compliance reports, and noncompliance/work stoppage reports for the reporting month.

Annual reports will be submitted to the Authority by January 20 and will include:

a. Summary of all monthly compliance reports for the reporting year.

b. A general description of the status of the project, including projected completion dates.

c. All available information about project-related incidental take of threatened and endangered species.

d. Information about other project impacts on the threatened and endangered species.

e. A summary of findings from pre-construction surveys (e.g., number of times a threatened or endangered species or a den, burrow, or nest was encountered, location, if avoidance was achieved, if not, what other measures were implemented).

f. Written description of disturbances to threatened and endangered species habitat within work areas, both for the preceding 12 months and in total since issuance of regulatory authorizations by USFWS and CDFW, and updated maps of all land disturbances and updated maps of identified habitat features suitable for threatened and endangered species within the project area.

In addition to the compliance reporting requirements outlined above, the following items will be provided for compliance documentation purposes:

a. If agency personnel visit the project footprint in accordance with *CM-GEN-2*, the project biologist will prepare a memorandum within 1 day of the visit that memorializes the issues raised during the field meeting. This memorandum will be submitted to the Authority via EMMA. Any issues regarding regulatory compliance raised by agency personnel will be reported to the Authority and the contractor.

b. Compliance reporting will be submitted to the Authority via EMMA in accordance with the report schedule. The project biologist will prepare and submit compliance reports that document the following:

    i. Compliance with *CM-GEN-6: Monofilament Restrictions*.

    ii. Compliance with *CM-GEN-7: Prevent Entrapment in Construction Materials and Excavations*.

    iii. Compliance with *CM-GEN-8: Delineate Equipment Staging Areas and Traffic Routes.*

    iv. Compliance with *CM-GEN-10: Clean Construction Equipment*.

    v. Compliance with *CM-GEN-12: Design the Project to be Bird Safe*.

    vi. Compliance with *CM-GEN-9: Dispose of Construction Spoils and Waste*.

vii. BMP field manual implementation and any recommended changes to construction site housekeeping practices outlined in *CM-GEN-11: Maintain Construction Sites*.

c. Work stoppages and measures taken under *CM-GEN-13: Work Stoppage* (see below) will be documented in a memorandum prepared by the project biologist and submitted to the Authority within two business days of the work stoppage.

CM-HYD-1: Stormwater Management

Prior to Construction, the Contractor shall prepare a stormwater management and treatment plan for review and approval by the Authority. During the detailed design phase, each receiving stormwater system's capacity to accommodate project runoff would be evaluated. As necessary, on-site stormwater management measures, such as detention or selected upgrades to the receiving system, would be designed to provide adequate capacity and to comply with the design standards in the latest version of Authority Technical Memorandum 2.6.5 Hydraulics and Hydrology Guidelines. On-site stormwater management facilities would be designed and constructed to capture runoff and provide treatment prior to discharge of pollutant-generating surfaces, including station parking areas, access roads, new road over- and underpasses, reconstructed interchanges, and new or relocated roads and highways. Low-impact development techniques would be used to detain runoff on site and to reduce off site runoff such as constructed wetland systems, biofiltration and bioretention systems, wet ponds, organic mulch layers, planting soil beds, and vegetated systems (biofilters), such as vegetated swales and grass filter strips, would be used where appropriate.

CM-HYD-3: Prepare and Implement a Construction Stormwater Pollution Prevention Plan

Prior to Construction (any ground disturbing activities), the Contractor shall comply with the State Water Resources Control Board (SWRCB) Construction General Permit requiring preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP). The Construction SWPPP would propose BMPs to minimize potential short-term increases in sediment transport caused by construction, including erosion control requirements, stormwater management, and channel dewatering for affected stream crossings. These BMPs would include measures to incorporate permeable surfaces into facility design plans where feasible, and how treated stormwater would be retained or detained on site. Other BMPs shall include strategies to manage the amount and quality of overall stormwater runoff. The Construction SWPPP would include measures to address, but are not limited to, the following:

a. Hydromodification management to verify maintenance of pre-project hydrology by emphasizing on site retention of stormwater runoff using measures such as flow dispersion, infiltration, and evaporation (supplemented by detention where required). Additional flow control measures would be implemented where local regulations or drainage requirements dictate.

b. Implementing practices to minimize the contact of construction materials, equipment, and maintenance supplies with stormwater.

c. Limiting fueling and other activities using hazardous materials to areas distant from surface water, providing drip pans under equipment, and daily checks for vehicle condition.

d. Implementing practices to reduce erosion of exposed soil, including soil stabilization, regular watering for dust control, perimeter siltation fences, and sediment catchment basins.

e. Implementing practices to maintain current water quality, including: siltation fencing, wattle barriers, stabilized construction entrances, grass buffer strips, ponding areas, organic mulch layers, inlet protection, storage tanks, and sediment traps to arrest and settle sediment.

f. Where feasible, avoiding areas that may have substantial erosion risk, including areas with erosive soils and steep slopes.

g. Using diversion ditches to intercept surface runoff from off site.

h. Where feasible, limiting construction to dry periods when flows in water bodies are low or absent.

i. Implementing practices to capture and provide proper off-site disposal of concrete wash water, including isolation of runoff from fresh concrete during curing to prevent it from reaching the local drainage system, and possible treatments (e.g., dry ice).

j. Developing and implementing a spill prevention and emergency response plan to handle potential fuel and/or hazardous material spills. Implementation of a SWPPP would be performed by the construction contractors as directed by the contractor's Qualified SWPPP Practitioner or designee. As part of that responsibility, the effectiveness of construction BMPs must be monitored before, during, and after storm events. Records of these inspections and monitoring results are submitted to the local regional water quality control board (RWQCB) as part of the annual report required by the Statewide Construction General Permit. The reports are available to the public online. The SWRCB and RWQCB would have the opportunity to review these documents.

CM-LBVI-1: Conduct Pre-Construction Protocol-Level Surveys and Construction Monitoring for Least Bell's Vireo

Protocol surveys will be conducted for least Bell's vireo during the breeding season at least 2 years prior to the commencement of HSR project activities within a 500-foot buffer of the HSR footprint at the following locations: (1) the Verdugo Wash Bridge Replacement area, (2) the Metrolink Central Maintenance Facility, and (3) rail alignment work between Interstate 5 and State Route 2 (including areas adjacent to Rio de Los Angeles State Park). Protocol surveys will be repeated within 1 year prior to the commencement of vegetation clearing and construction activities in these locations to ensure that survey information for the HSR project remains up to

date. The protocol surveys will be conducted by a qualified Designated Biologist(s)[11] in accordance with the most recent USFWS guidelines. All survey results will be submitted to the USFWS CFWO.

Weekly surveys and monitoring of suitable vireo habitat within 500 feet of the HSR footprint will be conducted by the Designated Biologist(s) if construction activities are occurring in these areas during the vireo breeding season (March 15 to September 15).

CM-LBVI-2: Implement Impact Avoidance and Minimization Measures for Occupied Least Bell's Vireo Habitat

The following measures will be implemented to avoid and minimize HSR project impacts on suitable least Bell's vireo habitat occurring within a 500 foot buffer of the HSR footprint at (1) the Verdugo Wash Bridge Replacement area, (2) the Metrolink Central Maintenance Facility, and (3) rail alignment work between Interstate 5 and State Route 2 (including areas adjacent to Rio de Los Angeles State Park):

a. HSR construction activities will be limited to daylight hours during the vireo breeding season.

b. For any work proposed within 500 feet of vireo occupied habitat during the vireo breeding season, the occupied habitat shall be clearly delineated and no work shall occur within occupied habitat without the Service's written approval. In addition, onsite noise reduction/attenuation techniques shall be incorporated, as appropriate, to avoid impacts to vireo from elevated construction noise levels during the breeding season. Noise monitoring will be implemented by the Designated Biologist(s)[12] during the breeding season to ensure that elevated construction noise levels are appropriately attenuated at the edge of vireo occupied habitat to a level that is not expected to adversely affect nesting bird behavior (i.e., not to exceed an hourly average of 3 dBA above existing ambient levels at the edge of vireo occupied habitat). If specific HSR project construction noise levels would exceed this threshold within 500 feet of vireo occupied habitat during the vireo breeding season, the CFWO will be contacted for guidance on additional noise reduction measures and written approval before such activities are performed. If sound control measures fail to effectively reduce noise levels to this threshold at any vireo nest, those construction activities will be delayed until after the nesting season.

[11] The Designated Biologist(s) will be familiar with the biology and ecology of the vireo and with the habitats that support this species.

[12] The Designated Biologist(s) will be familiar with the biology and ecology of the vireo and with the habitats that support this species.

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APPENDIX G: COMMENTS RECEIVED AFTER THE PUBLICATION OF THE FINAL EIS

When a comment letter is received after the close of the public comment period, neither a CEQA nor a NEPA lead agency have an obligation to respond. (Pub. Resources Code, § 21091, subd. (d)(1); Pub. Resources Code, § 21092.5, subd. (c); 40 CFR 1503.4) However, a lead agency may, in its discretion and to the extent practicable, choose to respond. Consistent with that discretion, the below summarizes key written comments received outside the comment period and the Authority's response.

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#	First Name	Last Name	Business/ Organization	Summary of Stakeholder Comments/Issues	Response/Status Update
01	Alex	Villanueva	Office of the Sheriff, County of Los Angeles	The commenter noted that Section 3.11 Safety and Security in the Final EIR/EIS included outdated information regarding the Transit Policing Division (TPD). The commenter also recommended that the general principles of Crime Prevention through Environmental Design (CPTED) are incorporated in the design plans.	The commenter noted that Section 3.11 Safety and Security, pages 3.11-29 and 3.11-30, incorrectly states that the Transit Policing Division (TPD) provides contract transit services to Metro, which operates the public transit system serving Los Angeles County and the Resource Study Area (RSA). The commenter clarified that TPD has not existed since 2017, and that the Department's Transit Services Bureau (TSB) contracts policing services for on-board activities, as well as each Metro station, and its light rail right-of-way. Additionally, the commenter clarified that the Department's Metrolink Bureau (MTB) currently has a contract with Metrolink to provide policing services for on-board activities on Metrolink heavy commuter trains located within the RSA, whereas the Project Section's proposed train stations, transit rail lines, and right-of-ways that HSR would utilize are being policed by local police departments. In response to the commenter's clarification, the following text in Section 3.11, pages 3.11-29 and 3.11-30, was revised: The Los Angeles County Sheriff's Department's Transit Services Bureau (Transit Services Bureau) provides contract transit services to Metro, which operates the public transit system serving Los Angeles County and the RSA. The deputies provide transit police services for both the light rail and bus transportation systems. The Transit Services Bureau also serves as the contract transit police agency for Metrolink's heavy commuter rail transportation system located within the RSA (Los Angeles County Sheriff's Department 2017). While the Transit Services Bureau provides contract transit services, the local agencies identified above also respond to calls for these transportation systems when requested by the Transit Services Bureau. The Transit Services Bureau dispatch policy requires that a response from a local agency be requested when Transit Services Bureau patrol units are not able to respond in a reasonable amount of time. Additionally, many of the calls are received directly by local law enforcement agencies due to transit patrons dialing 911, where, in most cases, the public safety calls are routed to dispatch centers of the local law enforcement agencies (Metro 2016). Additionally, the Department's Metrolink Bureau currently has a contract with Metrolink to provide policing services. The commenter requested that if future train stations and other related amenities are proposed within the project area, that their Department should be informed during the planning phases so that potential impacts and its cost implications may be evaluated to the level of service required and amended as necessary. The commenter also recommended that the general principles of Crime Prevention through Environmental Design (CPTED) are incorporated in the design plans. A provision of SS-IAMF#2, Safety and Security Management Plan, requires implementing the principles of crime prevention through environmental design. The contractor shall consider four basic principles of crime prevention through environmental design during station design and site planning: (1) territoriality (design physical elements that express ownership of the station or site); (2) natural surveillance (arrange physical features to maximize visibility); (3) improved sightlines (provide clear views of surrounding areas); and (4) access control (provide physical guidance for people coming and going from a space). The HSR design includes emergency access to the rail right-of-way, and elevated HSR structure design includes emergency egress points.
02	Jean	Prijatel	United States Environmental Protection Agency, Environmental Review Branch	The commenter has no further comments on the Final EIS and appreciates the ongoing coordination with the Authority.	EPA review was completed pursuant to the National Environmental Policy Act, Council on Environmental Quality regulations (40 CFR Parts 1500-1508), Section 309 of the Clean Air Act, and Section 404 of the Clean Water Act. Throughout the environmental review process, the commenter has appreciated the commitment of the Authority to work closely with state and federal resource and regulatory agencies to address concerns early and avoid and minimize impacts to environmental resources. The commenter noted that the Authority has acknowledged the need to enter into an enforceable agreement with the EPA and/or other regulatory agencies for oversight of this project as it relates to contamination of soil and groundwater in this area, and specifically to address the proposed relocation of extraction wells and associated infrastructure. This includes assessment, design, and construction phases of the proposed project. The commenter looks forward to continued collaboration in determining compliance with permitting requirements, project design and construction methods for proposed modifications to extraction wells and associated infrastructure, and long-term management in the project area. The commenter also mentioned the ongoing coordination between the Authority and the U.S. Army Corps of Engineers with respect to potential impacts to the LA River Ecosystem Restoration Project and noted that further coordination will be required to ensure that impacts are avoided to the greatest extent possible.

#	First Name	Last Name	Business/ Organization	Summary of Stakeholder Comments/Issues	Response/Status Update
03	Rick	Jerabek	Costco Wholesale Corporation (Costco)	The commenter, providing comments on the Draft EIR/EIS, expressed two major concerns.[1] First, that Costco was not adequately notified regarding the Project or the availability of the EIR/EIS. Second, that impacts to the two Costco sites that fall within the Project Footprint will limit the viability of each site's continued operation.	The commenter expressed two major concerns regarding the two Costco sites that fall within the Project Footprint: • Costco Burbank 1051 W. Burbank Blvd. Burbank, CA 91506 • Costco Los Feliz 2901 Los Feliz Blvd. Los Angeles, CA 90039 First, the commenter stated that, during the time of the Draft EIR/EIS circulation period (May 29 - August 31, 2020), it was not clear that Costco received any notices from the Authority regarding the Project or the availability of the EIS/EIR. Three different notices were sent to three different Costco addresses to announce the release of the Draft EIR/EIS: • The Notice of Availability of the Draft EIR/EIS; • A postcard announcing the public hearing, the Telephone Town Hall, and the extension of the comment period from 45 to 60 days ending on July 31, 2020, and; • A postcard announcing the Telephone Town Hall, office hours, and the second comment period extension to August 31, 2020. These materials were sent to the two Costco sites listed above, as well as the parcel owners at: • Costco Wholesale Corporation 999 Lake Dr., Issaquah, WA 98027 Second, the commenter expressed concern over community and environmental impacts related to the above stated two Costco sites. These concerns include impacts to access and circulation at the Costco sites, the viability of continued operation of the two Costco sites during Project construction, and the long-term viability of the Costco Los Feliz site due to permanent loss of parking. Project design has identified both Costco sites for temporary construction easements and partial permanent acquisition. The Final EIR/EIS analysis assumes that both sites would be able to operate during and after construction. The Costco Burbank Site is shown in Appendix 3.1-A: Parcels Affected by the Footprint on Page 3, and in Appendix 3.12-D: Parcel Acquisition on Sheets 14-15. The Costco Los Feliz Site is shown in Appendix 3.1-A on Page 9, and in Appendix 3.12-D on Sheets 31-32. Construction of the HSR Build Alternative would have temporary impacts to parking and circulation at the Costco Burbank Site, as well as possible impacts to loading operations. Permanent impacts would include acquisition of a portion of the site to construct a retaining wall for the Victory Boulevard rail bridge, resulting in a loss of up to 58 parking spaces. Construction of the retaining wall would be phased so that these parking spaces would be relocated prior to construction onto adjacent parcels acquired as part of the project. Prior to construction of the HSR Build Alternative, a new replacement loading dock could be constructed at the northwest corner of the building, which is currently being used for storage and not retail. Construction of the new loading dock would be phased to allow the store to continue operating. At the Costco Los Feliz site, the railroad ROW would be expanded to add HSR tracks and avoid impacts to the historic Glendale Metrolink Station. Construction of the Build Alternative would result in loss of parking along the railroad ROW—a permanent loss of 103 parking spaces, and a temporary loss of 26 parking spaces, for a total of 129 parking spaces during construction. The Costco Los Feliz parcel has a total of 768 parking spaces, of which 16 are accessible and 15 are employee parking spaces. The estimated parking required by code for the Costco Los Feliz site would be approximately 600 parking spaces, 168 spaces less than what is currently provided at the site. Therefore, the Authority's Regional Consultant ROW analysts have determined that the loss of parking spaces from construction of the Build Alternative would not force Costco Los Feliz out of compliance with the Los Angeles Municipal Code, and would therefore not create a legal scenario that would force the site out of operation. The Authority is committed to ongoing coordination with Costco as this Project moves forward. No changes were made to the Final EIR/EIS in response to these comments.

[1] Comments received from Costco were intended for the Draft EIR/EIS but were received after the close of the Draft EIR/EIS circulation period (May 29 - August 31, 2020) and before publication of the Final EIR/EIS (November 5, 2021). They are included in this document for convenience.

#	First Name	Last Name	Business/ Organization	Summary of Stakeholder Comments/Issues	Response/Status Update
04	Arnold	Hackett	Southern California Regional Rail Authority (SCRRA)	The commenter appreciates the Authority's responses to their comments on the Draft EIR/EIS but indicate SCRRA would need the design, the assessment of impact, and the mitigation to be developed to an even greater level of detail. The commenter expresses concerns that the Authority's plans involve the degradation of the ultimate capacity for regional passenger trains between Los Angeles Union Station and the Central Maintenance Facility and a limitation of capacity growth between the Central Maintenance Facility and Burbank. The commenter expresses concern that the construction-related disruption proposed in the current design would have an adverse impact on SCRRA's maintenance operations. The commenter notes that more detailed work and coordination are required and anticipates SCRRA and the Authority will sign a Memorandum of Understanding to ensure future coordination.	The Authority is committed to working with SCRRA and the other operators in the corridor throughout all phases of the project to ensure that there are no conflicts during design, construction, and operations. The Authority negotiated a Memorandum of Understanding (MOU) with SCRRA detailing roles and responsibilities for future work that is to be completed. The commenter expresses concerns that the Authority's plans involve the degradation of the ultimate capacity for regional passenger trains operating within the shared corridor. The Authority has completed operational modeling (SoCal Integration: Burbank to LA Slot Analysis, May 13, 2021) that shows the proposed design would not cause a reduction in capacity, travel time, or speeds, and the Authority has committed to working with SCRRA as design advances to continue to ensure that the project will not result in significant, adverse impacts to passenger rail capacity in the shared corridor. Additionally, the project would not preclude future growth in the corridor.

#	First Name	Last Name	Business/ Organization	Summary of Stakeholder Comments/Issues	Response/Status Update
05	Karen	Ellis	Overton Moore Properties	The commenter states that the Final EIR/EIS fails to consider the reasonably foreseeable environmental impacts of the additional non-residential displacements at the Avion Burbank development. The Final EIR/EIS also fails to consider any of the potential impacts associated with the demolition of the buildings and other improvements that were recently constructed as part of the Avion Burbank Project. The commenter states that the Final EIR/EIS grossly underestimates the cost of acquiring the Site and that the owners of the project have entered into long term leases and have made a substantial investment in the tenant improvements. With the majority of the project being leased or sold, it is likely that the true cost of acquiring the Site is in excess of $900,000,000 (including displacement, relocation and disruption). The commenter requests that the Final EIR/EIS be revised based on a more realistic estimate of the true cost of acquiring the Site. In addition, the Final EIR/EIS should be revised to identify and evaluate additional alternatives that would avoid or minimize the need to acquire and demolish the recently-completed Avion Burbank Project, which will provide hundreds of local jobs and stimulate additional economic investment in the area. The commenter requests the Board refrain from certifying the Final EIR/EIS until it has been revised as outlined above. The commenter further requests that the Board refrain from taking any action on the Burbank to Los Angeles Section of the CHSR Project until it has been provided with complete information regarding the true cost and potential environmental and economic impacts of acquiring the Avion Burbank Project Site.	The commenter states that the Final EIR/EIS fails to consider the reasonably foreseeable environmental impacts of the additional non-residential displacements at the Avion Burbank development and fails to consider any of the potential impacts associated with the demolition of the buildings and other improvements that were recently constructed as part of the Avion Burbank Project. As stated in Section 3.12 of the Final EIR/EIS, the analysis was revised to include an estimated 53 business displacements from the Avion Burbank development. Although significant development has occurred on the site, any losses in property tax revenue that would occur from the acquisition of this property and any potential displacements cannot be determined at the time of this analysis. This is because construction of the Avion Burbank project is not yet complete and this property has not been reassessed to reflect the value of the new improvements. With implementation of construction IAMFs to avoid and minimize construction impacts, there would not be changes to the impact determinations due to the demolition of the Avion Burbank Project. The commenter states that the Final EIR/EIS grossly underestimates the cost of acquiring the Avion Burbank development. Cost estimates included reasonable and appropriate methodology for estimating costs, as more fully described in HSR technical memoranda, such as Avion Memorandum – Supplement to Relocation Impact Technical Report (March 2021) and Methodology for Preparation of Supplemental Relocation Impact Analysis (June 2021). Additionally, based on the Authority's Capital Cost Estimating Methodology for the 15% Design Level TM 1.1.19 (Authority 2014), following preparation of the 15% Design level estimates, cost estimates will be refined as design advances through a validation process that involves assembling subject matter experts in the areas of engineering, construction, and estimating to perform an independent review of the scope, assumptions, and basis used to prepare the cost estimate. This process will provide a thorough vetting of each cost estimate before it is finalized. It is important that the methodology used in estimating project costs is flexible enough to be applied at each point in the project development process, and additional guidelines will be developed to prepare cost estimates for subsequent phases of the HSR project. At this stage of project design, a 10% contingency is included for the purchase or lease of real estate. The more detailed the design becomes in subsequent phases, the more detailed the cost estimate should be. Therefore, the capital costs provided in Chapter 6 of the Final EIR/EIS are preliminary in nature and will be refined in the next phase of project design. Once the design is final and the exact nature of impacts to the Burbank Avion development is defined, the Authority will coordinate with the property owner and follow the procedures described in the Right-of-Way Manual (Authority 2019). The commenter requests that the Final EIR/EIS be revised based on a more realistic estimate of the true cost of acquiring the Avion Burbank development. As stated above, the costs related to impacts to the Avion Burbank development are preliminary and based on 15% design and will be reassessed in advanced design phases. Therefore, the Final EIR/EIS does not need to be revised to reflect a more realistic estimate of the true cost of acquiring the site. As a part of the 2016 SAA, a surface option (Alignment Option A and Station Option A) was considered. In 2018, the Burbank Airport Station Option Screening Report withdrew Option A primarily due to community impact and potential environmental justice impact concerns. Option A had the greatest amount of residential and business displacements and noise/vibration and visual impacts. In July 2021, the Authority prepared an update to the Burbank Airport Station Options Screening Report, Draft (version) 2 (updated Report). The updated Report considers the Avion Burbank Project Final EIR and approval by the City of Burbank, its current construction schedule and projected opening date, any potential changes to the evaluation results provided in the Report analysis, and determination if the Report conclusion recommending studying Option B Refined as the Preferred Alternative in the Burbank to Los Angeles California High-Speed Rail Project Section EIR/EIS remains valid. Based on the screening analysis and results described in the updated Report, the Authority maintains its 2018 recommendation to proceed with Station Option B Refined for detailed study in the EIR/EIS. When compared with Option A, Option B Refined has a substantially lower impact on environmental justice populations, has fewer residential and business displacements, and better conforms with local land use plans. Compared to Option B, Option B Refined would tunnel beneath airport properties and would be approximately 50 feet below the surface, requiring less intensive soil excavation activities and removal/treatment of spoils for station construction than Option B, which would tunnel beneath residential neighborhoods and would therefore require platforms to be 150 feet below the surface. Therefore, the evaluation of one underground station near the Hollywood Burbank Airport (Burbank Airport Station) is adequate. In addition, the Authority has committed to developing a multi-modal access plan prior to design and construction at the Burbank Airport Station. This plan will be done in coordination with the City of Burbank and with the BGPAA and will include a parking strategy that will inform the final location, amount, and phasing of parking. The Authority took into consideration all public comments received on the Final EIR/EIS. The Board unanimously certified the Final EIR/EIS on January 20, 2022.

#	First Name	Last Name	Business/ Organization	Summary of Stakeholder Comments/Issues	Response/Status Update
06	Edward	Belden	City of Los Angeles, Department of Public Works	The commenter states that the Final EIR/EIS fails to fully evaluate noise impacts to Rio de Los Angeles as well as Taylor Yard G1 and G2 as they are excluded from the Noise and Vibration Technical Analysis that the Noise section relies on. The commenter states that the operational noise impacts to Rio de Los Angeles as well as Taylor Yard G1 and G2 are not mitigated below the level of significance. The commenter states that additional mitigation is required for operational noise impacts from the increase in frequency of the number of trains that will be running along the tracks which is not addressed in the environmental documents. The commenter states that additional mitigation is needed for noise impacts to wildlife since the cited threshold of 100 dBA to wildlife is incorrect. The commenter states that the new HSR tracks will be in conflict with the least Bell's vireo traveling between two suitable habitat areas in Rio de Los Angeles and the LA River and that that the increased frequency of train trips and noise impacts will cause permanent impacts to crossing and use of the suitable habitat in Rio de Los Angeles State Park. The commenter states that operation impacts to least Bell's vireo have not been reduced and require mitigation. The commenter states that Section 3.15 does not address operational and long term noise and visual impacts to Taylor Yard G2 River Park or the Bowtie G1 State Park locations and that there will be permanent noise impacts to these parks. The commenter further states that the Final EIR/EIS fails to include adequate and specific mitigation measures to document how impacts to access to the G2 River Park and Paseo del Rio during construction will be addressed below the level of significance. The existing mitigation measures are too broad and not specific enough to mitigate this impact to providing access to this 42-acre recreation site. The commenter requests that the location and type of access during construction needs to be provided. The commenter states that Impact PK #5 fails to evaluate the permanent loss of future needed access points to and from the Taylor Yard G2 River Park and G1 Bowtie Parcel to Rio de Los Angeles State Park or Sonia M. Sotomayor Learning Academies or other parcels north/east of the parks and that permanent impacts to the loss of access to these recreation resources need to be evaluated and mitigated. The commenter states that the Section 4(f) analysis does not address the constructive impacts the HSR project will have on the recreation, parks and habitat refuges that currently exist and are proposed, especially the Taylor Yard G1, G2 and Rio de Los Angeles State Park and the Los Angeles River Recreation Zone and that the de minimis findings for constructive impacts to these Section 4(f) sites are incorrect and mitigation from the impacts will be required due to the noise and biological impacts.	**Noise** The commenter states that the Final EIR/EIS fails to fully evaluate noise impacts to Rio de Los Angeles as well as Taylor Yard G1 and G2 as they are excluded from the Noise and Vibration Technical Analysis that the Noise section relies on. The Final EIR/EIS fully evaluates noise impacts at Rio de Los Angeles State Park, the Planned Taylor Yard G1 Parcel (Bowtie Parcel) and the Planned Taylor Yard G2 River Park. Impact N&V #4 analyzes operational noise impacts from the Project in the Taylor Yard area and the Rio de Los Angeles State Park. Noise impacts due to high-speed train operations at Rio de Los Angeles State Park, the Planned Taylor Yard G1 Parcel (Bowtie Parcel) and the Planned Taylor Yard G2 River Park are described in Chapter 4, Section 4(f) and 6(f) Evaluations. Please refer to Sections 4.6.1.14, Taylor Yard G1 Parcel (Bowtie Parcel) (Planned) (P-10), 4.6.1.15, Taylor Yard G2 River Park (Planned) (P-13), and Sections 4.6.1.16, Rio de Los Angeles State Park (P-14), in Chapter 4. If an orange or red 'dot' do not appear on a Figures 3.4-7 and 3.4-8, it means no impact was determined. As explained in those sections, operation of HSR trains would not result in noise impacts that would adversely affect the protected activities, features or attributes of Rio de Los Angeles State Park, and would not result in noise impacts that would substantially impair the protected activities, features, or attributes of the Planned Taylor Yard G1 Parcel (Bowtie Parcel) or the Planned Taylor Yard G2 River Park. Rio de Los Angeles State Park and the planned parks are adjacent to an existing rail corridor that would be used by HSR trains. Project operations would result in either a no impact or moderate noise impact at these resources; a moderate impact indicates that the introduction of the Project would be noticeable to most people, but it may not be sufficient to cause strong reactions from the community. The commenter states that the operational noise impacts to Rio de Los Angeles as well as Taylor Yard G1 and G2 are not mitigated below the level of significance. Consistent with the FRA's High-Speed Ground Transportation Noise and Vibration Impact Assessment Manual (FRA 2012), the noise impacts to Rio De Los Angeles State Park described in Section 3.4, Noise and Vibration, were classified as no impact. This is assessed at the center or average location of potential users within the park. No mitigation is necessary for receptors classified as no impact. Additionally, the Authority's noise model accounts for project-related changes to the existing trackwork in areas such as Taylor Yard. More specifically, the relocation of existing freight lines, reduction in number of switches, relocation of the Glendale Slide, and elimination of Union Pacific Railroad turnout use would result in a net decrease of noise levels in the Taylor Yard Community. Lastly, the commenter refers to Table 3.4-8 in the Section, however, that only applies to Category 1 and Category 2 receptors, whereas the Rio de Los Angeles Park is Category 3. With an existing noise level of 62.1 dBA Leq and a project noise exposure level of 62.7 dBA Leq at the Rio de Los Angeles Park receptor location, the criteria as presented in Figure 3.4-2 supports a no impact conclusion. The commenter states that additional mitigation is required for operational noise impacts from the increase in frequency of the number of trains that will be running along the tracks which is not addressed in the environmental documents. Consistent with the FRA's High-Speed Ground Transportation Noise and Vibration Impact Assessment Manual (FRA 2012), the noise impacts to Rio De Los Angeles State Park described in Section 3.4, Noise and Vibration, were analyzed to incorporate all of the daytime and nighttime trains proposed under the HSR Build Alternative. There is no specific number of trains in the daytime, nighttime, or combined that directly equates to a significant impact. The analysis under Noise & Vibration: Impact N&V #4 does calculate the daily and peak hour noise levels for sensitive receptors as dictated by their use. Because people do not typically use parks during nighttime hours, similar to uses such as schools, the use of a daily noise level would not be accurate and, therefore, the peak condition, as directed by the FRA HSR Manual, of the Project is considered the condition for which the most noise is generated. It is expected that the proposed HSR operations would include trains that have much shorter train lengths that then existing freight trains and, therefore, would complete individual pass-bys in a much shorter time period. The commenter states that additional mitigation is needed for noise impacts to wildlife since the cited threshold of 100 dBA to wildlife is incorrect. The noise analysis within the Noise and Vibration section (Section 3.4) of the EIR/EIS focuses solely on livestock, domestic animals, and general wildlife. The 100 dBA SEL, consistent with FRA methodology was appropriately used. As it pertains to special or endangered species, such as the least Bell's vireo, more information and analysis was completed in the Biological Resources section (Section 3.4) of the EIR/EIS. In the EIR/EIS, the Authority determined that noise from train operations would not have a significant effect on least Bell's vireo, and therefore mitigation was not required. Refer to the response below for more detail regarding the thresholds used for the least Bell's vireo. **Biological Resources** The commenter states that the new HSR tracks will be in conflict with the least Bell's vireo traveling between two suitable habitat areas in Rio de Los Angeles and the LA River and that that the increased frequency of train trips and noise impacts will cause permanent impacts to crossing and use of the suitable habitat in Rio de Los Angeles State Park. There is no biological information or data to suggest that any bird species would be precluded from moving between suitable habitat in Rio de Los Angeles Park and the LA River. To the extent that birds are flying between the two areas now, they would be able to continue doing so. As the Authority noted in the Final EIR/EIS, most wildlife currently occupying habitats adjacent to the existing railroad corridor are likely habituated to frequent wind, noise, vibration, and other indirect effects associated with the urban setting of the Wildlife RSA and existing rail system operations. With respect to least Bell's vireo, the Authority determined, and USFWS concurred, that HSR operations would not be likely to adversely affect vireo use of habitat in these areas.

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06 (Continued)	Edward	Belden	City of Los Angeles, Department of Public Works	The commenter further states that impacts from the Kerr Road replacements and bridge modifications to access to parks and recreation, impacts to traffic and pedestrian/bicycle circulation to Elysian Valley, impacts to Section 4(f) sites, and impacts to utilities are not addressed in the FEIR/EIS and must be mitigated and addressed. The commenter requests that the connection between the LA River and the LA State Historic Park that is included in the Los Angeles River Ecosystem Restoration Project should be incorporated into the HSR Project plans for any modifications to the tracks between the LA River and State Historic Park.	The commenter states that operation impacts to least Bell's vireo have not been reduced and require mitigation. As stated previously, in the Final EIR/EIS, the Authority determined that noise from train operations would not have a significant effect on least Bell's vireo, and therefore mitigation was not required. Given the high baseline levels of noise in this area of blended track, the increase in noise of about 2 dBA (daily and peak hour) within the western park area from the shift in tracks and the increase of 1 to 1.5 dBA for the short duration for each HSR train pass-by, would not cause any vireos using habitat areas to cease using it. For this same reason, in the Biological Assessment the Authority determined that project operations were not likely to adversely affect least Bell's vireo (which are only present in Southern California during seasonal migrations, and have to pass through an extremely constrained urban environment to arrive at this location). USFWS concurred with the Biological Assessment, acknowledging that the vireo seasonally present at this location are adjacent to an existing train track and are already exposed to various anthropogenic disturbances and high noise levels. The small increases in noise associated with HSR operations, as outlined above, would be within the existing hourly range at this location (63 to 73 dBA equivalent continuous noise level). Furthermore, the maximum noise level posed by HSR operations at this location was determined to be approximately 76.6 dBA (Lmax), which is less than the current maximum of 81.9 dBA (Lmax) that was measured in the general vicinity as part of the HSR noise analysis. This data indicates that the maximum noise level caused by HSR operations would be lower than the existing maximum noise level at this location, which can largely be attributed to existing freight and passenger train operations. As such, USFWS concluded that the vireos are unlikely to be substantially disrupted by the small increase in operational noise levels. In regards to the 3 dBA threshold referenced in BIO-MM#80, the measure is specifically aimed at avoiding temporary construction activities that would result in an hourly average of 3 dBA above existing ambient levels at the edge of vireo occupied habitat during the breeding season, rather than a slight daily and peak hour noise level increase associated with operations, which would be within the existing range of equivalent continuous noise levels at this location. Again, the approximate existing hourly range at this location was determined to be 63 to 73 dBA equivalent continuous noise level. **Parks and Recreational Resources/Section 4(f)** The commenter states that Section 3.15 does not address operational and long-term noise and visual impacts to Taylor Yard G2 River Park or the Bowtie G1 State Park locations and that there will be permanent noise impacts to these parks. As stated in Impact PK #5, access, noise, and visual impacts due to high-speed train operations are described in Chapter 4, Section 4(f) and 6(f) Evaluations. Please refer to Sections 4.6.1.14, Taylor Yard G1 Parcel (Bowtie Parcel) (Planned) (P-10), and 4.6.1.15, Taylor Yard G2 River Park (Planned) (P-13), in Chapter 4. As explained in those sections, operation of HSR trains would not result in access, noise, or visual impacts that would substantially impair the activities, features, or attributes of the Planned Taylor Yard G1 Parcel (Bowtie Parcel) or the Planned Taylor Yard G2 River Park. These planned parks are adjacent to an existing rail corridor that would be used by HSR trains. Project operations would result in a moderate noise impact near these resources; a moderate impact indicates that the introduction of the Project would be noticeable to most people, but it may not be sufficient to cause strong reactions from the community. Project operations would not affect access to these planned parks. The Project's visual elements would be consistent with the existing railroad corridor, and the Project would not introduce any vertical elements that would be visually intrusive to users of the parks. The Project would not preclude or conflict with restoration activities proposed at these planned parks. The commenter further states that the Final EIR/EIS fails to include adequate and specific mitigation measures to document how impacts to access to the G2 River Park and Paseo del Rio during construction will be addressed below the level of significance. The commenter states that the existing mitigation measures are too broad and not specific enough to mitigate this impact to providing access to this 42-acre recreation site. The commenter requests that the location and type of access during construction needs to be provided. Access along the Metrolink CMF access road may be affected during project construction, but construction will be able to be phased and access to the park site will be maintained at all times during construction. In addition, the Proposed Taylor Yard G2 Parcel also includes planned pedestrian connections between this proposed park area and Rio de Los Angeles State Park across the existing railroad tracks. Therefore, if the park exists at the time of construction, these proposed pedestrian connections would be closed during construction and alternate pedestrian access routes would be provided. As stated previously, access to the park site will be maintained at all times during construction. If the proposed park does not exist at the time of construction, no temporary impacts related to access would occur. The Authority would implement TR-IAMF#2, TR-IAMF#4, TR-IAMF#5, and TR-IAMF#7 to minimize construction-related traffic delays for public access. TR-IAMF#2 requires the contractor to prepare a Construction Transportation Plan for the purpose of minimizing the impacts of construction and construction traffic on adjoining and nearby roadways and providing safe vehicular and pedestrian access during construction. TR-IAMF#4 and TR-IAMF#5 require the contractor to prepare specific construction management plans to address the maintenance of pedestrian and bicycle access during the construction period where feasible (i.e., meeting design, safety, and Americans with Disabilities Act requirements). TR-IAMF#7 requires truck traffic, either for excavation or for transporting construction materials to the site, to use the designated truck routes within each city. This would minimize the construction-related delays on local roadways. Although traffic delays would extend the travel time to recreational resources, with implementation of these IAMFs, the delays would not prevent the use of the resources. The Authority would also adhere to PK-IAMF#1, which requires the contractor to prepare and submit to the Authority a technical memorandum identifying project design features to be implemented to minimize impacts on recreational resources. It should be noted that there will not be temporary access impacts to Paseo del Rio under the HSR Build Alternative, as stated in

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06 (Continued)	Edward	Belden	City of Los Angeles, Department of Public Works		Section 3.15.6.3 under Impact PK #1. With the inclusion of the IAMFs listed above, which are enforceable commitments made by the Authority, no mitigation is warranted for any temporary access issues to the G2 River Park and Paseo del Rio. The commenter states that Impact PK #5 fails to evaluate the permanent loss of future needed access points to and from the Taylor Yard G2 River Park and G1 Bowtie Parcel to Rio de Los Angeles State Park or Sonia M. Sotomayor Learning Academies or other parcels north/east of the parks and that permanent impacts to the loss of access to these recreation resources need to be evaluated and mitigated. The introduction of the HSR Project throughout the 100-Acre area would not widen the existing rail corridor. Any overcrossings being designed for current conditions would be required to completely span the 100-foot railroad ROW, and no change is needed to accommodate HSR trains. While HSR standards require 27-foot vertical clearance for overcrossings compared to a 24 foot requirement in the Metrolink standards, the Authority committed to a design variance providing a reduced visual clearance of 24 feet above-top-of-rail (reduced from 27 feet) for the crossings. Additionally, as the Authority advances design, the Authority will study and, if found feasible, implement additional advanced design project refinements to enable and facilitate these crossings (Belden letter, January 2022). Therefore, the HSR Project would not lead to a need for wider or taller bridges. Park users will still be able to access the G2 parcel via Kerr Road near the new Taylor Yard Los Angeles River bridge, and the G1 parcel via Kerr Street under the SR-2 Freeway. Planned overcrossings across the railroad corridor between Rio de Los Angeles State Park and the G2 parcel as outlined in the Taylor Yard G2 River Park Project Implementation Feasibility Report can be constructed with HSR in the same manner as without HSR, and the Authority is ready to work with the 100-Acre Partnership and others to implement crossings in the areas to the north/east of the parks as they are planned. The Authority committed to collaboratively working with the 100-Acre Partnership agencies, using Authority planning, design/engineering, and grant writing resources to support a feasibility study for habitat, wildlife, pedestrian, and bicycle crossings between Rio de Los Angeles State Park and the Taylor Yard G2 River Park parcel across the existing railroad right-of-way. The Authority similarly committed to study connections across the rail between the Taylor G1 “Bowtie” property and the Sonia Sotomayor Learning Academies site. The commenter states that the Section 4(f) analysis does not address the constructive impacts the HSR project will have on the recreation, parks and habitat refuges that currently exist and are proposed, especially the Taylor Yard G1, G2 and Rio de Los Angeles State Park and the Los Angeles River Recreation Zone and that the *de minimis* findings for use of these Section 4(f) sites are incorrect and mitigation from the impacts will be required due to the noise and biological impacts. As stated previously, potential constructive use is addressed in Sections 4.6.1.14, Taylor Yard G1 Parcel (Bowtie Parcel) (Planned) (P-10); 4.6.1.15, Taylor Yard G2 River Park (Planned) (P-13); and 4.6.1.17, Los Angeles River Recreation Zone (R-2). As explained in those sections, the Project’s proximity impacts would not substantially impair the activities, features, or attributes of the proposed Taylor Yard G1 Parcel (Bowtie Parcel), the proposed Taylor Yard G2 River Park, or the Los Angeles River Recreation Zone. These resources are adjacent to an existing rail corridor that would be used by HSR trains. Project operations would result in a moderate noise impact near these resources; a moderate impact indicates that the introduction of the Project would be noticeable to most people, but it may not be sufficient to cause strong reactions from the community. Access to the parks would be maintained during project construction and operations. The Project’s visual elements would be consistent with the existing railroad corridor, and the Project would not introduce any vertical elements that would be visually intrusive to users of the parks. The Project would not preclude or conflict with restoration activities proposed at the planned Taylor Yard G1 Parcel (Bowtie Parcel) or the planned Taylor Yard G2 River Park. For these reasons, the Authority correctly determined that the project would have no constructive use of the proposed Taylor Yard G1 Parcel (Bowtie Parcel), the proposed Taylor Yard G2 River Park, or the Los Angeles River Recreation Zone. The commenter does not provide information that contradicts the Authority’s Section 4(f) determinations with respect to the planned Taylor Yard G1 Parcel (Bowtie Parcel), the planned Taylor Yard G2 River Park, and the Los Angeles River Recreation Zone. As explained in Section 4.6.1.16, Rio de Los Angeles State Park (P-14), the HSR Project would use land from Rio de Los Angeles State Park but this use would have a *de minimis* impact on the park because the Project would not adversely affect the activities, features, or attributes of the park. The Project would use 0.56 acre along the southern boundary of the park adjacent to Kerr Road. The affected area consists of an existing vegetated slope that is outside the park’s fence line and is not developed with any recreational amenities. The Project would not affect existing recreational amenities at the park. The Project would not preclude a proposed expansion of a soccer field at the park. The park would remain open for public use during construction. Access to the park would be maintained during construction (TR-IAMF#2, TR-AIMF#4, TR-IAMF#5, PR-MM#1) and operations (PK-IAMF#1, PR-MM#2). Fugitive dust, noise, and visual impacts during construction would be minimized (AQ-IAMF#1, NV-IAMF#1, AVQ-MM#1). Temporary indirect construction impacts on potentially suitable habitats for special-status wildlife species would be minimized, and impacts on adjacent habitats and/or direct impacts on special-status animal species would be avoided (BIO-IAMF#1, BIO-IAMF#3, BIO-IAMF#5, BIO-IAMF#8, BIOIAMF#11, AQ-IAMF#1, HMW-IAMF#6, HYD-IAMF#1, BIO-MM#56, BIO-MM#61, BIO-MM#63). Project operations would result in a moderate noise impact near the park; a moderate impact indicates that the introduction of the Project would be noticeable to most people, but it may not be sufficient to cause strong reactions from the community. The Project would introduce visual elements that would have a neutral effect on visual quality because the Project would result in a moderate visual change that would be compatible with the existing environment. The Project would not preclude or conflict with restoration activities proposed at the park. For these reasons, the Authority determined that the use of Rio de Los Angeles State Park would have a *de minimis* impact on the park. The California

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06 (Continued)	Edward	Belden	City of Los Angeles, Department of Public Works		Department of Parks and Recreation (the official with jurisdiction over Rio de Los Angeles State Park) concurred with the Authority's *de minimis* impact finding in a letter on October 21, 2021. The comment does not provide information that contradicts the Authority's Section 4(f) determination with respect to Rio de Los Angeles State Park. The commenter further states that impacts from the Kerr Road replacements and bridge modifications to access to parks and recreation, impacts to traffic and pedestrian/bicycle circulation to Elysian Valley, impacts to Section 4(f) sites, and impacts to utilities are not addressed in the FEIR/EIS and must be mitigated and addressed. The comment does not provide information that contradicts the Authority's Section 4(f) determinations with respect to the planned Taylor Yard G1 Parcel (Bowtie Parcel), the planned Taylor Yard G2 River Park (Planned), and Rio de Los Angeles State Park. As stated previously, access along the Metrolink CMF access road may be affected during project construction, but construction will be able to be phased and access to the park site will be maintained at all times during construction. In addition, the Proposed Taylor Yard G2 Parcel also includes planned pedestrian connections between this proposed park area and Rio de Los Angeles State Park across the existing railroad tracks. Therefore, if the park exists at the time of construction, these proposed pedestrian connections would be closed during construction and alternate pedestrian access routes would be provided. However, as stated previously, access to the park site will be maintained at all times during construction. If the proposed park does not exist at the time of construction, no temporary impacts related to access would occur. The Authority would implement TR-IAMF#2, TR-IAMF#4, TR-IAMF#5, and TR-IAMF#7 to minimize construction-related traffic delays for public access and PK-IAMF#1, which requires the contractor to prepare and submit to the Authority a technical memorandum identifying project design features to be implemented to minimize impacts on recreational resources. With the inclusion of the IAMFs listed above, which are enforceable commitments made by the Authority, no mitigation is warranted for any temporary access issues related to the G2 parcel and the new Taylor Yard Pedestrian and Bicycle Bridge. In addition, design characteristics of the HSR Build Alternative would include effective measures to minimize temporary interruption of utility service by adhering to PUE-IAMF#3 and PUE-IAMF#4 during construction of the HSR Build Alternative. PUE-IAMF#3 would require the contractor to notify the public within the jurisdiction and the affected service providers of the planned outage through a combination of communication media (e.g., phone, email, mail, newspaper notices, or other means). PUE-IAMF#4 would require the contractor to prepare a technical memorandum documenting how construction activities would be coordinated with service providers to minimize or avoid interruptions. Therefore, the impacts of temporary interruption of utility service (Impact PUE #1), accidental disruption of utility systems (Impact PUE #2), and conflicts with existing utilities (Impact PUE #3) would be less than significant under CEQA and does not require any mitigation. The commenter also states that the project will impact the connection between the Los Angeles River and the Los Angeles River State Historic Park that is called out in the Los Angeles River Ecosystem Restoration Project and states that the HSR Project should incorporate a trestle railroad bridge to allow water to flow between the Los Angeles River and the Los Angeles River State Historic Park. As explained in Section 3.7.3, Consistency with Plans and Laws; Section 4.6.1.22, Los Angeles State Historic Park (P-22); and Appendix 3.1-B, Regional and Local Policy Consistency Analysis, the Project would not preclude or conflict with the restoration activities proposed at Los Angeles State Historic Park under the Los Angeles River Ecosystem Restoration Project, including the trestle bridge.

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07	Mitali	Gupta	LA Metro	The commenter expresses concern over some language in the FEIR/EIS that LA Metro feels could potentially jeopardize construction and implementation of the Los Angeles River Bike Path project.	The commenter provides the following recommendations regarding text revisions to the FEIR/EIS. The commenter recommends text revisions to the FEIR/EIS to state that any action taken by the Authority would not preclude the construction and implementation of the Los Angeles River Bike Path, even if the Los Angeles River Bike Path is constructed after the HSR Build Alternative. The Final EIR/EIS concludes that the HSR Build Alternative would not preclude construction of the Los Angeles River Bike Path planned extension. As stated in Section 3.2.6.3 under Impact TR#12, the HSR Build Alternative would allow for current and future planned bikeways with the exception of the planned San Fernando Railroad Bike Path. As stated in Section 3.15.6.3 under Impact PK #3 and Impact PK #4, construction of the HSR Build Alternative may require permanent easements along the planned extension of the Los Angeles River Bike Path. If the planned extension of the Los Angeles River Bike Path is not yet operational at the time the HSR Build Alternative is constructed, portions of the currently proposed alignments would be permanently converted to rail right-of-way. As only portions of the proposed alignments (which are still conceptual in design) would need to be rerouted, construction and implementation of the HSR Build Alternative would not preclude this planned extension of the Los Angeles River Bike Path. Mitigation Measure PR-MM#4 requires the Authority to consult with the officials with jurisdiction to identify an alternative route for the continuation of the lost use and functionality of the LARP planned extension, including maintaining connectivity. EJ-IAMF#5 requires the Authority to consult with the public agency with jurisdiction over any existing or planned bicycle routes regarding the specific conditions of acquisition and replacement of the land that will be acquired and to seek input from impacted environmental justice communities on the relocation of these bike paths. The commenter recommends that PR-MM#4, Replacement of Property Acquired from Existing or Planned Bicycle Routes, be included in Section 3.2, Transportation, in the FEIR/EIS, within the discussion related to the Main Street Grade Separation because the current mitigation measure, TRAN-MM#1, is not related to bicycle facilities. As indicated in Section 3.15.7.1, PR-MM#4 would apply to the Main Street Grade Separation early action project. The impact to the Los Angeles River Bike Path planned extension from the proposed Main Street Grade Separation would be temporary from construction easements. As shown in Figure 3.15-3 (Sheet 4 of 4) on page 3.15-44 of the Final EIR/EIS, there are two conceptual alignments of the Los Angeles River Bike Path, one on each side of the river near Albion Riverside Park. Operation of the grade separation could maintain the resource if planned on the east side of the river. However, the potential impact from the HSR Build Alternative would be permanent for the conceptual alignment on the west side of the river. Therefore, PR-MM#4 for permanent impacts requiring reroutes may not be necessary for the Main Street Grade Separation, as it is anticipated only temporary detours would be required during construction, which is addressed by PR-MM#3. Although impacts from the Main Street Grade Separation to the planned extension are anticipated to be temporary from TCEs, the Final EIR/EIS includes PR-MM#4 as the alignments for the planned extension are conceptual and high level at this stage, and early action projects would implement all necessary mitigation to preserve resources if required. The commenter recommends that PR-MM#1 and PR-MM#3 be revised to include the requirement for consultation with the property owner/operator, similar to language that currently exists within PR-MM#5. PR-MM#1 and PR-MM#3 will not be revised as requested. However, the Authority is committed to working with LA Metro through advanced design and operation of the Project, including coordination related to the Los Angeles River Bike Path. The commenter recommends that PR-MM#1, PR-MM#3, and PR-MM#5 be included in Section 3.2, Transportation, in the FEIR/EIS, within the discussion related to the Main Street Grade Separation. PR-MM#1, PR-MM#3, and PR-MM#5 are already included in the FEIR/EIS and are applicable to the Los Angeles River Bike Path, even if they are not included in Section 3.2, Transportation. The commenter recommends revisions to TR-IAMF#12, Pedestrian and Bicycle Safety, to state that the technical memorandum will be provided to jurisdictions with authority. TR-IAMF#12 has not been revised. However, the Authority is committed to working with LA Metro through advanced design and operation of the Project, including coordination related to the Los Angeles River Bike Path.

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08	Chrissy	Humphreys	Los Angeles Regional Water Quality Control Board	The commenter provides clarification on two comments that the LARWQCB previously provided on the Draft EIR/E IS. One comment was regarding their recommendation for the Authority to prepare a Soils Management Plan (SMP) and the second comment was regarding coordination necessary to construct replacement drinking water wells in Burbank. The commenter restated the Authority's previous acknowledgement that a funding mechanism may be set up to compensate the LARWQCB for its involvement in reviewing documents and providing consultation. The commenter also requested the Authority to set up regular meetings including the Authority, the USEPA, and the LARWQCB for future planning of the Los Angeles to Burbank HSR Project Section.	The commenter clarified that their comment was not referring to conducting environmental site assessments or remediation at discrete sites known or suspected to be contaminated. The commenter clarified that the type of SMP they recommend would be regarding how to handle soils during excavation and/or tunneling along the entire sub-graded portion of the project. The Final EIR/EIS includes GEO-IAMF#1 (Geologic Hazards), GEO-IAMF#4 (Historic or Abandoned Mines and Other Toxic Sites), GEO-IAMF#5 (Hazardous Materials, Soils, or Vapors), HMW-IAMF#1 (Property Acquisition Phase 1 and Phase 2 Environmental Site Assessments), HMW-IAMF#4 (Undocumented Contamination), HMW-IAMF#6 (Spill Prevention), HMW-IAMF#11 (Stakeholder Consultation for the San Fernando Valley Groundwater Basin Superfund Site), HWR-MM#1 (Below-Grade Section Constructability and Hydrogeological Monitoring), and HYD-IAMF#1 (Storm and Ground Water Management) which will avoid, minimize, and or/mitigate for both potentially contaminated soils and known/documented contaminated soils. The commenter restated the Authority's previous acknowledgement that a funding mechanism may be set up to compensate the LARWQCB for its involvement in reviewing documents and providing consultation. The Authority is required to coordinate with the LARWQCB, and reimbursement is negotiated during the Authority's third-party agreement process. The commenter clarified that in addition to coordination with the USEPA being necessary during the construction of replacement drinking water wells in Burbank, coordination with the City of Burbank and Lockheed Martin will be necessary. The Authority confirms that coordination with the City of Burbank and Lockheed Martin will occur during the construction of replacement drinking water wells in Burbank per HMW-IAMF#11. The Authority is in agreement with the commenter that future regular meetings between the Authority, the USEPA, and the LARWQCB are necessary and will be helpful for the future planning of the Los Angeles to Burbank HSR Project Section.

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09	Jess Konstantine Bob Sharon Nick	Talamantes Anthony Frutos Springer Schultz	City of Burbank City Council	The commenter states the EIR does not present a reasonable range of alternatives and suggests the Authority consider alternatives that tunnel the alignment through Burbank, relocate conventional tracks to the HSR tunnel/trench corridor, place conventional tracks and HSR tracks on a shared, electrified track, and reduce the station footprint. The commenter states that IAMFs and mitigation measures (specifically TRAN-MM#1) do not provide specificity or surety that impacts would be less than significant. The commenter states that IAMFs should be mitigation measures and included in the MMEP. The commenter states that the baseline year was 2015, but with the delayed start of construction project buildout/operation should be adjusted. The commenter asserts to have provided empirical evidence that is more accurate than the data in the EIR/EIS. The commenter provided clarifications on the Authority's responses to the City's comments on the transportation network. The commenter noted that the City and the Authority, during Section 4(f) consultation discussions, identified that the San Fernando Bikeway would be constructed as a Class IV bike path on Victory Boulevard, consistent with the City's Complete Streets Plan. The commenter provided clarification that this improvement, if required, should be a raised, sidewalk-level, protected Class IV bike path. The commenter states that the proposed project further divides established neighborhoods, impacts transit-oriented development opportunities, and does not consider conventional rail improvements that help restore divided neighborhoods. The commenter states that project-specific mitigation to noise and vibration impacts are not identified. The commenter also states that the EIR is required to identify the locations where mitigation is not feasible and significant impacts remain. The commenter disagrees with the Final EIR/EIS response related to operational vibration. The commenter states that the project will impact significant City infrastructure (roadway, sewer, storm drain, and other municipal infrastructure) and disagrees that the Authority will not be required to obtain local permits. The commenter notes that HSR will need to get a permit for roadway work, which could be subject additional review under CEQA and mitigation imposed by City. The commenter indicates that BIO-MM#6 should be revised to reflect no tree removal. Alternatively, the commenter suggests that the response should be revised if tree removal would still occur. The commenter requests the Authority identify specific impacts to the City's infrastructure maintenance and benefits to offset such impacts. The commenter states that the EIR/EIS does not adequately disclose the electric power requirements for the station.	The commenter requests that a project alternative or mitigation measure that extends the tunnel and trench sections further east of the planned daylighting location near Hollywood Way to 1) Victory Place and 2) south of downtown Burbank near the I-5 rail grade separation at Providencia Avenue should be analyzed. The Preferred Alternative selected reflects one that takes advantage of the existing rail corridor allowing for efficiencies while avoiding duplicative efforts to the existing rail infrastructure, where possible. The benefit of using existing rail infrastructure does not create significant new impacts and is consistent with the proposed alignment as it travels through the remaining corridor cities to Los Angeles Union Station all the way south to HSR's terminus in Anaheim. Locating HSR tracks below grade for an additional portion of the alignment would have cost and constructability impacts. A significant amount of dirt would need to be excavated, and construction staging time would be significant given the need to keep the corridor operating during construction for the existing trains. The Authority previously considered alternatives that extended the trench section further south, and it was determined that it was infeasible due to cost and potential subsurface impacts related to utilities, the Lockheed and Burbank Western Channel, and seismic concerns. The commenter requests that a project alternative or mitigation measure that places conventional tracks adjacent to the proposed high-speed tracks in the same trench or tunnel be analyzed. This alternative is infeasible since freight tracks have different design requirements, such as grade, and would not fit within the planned trench. In order for the planned trench to be able to accommodate conventional tracks, the footprint would have had to be expanded, resulting in additional property impacts. The commenter requests that the Authority analyze a project alternative that places high speed trains and conventional trains on the same set of tracks by electrifying the conventional trains to reduce the project's footprint and environmental impacts to Burbank. This alternative is infeasible since UPRR cannot operate on shared electrified track without modifications to the overhead catenary system. Additionally, the modifications would not meet HSR design criteria. Lastly, the commenter requests that the Authority consider a reduced station footprint design alternative that reduces private property acquisition, surface parking area, and associated urban heat island effects. The EIR/EIS conservatively identified parking facilities based on the maximum forecast for parking demand at each station and the local conditions affecting access planning. This approach results in providing the upper range of actual needs and the maximum potential environmental impacts of that range. The Authority has committed to developing a multi-modal access plan prior to design and construction at Burbank Airport Station. This plan will be done in coordination with the City of Burbank and with the BGPAA and will include a parking strategy that will inform the final location, amount, and phasing of parking. As described in Section 2.5.2.10 of this Final EIR/EIS, as part of the Tier 1 decision, the Authority and FRA committed to integrate programmatic impact avoidance and minimization features (IAMF) into the HSR project. The Authority has developed IAMFs that are applicable to this project section. IAMFs include standard engineering or industry practices, actions, and design features that the Authority has employed during the design of the project section or would employ as part of standard agency requirements during design and construction. Like the mitigation measures described in Chapter 3 of this Final EIR/EIS, the project IAMFs are a condition of project approval and must be implemented by the Authority during design, construction, and operation of the Project. As stated in Section 3.2.7, all of the improvements included in TRAN-MM#1 would take place within existing city rights-of-way. No impacts would occur from modifying signal phasing and timing, because these changes are done electronically to the existing signals. Adding signals would generally be done within the existing pavement or disturbed graded right-of-way. Temporary traffic, noise, and dust impacts could occur to nearby properties; however, the construction at these locations would be limited in duration. Restriping would take place within existing pavement and could result in temporary traffic, noise, and air quality impacts. Additionally, yellow paint containing lead may need to be removed at some of the locations requiring restriping. The IAMFs and mitigation measures in Section 3.2, Transportation; Section 3.3, Air Quality and Global Climate Change; Section 3.4, Noise and Vibration; and Section 3.10 Hazardous Waste and Materials would be implemented for the intersection improvements and would address the traffic, noise, air quality, and hazardous waste impacts. Additionally, implementation of TRAN-MM#1 would benefit local circulation in the area by improving traffic operations. Because the intersection improvements would be permanent, these benefits would continue after completion of construction of the HSR Build Alternative. For these reasons, impacts from implementing the intersection improvements listed in TRAN-MM#1 would be less than significant and would be consistent with the City of Burbank's general plan and transportation network. The commenter expresses concern that 2015 was used for the baseline conditions and construction impact analysis. CEQA allows for the baseline to be set at the time of the issuance of the Notice of Preparation. As the NOP was issued in 2014 and the technical analysis for the TTR was initiated in 2015, this provided the appropriate baseline conditions for the analysis. To verify if any analysis changes might be warranted by an evaluation of future-year conditions using the 2016 RTP/SCS growth factors, a sampling analysis was conducted for the Burbank portion of the RSA. The analysis of volume percentage changes between the 2012 RTP and the 2016 RTP/SCS growth sources is provided in Response to Comment 789-1891 in Volume 4 of the Final EIR/EIS. Based on the analysis of the volume growth increase above, the significant impact determinations from the traffic analysis would remain unchanged with the application of these volumes. The commenter provided clarifications on the Authority's responses to the City's comments on the following features of the transportation network:

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09 (Continued)	Jess Konstantine Bob Sharon Nick	Talamantes Anthony Frutos Springer Schultz	City of Burbank City Council		• The commenter expressed concern regarding the temporary closure of Avon Street and requested clarification on the detour requirements for this roadway. The Authority confirms that the response to the City's original comment on the Draft EIR/EIS referenced Hollywood Way, and not Avon Street. Although the current design proposes the closure of Avon Street at Empire Avenue, this construction phasing is preliminary and will be determined as part of the Construction Transportation Plan (TR-IAMF#2). Details regarding detours during project construction would be provided during final design and in coordination with the City of Burbank. • The commenter expressed a concern over impacts caused by the closure of Victory Place between Lake Street and just south of Empire Avenue and that the Final EIR/EIS does not adequately identify construction impacts related to the lack of detours for this facility and its proximity to a regional shopping center. Victory Place would not be closed down during construction. It may be used as a detour route. • The commenter expressed concern that the proposed construction impact mitigation at the Hollywood Way/Victory Boulevard intersection would actually worsen delay at the intersection and that the Authority's response to this comment in Volume 4 of the Final EIR/EIS did not provide evidence that the proposed mitigation will actually improve conditions during construction. Based on the analysis of Mitigation Measure TRAN-MM#1 provided in the Final EIR/EIS, adding a second northbound left-turn lane, even with the phase change, would reduce delay and fully mitigate the impact at this intersection. In addition, as stated in Section 3.2.7 of the Final EIR/EIS, secondary traffic impacts related to mitigation for this intersection could include construction-related lane closures or traffic delays and construction equipment and construction activities could result in impacts to nearby commercial properties related to emissions, fugitive dust, and noise. In addition, yellow striping containing lead could be removed. However, the IAMFs and mitigation measures in Section 3.2, Transportation; Section 3.3, Air Quality and Global Climate Change; Section 3.4, Noise and Vibration; and Section 3.10 Hazardous Waste and Materials would be implemented and would address the traffic, noise, air quality, and hazardous waste impacts. In addition, because the intersection improvements would be permanent, these benefits would continue after completion of construction of the HSR Build Alternative. • The commenter expressed concern that the proposed construction impact mitigations at the Buena Vista/San Fernando, Buena Vista/Victory, Magnolia/Victory, and Olive/First, intersections would actually worsen delay at the intersection, and stated that the Authority's response to this comment in the Final EIR/EIS did not provide evidence that the proposed mitigation will actually improve conditions during construction. The commenter further stated that certain changes that the Authority did make to these mitigations were not reflected in the FEIR/FEIS. In response to the City of Burbank's comments on the Draft EIR/EIS, the Authority reexamined the analysis at multiple intersections, using parameters or information provided by the city. The results of this re-analysis are explained in Volume 4, responses to comments 789-1964, 789-1967, 789-1971, and 789-1972, along with a description of any changes that were deemed necessary for the mitigation measures. The commenter also expressed concern that given the lack of specificity in how impacts to emergency access will be addressed, the commenter continues to believe that unidentified significant construction impacts will be caused by the project since the commenter stated that the Final EIR/EIS did not consider an adequate range of additional mitigation measures (which should not be IAMFs). As stated in Section 3.2.8.1 of the Final EIR/EIS, law enforcement, fire, and emergency services would experience increased response times due to construction-related road closures, detours, and increased traffic congestion in some locations. However, emergency vehicle access for police and fire protection services would be maintained at all times and construction would be phased to prevent concurrent closures from limiting emergency access. TR-IAMF#1, TR-IAMF#2, TR-IAMF#3, TR-IAMF#6, TR-IAMF#7, and SS-IAMF#1 would minimize impacts related to emergency access. The CTP (TR-IAMF#2) and CSTMP (SS-IAMF#1), which would include provisions to maintain 24-hour access for emergency vehicles, would be reviewed and approved by affected emergency responders and the affected cities to ensure that the HSR project does not affect emergency vehicle access during the construction period and would state that the Authority requires its contractor(s) to prepare these plans in close consultation with the local jurisdictions having authority over the impacted roadways. Specific detour routes and the duration of street closures will be identified during final design when more specific construction durations can be defined. It should be noted that both IAMFs and mitigation measures are enforceable commitments made by the Authority and are both included in the Mitigation, Monitoring, and Reporting Program. Finally, the commenter states that explicit mitigation measures (not IAMFs) are necessary to address impacts to City streets should identify the explicit mechanism whereby the Authority or the City may enforce the obligation for the contractor to abide by the mitigation measures and repair damaged streets. TR-IAMF#1 specifically requires that the Authority's Contractor would be responsible for the repair of any structural damage to public roadways caused by HSR construction or construction access, returning any damaged sections to the equivalent of their original pre HSR construction structural condition or better. As stated previously, an IAMF is an enforceable commitment made by the Authority.

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09 (Continued)	Jess Konstantine Bob Sharon Nick	Talamantes Anthony Frutos Springer Schultz	City of Burbank City Council		The Authority acknowledges that if the San Fernando Bikeway improvement is required, it will need to be constructed consistent with the City's Complete Streets Plan. As stated in Response to Comment 789-1904 in Volume 4 of the Final EIR/EIS, the portion of the bikeway affected by the HSR Build Alternative will be rerouted as a Class IV separated bikeway along Victory Boulevard, approximately 600 feet to the west of the Burbank Water Reclamation Plant. Per PR-MM#4, the Authority will consult with the City of Burbank to identify an alternative route for the continuation of the lost use and functionality of existing or panned bicycle routes permanently impacted by the HSR Build Alternative, including maintaining connectivity. Conversations between the Authority and the City of Burbank to provide connectivity for the San Fernando Bikeway will continue during consultation in fulfillment of the requirements of Mitigation Measure PR-MM#4. The commenter states that the FEIR/FEIS should consider how making improvements to the Olive Avenue and Magnolia Boulevard Bridges could lessen the impacts that the project has on dividing Downtown Burbank. The HSR Build Alternative does not impact these bridges and therefore there is no nexus for the Authority to improve these overcrossings. However, as stated in Response to Comment 789-1908 in Chapter 21 of the Final EIR/EIS, although the HSR system would not serve the Downtown Burbank Metrolink Station, the HSR Build Alternative would construct modifications at the station to ensure continued operations of existing operators. Pedestrian bridges would be provided for passengers to cross over the HSR tracks to access the Metrolink platforms. Other accessibility improvements would include additional vehicle parking, bus parking, and bicycle pathways. These improvements would maintain public access to the Downtown Burbank Metrolink Station and therefore, the HSR Project would not permanently disrupt TOD development in Downtown. The commenter also states that the Final EIR/FEIS does not fully analyze how the construction of a surface-grade high speed train will impact the City's need to build more housing in Downtown Burbank and connect that housing to regional transit at the Downtown Burbank Metrolink Station. As stated in Response to Comment 789-1908 in Chapter 21 of the Final EIR/EIS, current land use trends would likely change with the presence of the HSR Build Alternative, as operation of the HSR Build Alternative and local government planning would encourage denser, more compact urban development around the Burbank Airport Station. However, in the area surrounding the proposed Burbank Airport Station, any future development would not include residential uses due to the area's proximity to Hollywood Burbank Airport. Residential land uses are generally incompatible with airport operation due to community noise exposure and the establishment of Safety Zones (i.e., areas near airports in which land use restrictions are established). The commenter further states that the Final EIR/EIS fails to address impacts caused by removal of significant amounts of private land around the Downtown Burbank Metrolink Station and along the rail corridor between Burbank Boulevard and Providencia Avenue, including undeveloped land immediately to the west of the station, and lower-intensity industrial uses south of the station along Flower Street that have future potential to be developed as more intense TOD. As described in Section 3.13.6.3, following construction of the HSR Build Alternative, the Authority would review all property acquisitions and evaluate whether all acquired land extending outside the area required for operation and maintenance of the HSR Build Alternative is needed. If not, the Authority may declare the property excess so the land may be disposed. To do so, the Authority would need to follow procedures set forth in Public Utilities Code Section 185040, which regulates the sale or exchange of property owned by the Authority. The sale and redevelopment of any land declared excess (i.e., remnant parcels) would allow such land to revert to its previous existing use or develop with uses in accordance with applicable local government land use plans and regulations. The Authority's policies would help ensure that implementation of the HSR project would maximize station area development and serve the local community and economy, while increasing HSR ridership. The commenter continues to be concerned that the Project proposes to create a series of surface parking lots around the proposed Burbank Airport Station, which significantly reduces TOD opportunities around the station and encourages more local automobile traffic to access the station. The parking lots shown on Figure 2-29 in the Final EIR/EIS are part of a preliminary station plan and includes a conservative estimate of parking spaces based on the maximum forecast for parking demand. As stated previously, the Authority has committed to developing a multi-modal access plan prior to design and construction at the Burbank Airport Station. This plan will be done in coordination with the City of Burbank and with the BGPAA and will include a parking strategy that will inform the final location, amount, and phasing of parking. The commenter suggests that the project should offset potential land use impacts that further divide established neighborhoods by consolidating the grade separation at Victory Place and the 80-year old conventional rail grade separation into one common rail corridor overpass that improves connectivity across the combined corridor. The existing bridge at Victory Place is not being replaced by the HSR Build Alternative. Therefore, since the Project is not affecting the existing bridge, there is no nexus to reconstruct this grade separation. The commenter further states that the Authority's response to the request by the City in their comment letter on the Draft EIR/EIS to grade separate the immediately adjacent conventional rail tracks when the Project constructs the grade separation at Buena Vista Street was not substantiated. As stated in Response to Comment 789-1911 in Chapter 21 of the Final EIR/EIS, the grade requirements for UPRR make a grade-separation at Buena Vista Street infeasible since UPRR does not allow grades higher than 1 percent and the HSR Build Alternative would require grades of 2 percent or higher. In order to accommodate these requirements, the railroad corridor west of Hollywood Way would have to be impacted to give enough clearance for UPRR to cross under Buena Vista Street.

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09 (Continued)	Jess Konstantine Bob Sharon Nick	Talamantes Anthony Frutos Springer Schultz	City of Burbank City Council		The commenter states that it cannot identify the locations where the sound barriers are effective or not and that CEQA requires the identification of each location where mitigation is not feasible and where impacts remain significant. Specific locations of impacts that remain significant cannot be identified at this time since N&V-MM#3 and N&V-MM#6 have not been fully implemented. Per N&V-MM#6, additional noise and vibration analyses will be conducted during final design and specific mitigation measures including building sound insulation and noise easements will be determined. The commenter states that the means by which the noise attenuation is achieved at each location is important as sound walls and other physical or structural mitigation techniques have their own potential environmental impacts. If the community does not know what type of noise mitigation improvement is to be utilized, the community cannot comment on the potential environmental impacts of such improvements. While the specific type and location of mitigation will be determined during final design, the potential impacts of each mitigation measure are discussed in Section 3.4.7 of the Final EIR/EIS and impacts from potential mitigation were determined to be less than significant. The commenter requests the Authority provide substantiation that vibration impacts caused by the operation of the Project would not require mitigations to the Olive Avenue and Magnolia Boulevard bridges. The commenter cites Section 3.4.6.3 of the EIR/EIS, as identifying operational vibration impacts that would require mitigation. However, the significant operational vibration impacts identified in Section 3.4.6.3 are to sensitive receivers and buildings, such as residences, recording studios, and theaters. HSR operations would not cause vibration impacts to the Olive Avenue and Magnolia Boulevard bridges, because of the structure type (reinforced concrete). The vibration generated by operation of HSR would be lower than the current vibration generated by freight and commuter trains that the bridge is experiencing, especially at the relatively low speeds the HSR would be traveling at in this area. Additionally, traffic on the bridge, including heavy trucks and other large vehicles generate vibration in the bridge at expansion joints that would be greater than what would be generated by HSR trains. Overall, the level of vibration generated by all the vehicles, including HSR, is several orders of magnitude below the thresholds for damage for structures of this type. The commenter states that pursuant to Burbank Municipal Code Section 7-1-202, the Authority and its contractors may not perform any excavation or construction within any City street, whether owned by the City in fee or easement, without first obtaining a permit to do so. As shown in Table 2-21, Anticipated Environmental Reviews, Permits, and Approvals, the Authority will obtain approval from the City of Burbank for construction and use of City right-of-way. The commenter also stated that, prior to the City's issuance of construction and/or excavation permits, the City will have to assess whether changes in the Project or changes to the environment since certification of the Final EIR, or new information which was not discussed in the Final EIR, reveal either new potentially significant impacts to the environment would occur, or there could be a substantial increase in the severity of previously identified significant impacts for which mitigation has not been incorporated into the project. The Authority will continue to work the City to identify any novel impacts as the design advances. The commenter states that because the construction footprint has been minimized to avoid impacts to all trees, then the Final EIR/EIS needs to make revisions to Impact BIO #6 to acknowledge that tree removal would no longer occur. The Authority is acknowledging and clarifying via this response that the construction footprint has been minimized to avoid impacts to trees, and impacts to all trees would be avoided or minimized with BIO-IAMF#1, BIO-IAMF#3, BIO-IAMF#5, BIO-IAMF#8, BIO-IAMF#9, BIO-IAMF#10, BIO-IAMF#11, HMW-IAMF#6, HYD-IAMF#1, HYD-IAMF#, and AQ-IAMF#1. This is consistent with the Final EIR/EIS. The commenter is requesting HSR to identify specific impacts to the City's infrastructure maintenance (e.g., roadways, waste disposal, new improvements to Burbank's infrastructure, and stormwater system) and benefits to offset such impacts. The commenter requests further detail than what was provided in the response to the City's comment on the Draft EIR/EIS. Impacts to infrastructure maintenance are preliminary and based on 15% design and additional details regarding specific impacts and benefits will be fine-tuned in advanced design phases. The commenter remains concerned that the electric power requirements for the station are not disclosed to enable the City to determine if its public utility can meet the demands of the proposed project. The HSR system is currently analyzed as if it would be powered by the state's current electric grid. This is a conservative assumption because of the state requirement that an increasing fraction of electricity (50 percent by 2030) generated for the state's power portfolio come from renewable energy sources. As such, the emissions generated for the HSR system are expected to be lower in the future than the emissions estimated for this analysis. Power for the future Burbank Airport Station will be sourced from Burbank Water and Power and the Authority will coordinate with Burbank Water and Power during advanced design. Furthermore, under the 2013 Policy Directive POLI-PLAN-03, the Authority has adopted a goal to purchase 100 percent of the HSR system's power from renewable energy sources.

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10	Josh Edward	Hertz Morrissey	Atwater Village Neighborhood Council	Release date of Final EIR/EIS in November instead of September reduced public review time before the HSR Board meeting by 2 months. Request for further clarification of how and who decides whether a "gate" is passed (in the Stage Gate process) regarding the Burbank to Los Angeles project section. Request the ombudsman be hired and assigned before the beginning of Stage 3 and request that this person is a representative for the Atwater Village Neighborhood Council for the design and development stages, in addition to construction. Request that there is one ombudsman dedicated to each environmental justice community, for example people who are low income, older adults, people of color, environmentally burdened, etc. Request that the ombudsman that represents Atwater Village lives or works within a half mile of the Burbank to Los Angeles project corridor. Effects that the HSR Project will have on the overall North/South connectivity in Atwater Village, particularly in North Atwater. There is no route to safely connect to North/South routes along Alger St and West San Fernando road features for community usage. The HSR Build Alternative should be addressed as a whole (including Metro's Salem/Sperry Street project), which would result in disproportionately high, adverse effects on Atwater Village requiring significant mitigation. The San Fernando Railroad Bike Path should be moved to the Atwater Village side of the HSR Corridor and HSR should acquire a permanent easement within the Metro-owned right-of-way in a high minority area with impacts to low-income populations. This would serve as a mitigation measure for losses to the Atwater Village community and alternative for the planned San Fernando Railroad Bike Path. The HSR project will widen the existing overpasses at Glendale Blvd and Los Feliz Blvd, increasing the pedestrian distances for our small and isolated community. Metro and HSR should work together to provide NO HORN benefits to adjacent residents and fulfill the "NO HORN " promise touted in public meetings. Atwater Village will most likely not reap the economic benefits of HSR given that our community is adjacent to the rail line yet not near a station.	The commenter expresses frustration over receiving less time than originally anticipated to review the Burbank to Los Angeles Final EIR/EIS. The HSR Authority would like to note that even if the Final EIR/EIS had been completed and released for review in September 2021, the HSR Board Meeting would still have occurred two months later in November 2021. The HSR Authority would like to thank the Atwater Village Neighborhood Council for completing their review of the Final EIR/EIS and providing thoughtful comments. The commenter requests further clarification of how and who decides whether a "gate" is passed (in the Stage Gate process) regarding the Burbank to Los Angeles project section. Per the Stage Gate process (refer to the Authority's 2020 Business Plan https://hsr.ca.gov/wp-content/uploads/docs/about/business_plans/2020_Business_Plan.pdf), the Authority applies criteria to determine whether a project should advance to the next stage, assesses the risks and benefits of moving to the next stage, and evaluates whether the project has completed the requirements for that specific stage. While the process will be structured, it will also provide flexibility to evaluate and select the appropriate project delivery/procurement strategy, such as design-build, design-bid-build or other approaches. As the Authority advances capital projects through the Stage Gate process, the Authority will manage the process through an integrated, multidisciplinary team and with the Authority's regional teams that engage with local communities and stakeholders. The HSR Authority acknowledges the request for one ombudsman dedicated to each environmental justice community, including the specific request that the ombudsman representing Atwater Village live or work within one half mile of the Burbank to Los Angeles Project Section. The HSR Authority understands the importance of the role an ombudsman and the value an ombudsman can provide on a project as an official public advocate. While the HSR Authority cannot commit to providing one ombudsman for each environmental justice community, the HSR Authority can commit to taking this request under consideration and looks forward to continuing to work with the Atwater Village Neighborhood Council throughout all phases of the project, including design, construction, and operations. This comment appears to suggest that Metro's plans to replace the existing at-grade railroad crossings at Doran Street and West Broadway/Brazil Street with above-grade crossings and provide a new overpass connecting Salem Street in Glendale and Sperry Street in Los Angeles would serve as a barrier to north/south pedestrian and bicycle travel through Atwater Village. The commenter acknowledges that these projects would provide pedestrian and bicycle access; however, the commenter suggests that there is no route to safely connect to those features for community usage. As the commenter correctly noted, the Doran Street, West Broadway/Brazil Street, and Salem/Sperry Street grade separations are being planned and constructed by Metro rather than the California HSR Authority as those projects have independent utility from the HSR project. Therefore, Metro is serving as the lead agency for the environmental review on these grade separations. As of January 17, 2022, environmental documentation was not available for the Doran Street, West Broadway/Brazil Street, and Salem/Sperry Street grade separations. Therefore, the HSR Authority does not have any specific information regarding the environmental impacts associated with those projects on Atwater Village residents. This Metro project is described as an existing condition in Section 2.5.2.2 of the Burbank to Los Angeles Final EIR/EIS and is also included in Volume 3.1. The commenter suggests that the EIR/EIS failed to consider the cumulative and environmental justice impacts of the Salem/Sperry Street project on environmental minority and low-income populations in North Atwater. As noted in Table 3.19-2 in Section 3.19, Cumulative Impacts, of the EIR/EIS, the list of transportation and transit projects considered in the environmental analysis includes Project T26, the Doran Street/San Fernando Road SCRRA Crossing Grade Separation. Therefore, the EIR/EIS already considers the Doran Street, West Broadway/Brazil Street, and Salem/Sperry Street grade separations and assumes that they would be completed prior to the introduction of HSR service on the Burbank to Los Angeles project section. As noted above, the Doran Street, West Broadway/Brazil Street, and Salem/Sperry Street grade separations have independent utility from the HSR project, are being cleared under a separate environmental review process, and would be constructed by Metro before the HSR project would operate between Burbank and downtown Los Angeles. Therefore, it would be inappropriate to consider those improvements as part of the project. As described in Chapter 5, Environmental Justice, of the EIR/EIS, after considering IAMFs, proposed mitigation measures, and benefits of the HSR Build Alternative, the Authority has determined that the HSR Build Alternative would not result in disproportionately high and adverse environmental effects on low-income and/or minority populations. For the Proposed San Fernando Railroad Bike Path, the Authority is responsible for implementing PR-MM#4 to consult with the official with jurisdiction to identify alternative routes to maintain connectivity. The official with jurisdiction is the City of Glendale. The commenter may propose the reroute to the OWJ and request that it be considered when the Authority consults with the OWJ. Additionally, the Authority's Board Resolution #HSRA 22-03 directs staff to develop a framework for consultation of neighborhood associations as project design advances and areas of partnership with neighborhood associations involved in enhancing HSR-adjacent public paths. Chapter 5 of the Final EIR/EIS also includes EJ-IAMF#5 which requires the Authority to seek input from impacted EJ communities on the relocation of bike paths by adhering to a community-inclusive process to reroute bike paths in EJ communities to avoid or minimize adverse impacts to EJ communities from the relocation of planned or existing bike paths. The Authority will consider all suggestions identified by neighborhood associations consulted within these frameworks or partnerships, including suggestions related to the possible reroute of the San Fernando Railroad Bike Path and will coordinate with the OWJ for this resource to determine its feasibility prior to establishment of the permanent easement or permanent conversion of the Metro-owned lands.

#	First Name	Last Name	Business/ Organization	Summary of Stakeholder Comments/Issues	Response/Status Update
10 (Continued)	Josh Edward	Hertz Morrissey	Atwater Village Neighborhood Council		The commenter states that the HSR project will widen the existing overpasses at Glendale Blvd and Los Feliz Blvd. While the overpass will be widened to accommodate HSR, existing pedestrian access and connectivity will not be disrupted at these existing overpasses. The commenter expresses concerns over the use of horns at the Glendale Metrolink Station and states that Metrolink uses horns at this location for pedestrian crossings. The commenter states that currently, the storage facility blocks the horn noise from the Glendale Metrolink Station. While Metrolink may still require the use of horns at the station, the noise analysis for the HSR Build Alternative accounted for the removal of the storage facility. As a result, sound barrier 1 is proposed in this area which will abate noise for the affected residents in this area. Although Atwater Village is located approximately 3.5 miles from the nearest planned HSR station (Union Station), the neighborhood would receive indirect economic benefits from construction of the HSR project in the form of temporary employment increases in regional employment. As described under Impact SOCIO #8, Temporary Construction Employment Resulting in the Need for Additional Community Facilities, in Section 3.12, Socioeconomics and Communities in the EIR/EIS, construction of the HSR Build Alternative is anticipated to create 25,060 additional direct, indirect, and induced jobs, most of which would be in Los Angeles County. These employment increases would strengthen the regional labor market and may lead to wage increases for workers in affected industries. The largest job growth is expected in the construction industry, followed by the retail trade sector. According to a recent economic development study prepared by the Los Angeles County Economic Development Corporation for the Northeast Los Angeles Riverfront District, an approximately 5.5 square mile area located along the Los Angeles River that includes Atwater Village and Elysian Valley, as well as portions of Lincoln Heights, Cypress Park, and Glassell Park, 5.8 percent of the labor force in the Northeast Los Angeles Riverfront District is employed in the construction industry and 12.3 percent of the labor force is employed in the retail trade industry.[1] By comparison, 2.7 percent of the labor force in Los Angeles County is employed in the construction industry and 10.3 percent is employed in the retail trade industry. Given this data, construction of the HSR Build Alternative is expected to result in greater economic benefits to Atwater Village than other areas of Los Angeles County where a smaller percentage of the population is employed in those industries. As described under Impact SOCIO #10, Temporary Sales Tax Revenue Gains and Losses from Construction, in Section 3.12, Socioeconomics and Communities in the EIR/EIS, approximately 17 percent of the total HSR spending on construction equipment and materials would occur within Los Angeles County, which would result in benefits to local businesses. Although it would be speculative to estimate how many of these purchases would occur in Atwater Village, it is reasonable to assume that HSR construction in the vicinity of the neighborhood would result in some revenue for Atwater Village businesses as construction workers are likely to patronize nearby businesses for their food and fuel purchases.

[1] Los Angeles County Economic Development Corporation. The Path Forward: Economic and Workforce Intelligency. July 2013. Website: https://laedc.org/wp-content/uploads/2013/09/NELA_The-Path-Forward_FINAL.pdf (accessed on January 17, 2022).

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11	Ginetta	Giovinco	Burbank-Glendale-Pasadena Airport Authority	The Final EIR engages in impermissibly deferred analysis and mitigation regarding construction impacts. The Final EIR engages in impermissibly deferred analysis and mitigation regarding conflicts with the Airport Layout Plan. The Final EIR must be revised and recirculated.	The commenter states that rather than fully analyzing and mitigating construction-related impacts at this time, including potential impacts to the safety of Airport operations, the Authority, as part of TR-IAMF#2, is simply requiring preparation of a plan at an unspecified time in the future. As detailed in Appendix 2-B, TR-IAMF#2 requires the contractor to prepare a detailed Construction Transportation Plan (CTP) that would be reviewed and approved by the Authority and coordinated with the City of Burbank and BGPAA before the contractor commences any construction activity. Therefore, the time frame in which this IAMF will be implemented is not unspecified. The commenter further states that TR-IAMF #2 contains no benchmark standards for what the CTP must include or what will be required to avoid significant impacts and, as a result, the Final EIR's response is vague and conclusory, and fails to comply with CEQA. Appendix 2-B of the Final EIR/EIS provides the full text of TR-IAMF # 2 with a list of the elements of the CTP, including but not limited to: detour provisions, construction traffic routes, provisions to minimize access disruptions, provisions for 24-hour access by emergency vehicles, safe vehicular and pedestrian access, and temporary signage. The CTP would provide controls pursuant to Caltrans Manual on Uniform Traffic Control Devices sections on Temporary Traffic Controls and would also take into consideration peak periods for airport travel. The overall CTP requirement is "maintaining traffic flow during peak travel periods." Therefore, TR-IAMF#2 does include benchmark standards. The commenter also states that the EIR/EIS lacks a stable and finite project description, and leaves open the significant possibility that new or greater impacts will occur based on a change in project design near the Airport's RITC for which there will be no formal, public review of potential impacts. The commenter further questions how it is known that these impacts and conflicts will be resolved to the satisfaction of BGPAA and, if they are not, what mitigation will be imposed to alleviate impacts; in the event the project will be changed when will those changes be analyzed and made available for public review and comment. Alternatives development for the Burbank to Los Angeles Project Section was part of a lengthy Tier 2 process that occurred with extensive public involvement opportunities, described in Section 2.4 of this EIR/EIS. Chapter 2, section 2.5.2 contains a detailed description of the HSR Build Alternative, augmented by Appendix 3.1-A, Parcels Affected by the Project Footprint, and Preliminary Engineering Drawings contained in Volume 3. Sufficient detail is included to develop the impacts analysis included in the Final EIR/EIS. The HSR Build Alternative design changed only slightly between the Draft EIR/EIS and Final EIR/EIS, as summarized in Section S.2.1, Engineering and Design Refinements, and described in Appendix 3.1-C, Evaluation of Engineering and Design Refinements since Publication of the Draft EIR/EIS. For major infrastructure projects, changes in design are not uncommon due to unanticipated new information resulting from advanced design. If the Authority makes design changes during advanced design of the HSR Build Alternative, including design changes in coordination with BGPAA under SS-IAMF#6, the Authority will follow CEQA and NEPA procedures for assessing changes to approved projects. Depending on the magnitude of any change of the design, additional CEQA and NEPA documents may be required, and could include supplemental analysis circulated for additional public review and comment. The commenter states that the Final EIR engages in impermissibly deferred analysis and mitigation regarding conflicts with the Airport Layout Plan (ALP) and expresses concern regarding the ramifications if BGPAA does not support the requested amendments to the ALP or the FAA does not grant them. The commenter requests more information on the Authority's plan for dealing with what it characterizes as unmitigated impacts arising from inconsistency with the ALP in its current form as the ALP helps to ensure that incompatible land uses, which could affect the safety of airport operations, do not occur. As stated in Section 3.12 of the Final EIR/EIS, above-ground and below-ground construction activities related to the HSR Build Alternative within or adjacent to the boundary of the Hollywood Burbank Airport do not obstruct air navigation or cause hazards related to airfield operations. Therefore, there are no unmitigated impacts related to inconsistencies with the ALP. The Authority notes that amending the ALP cannot be advanced until the Authority approves the HSR project and advances design. The Authority anticipates that the update to the ALP would have a limited scope; a ventilation structure would be needed approximately 1,000 feet south of the runway, but it would be in a location where it would be consistent with existing structures in the same location (see Volume 3.2, sheet TN-C1002). This is the only facility that may trigger an amendment to the ALP. Other above-ground elements of the HSR project on airport property would be temporary and would be handled through a Form 7460-1. The Authority submitted Form 7460-1 to the FAA for review in October 2019 and the FAA notified the Authority in March 2020 that they did not foresee impacts to airport operations from HSR construction, and asked that the Authority continue to coordinate as the Project got closer to construction. Therefore, the Form 7460-1 will be resubmitted closer to construction. The Authority is committing to work directly with the BGPAA and the FAA to secure all necessary approvals. As noted above, the Authority will follow CEQA and NEPA procedures for assessing design changes that are necessary to secure ALP amendments and other necessary approvals. Depending on the magnitude of the proposed design changes, the Authority may supplement the Final EIR/EIS analysis. Finally, the commenter states that the Final EIR must be revised and recirculated. Revisions to the EIR/EIS between the Draft EIR/EIS circulated for public review and the Final EIR/EIS clarify and amplify information provided in the Draft EIR/EIS and do not introduce significant new information under CEQA Guidelines Section 15088.5, and do not meet the supplementation requirements of 40 C.F.R. 1502.9(c)(1) under NEPA. On January 20, 2022, the Authority Board of Directors certified that the Final EIR has been completed in compliance with CEQA.

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12	Kimberly	Bick	Lockheed Martin Corporation	Because the Project is only at 15 percent design at this date, and all infrastructure has not yet been identified, Lockheed Martin is not able to fully comment on all details of design or all potential impacts that may require mitigation. Lockheed Martin appreciates the opportunity for ongoing collaboration with the Authority to ensure all impacts of the Project to the Burbank Operable Unit remedy are identified and mitigated without impairing the efficacy of the remedy or interfering with the provision of drinking water from the remedy for the duration of the remedy, as required by EPA, the RWQCB, and DDW. Lockheed Martin does not object to the Project, provided the Authority mitigates impacts as discussed, collaborates and informs stakeholders, including Lockheed Martin, as the design of the Project continues, enters into enforceable agreements to implement the Project, and pays for the costs associated with any and all mitigation of impacts to the Burbank Operable Unit remedy.	As stated in Responses to Comments 898-1764 through 898-1769 and in meeting held with the Burbank Operable Unit on January 6, 2022, the Authority is committed to working with the stakeholders, including Lockheed Martin, as the design of the Project continues. In addition the Authority is committed to entering into enforceable agreements to implement the Project, and pay for the costs associated with ensuring that municipal water supplies and the effectiveness of the Superfund Site clean-up remedies for the Burbank Operable Unit are not impaired by construction and operation of the Project.
13	Leah	Theilacker	Representative for the Potentially Responsible Parties for in United States of America and the State of California v. ITT LLC, et. al., Case No. CV 99-005522	Because the Project is only at 15 percent design at this date, and all infrastructure has not yet been identified, the PRPs are not able to fully comment on all details of design or all potential impacts that may require mitigation. The PRPs appreciate the opportunity for ongoing collaboration with the Authority to ensure all impacts of the Project to the Glendale Operable Units remedy are identified and mitigated without impairing the efficacy of the remedy or interfering with the provision of drinking water from the remedy for the duration of the remedy, as required by EPA, the RWQCB, DDW and the City. The PRPs do not object to the Project, provided the Authority mitigates impacts as discussed, collaborates and informs stakeholders, including the PRPs, as the design of the Project continues, enters into enforceable agreements to implement the Project, and pays for the costs associated with any and all mitigation of impacts to the Glendale Operable Units remedy.	As stated in Responses to Comment 874-1645 through 898-1769 and in meeting held with the Glendale Operable Unit on January 12, 2022, the Authority is committed to working with the stakeholders, including the PRPs, as the design of the Project continues. In addition, the Authority is committed to entering into enforceable agreements to implement the Project, and pay for the costs associated with ensuring that municipal water supplies and the effectiveness of the Superfund Site clean-up remedies for the Glendale Operable Unit are not impaired by construction and operation of the Project.

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14	Marshall	Styers	Los Angeles Department of Water and Power	Request for identification of impacts to LADWP water facilities and coordination with LADWP continue during advanced design. Concern regarding the possibility of HSR construction and operation activities to damage tower foundations or infringe on conductor operations.	The commenter states that LADWP has determined that multiple water distribution facilities may intersect with the proposed HSR alignment and that impacts to LADWP or HSR cannot be determined from the maps provided. As stated in Section 3.6.6.3 of the Final EIR/EIS, although the EIR/EIS identifies many potential utility conflicts, some areas of potential conflict cannot be fully determined at this time. It is, therefore, likely that with a more detailed design, there may be additional conflicts with utilities than what are currently identified. However, these would be low-impact conflicts such as minor relocations of underlying utilities. The commenter requests that the Authority work with the Central Water District Distribution Engineering Group to determine the extent of overlap between the Project and LADWP's water facilities. As stated in Section 3.6.6.3, as part of PUE-IAMF#4, the Authority will require the contractor to prepare a technical memorandum documenting how construction activities would be coordinated with service providers to minimize or avoid any potential interruptions, for review and approval by the Authority. The commenter states that LADWP has determined that multiple transmission line right of ways and 40 transmission line towers (towers) are within proximity to, or are directly in the path of the proposed alignment of the Burbank to Los Angeles Project Section. The commenter further states that, due to the close proximity of these towers, LADWP is concerned by the possibility of HSR construction and operation activities to damage tower foundations or infringe on conductor operations. As stated in Response to Comment 783-1349 in Volume 4 of the Final EIR/EIS, it is anticipated that the HSR Build Alternative will remain within the existing rail right-of-way outside of LADWP property except near Main Street where systems are proposed within the existing employee surface parking lot. It is also anticipated that the HSR Build Alternative will protect-in-place transmission towers along the alignment with the possible exception of the area near Main Street. The right-of-way sheets as contained in the PEPD plans in Volume 3 of this Final EIR/EIS demonstrate an impact at each respective parcel without details regarding the proximity to the parcel boundary. Volume 3.4 of the Final EIR/EIS provides grading and utility plans at a preliminary level. These designs are preliminary in nature and more detail will be developed during advanced design. The Authority will continue to coordinate with LADWP in future phases of design. In addition, as stated in Response to Comment 783-1363, the Authority will maintain a 50-foot unobstructed area around each LADWP tower.

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