Record of Decision
on the
Redlands Passenger Rail Project
in San Bernardino County, California
by the
Federal Transit Administration

Decision

The Federal Transit Administration (FTA) has determined that the requirements of the National Environmental Policy Act of 1969 (NEPA) and related federal environmental statutes, regulations, and executive orders have been satisfied for the Redlands Passenger Rail Project (the Project) in San Bernardino County, California.

This environmental Record of Decision (ROD) applies to the locally preferred alternative (LPA) as described and evaluated in the *Redlands Passenger Rail Project Final Environmental Impact Statement/Environmental Impact Report* (Final EIS/EIR). The FTA served as the federal lead agency under NEPA, and the San Bernardino Associated Governments (SANBAG) served as the local lead agency under the California Environmental Quality Act of 1970, as amended (CEQA).

SANBAG will seek financial assistance from FTA to implement the Project final design and construction. If FTA provides financial assistance for final design or construction of the Project, FTA will require the Project to be designed and built as presented in the Final EIS/EIR and in the ROD. Any proposed change must be evaluated in accordance with 23 Code of Federal Regulations (CFR) Section 771.129, and must be approved by FTA before the agency requesting the change can proceed.

Background

The purpose of the Project is to provide improvements to transit service in a way that maintains existing freight service in the Redlands Corridor between the Cities of San Bernardino and Redlands. The existing transit system does not offer the level of service needed to meet the region's goals for mobility, accessibility, reliability, and efficiency. The speed and reliability of bus service along the corridor is constrained by roadway congestion and the Santa Ana River, which bisects the roadway network. Roadway congestion is projected to increase in the future in conjunction with forecasted growth in population and employment. Therefore, the level of service, reliability, and efficiency of the bus transit system will decrease.

The Project will create new passenger rail operations along an approximately nine-mile corridor between E Street in San Bernardino and University Street in Redlands. The Project will provide a frequency of service, speed, and reliability that will better serve existing transit riders, serve future transit demand, and attract new ridership. The Project will reduce travel times, improve transit reliability and on-time performance, and improve connectivity to destinations in Redlands, Loma Linda, and San Bernardino.

Planning for the Project

In 1992, following the passage of San Bernardino County's Measure I in 1989, SANBAG purchased the Redlands Corridor with a vision to implement passenger rail service in the future. In 2001, the Southern California Association of Governments (SCAG) initiated a visioning process, known as the Compass Blueprint Program, resulting in a regional strategy to accommodate projected growth in Southern California. As part of this visioning process, SANBAG prepared various planning studies and reports to

explore transportation alternatives, station locations, and multi-modal transit development opportunities along the Redlands Corridor.

Following the reauthorization of Measure I in 2004 by San Bernardino County voters, SANBAG prepared multiple planning documents, including the Measure I 2010–2040 Strategic Plan (SANBAG 2009) and Long Range Transit Plan, Interim Project Report (2009). These planning documents led to the identification of the Project as a key project in the Measure I 2010–2040 Strategic Plan and inclusion in SCAG's 2012-2035 Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS). SCAG's RTP/SCS specifically identifies the Project as a means to address regional travel patterns within a delineated High Quality Transit Area.

SANBAG conducted public outreach meetings in 2010 and 2011 as part of an initial Alternatives Analysis to solicit public and agency comments on the Project. SANBAG initiated the environmental review process for the Project by filing a notice of preparation (NOP) for an EIR in compliance with CEQA on April 10, 2012 and conducted two public scoping meetings on April 24, 2012 in Redlands and May 2, 2012 in San Bernardino. The Notice of Intent (NOI) to prepare an EIS was published in the *Federal Register* on July 31, 2012. A Notice of Correction was issued in *the Federal Register* on August 17, 2012 to clarify the location and dates of the scoping meetings and to extend the scoping comment period, which originally had ended on August 31 to October 11, 2012. SANBAG conducted two additional public scoping meetings on September 25, 2012 in San Bernardino and September 27, 2012 in Redlands.

The Notice of Availability (NOA) of the Draft EIS/EIR was published in the *Federal Register* on August 15, 2014. In addition, on August 6, 2014, the NOA for the Project's Draft EIS/EIR was filed with the San Bernardino County Clerk's Office and sent to the government agencies, interested parties, and property owners and mailing addresses for all parcels adjacent to the nine-mile stretch of the Project. Copies of the Draft EIS/EIR, including the NOA, were also mailed to each of the Participating and Cooperating Agencies in the NEPA process (which also included Responsible Agencies as defined by CEQA). The Draft EIS/EIR was circulated for public review and comment over a 45-day period that concluded on September 29, 2014. Two public meetings were conducted during the course of the public review period on September 4, 2014 in Redlands and September 9, 2014 in San Bernardino.

Alternatives Considered

In early 2009, SANBAG acting in its capacity as the San Bernardino County Transportation Commission, embarked on an effort to prepare an Alternatives Analysis (AA). Early modal alternatives considered by SANBAG included transit infrastructure for commuter rail, DMU, bus rapid transit (BRT), and light rail transit (LRT). The alternatives screening considered the need to maintain freight movements along the railroad corridor, minimization of property acquisitions through the use of SANBAG's existing ROW, and avoidance of environmental resources. Transit modes requiring the construction of a separate, parallel track system or substantially increasing the Project's footprint, were not carried forward. Through this screening process, the use of diesel-powered locomotives or a DMU were determined to be vehicle options that would be compatible vehicle technologies to the existing freight service. The EIS/EIR considered the following build alternatives and design options:

- Alternative 1 – No Build Alternative
- Alternative 2 – Preferred Project Alternative
- Alternative 3 – Reduced Footprint Alternative
- Design Option 1 – Train Layover Facility (Waterman Avenue)
- Design Option 2 – Use of Existing Train Layover Facilities
- Design Option 3 – Waterman Avenue Station

Alternative 1 – No Build Alternative. Under the No Build Alternative, SANBAG would not implement passenger rail service. Local freight service would continue along the existing railroad requiring future maintenance to Class 1 standards. Routine maintenance of the existing track alignment and corresponding improvements at existing bridge structures, at Bridges 1.1, 2.2, and 3.4, and at-grade roadway crossings would be required in order to facilitate continued freight service. Existing bus service operated by Omnitrans would continue to provide transit service between San Bernardino and Redlands. This would include Omnitrans' bus routes 8 and 9 that operate at 60-minute headways with transit times ranging from 45 to 50 minutes between San Bernardino and Redlands.

Alternative 2 – Preferred Project Alternative. The Preferred Project Alternative involves the implementation of passenger rail service between E Street in the City of San Bernardino and the University of Redlands in the City of Redlands. Major components include: reconstruction of track, at-grade roadway crossings, and existing bridge crossings; construction of four new rail stations; various drainage and roadway improvements, and a new train layover facility at California Street. Passenger train operations would include local transit service, which would operate on 30-minute headways during peak hours and one-hour headways during non-peak hours during weekdays, and up to two express trains during the AM and PM peak hours.

Alternative 3 – Reduced Footprint Alternative. This alternative includes the development of the Preferred Project Alternative within a reduced footprint with the primary objective of minimizing disturbance to biological and historic resources that border and intersect the railroad corridor. Train operations and the remaining track infrastructure under this alternative would be the same as those identified for the Preferred Project. The changes in the Project's footprint under involve:

- Alternative design for Bridge 3.4 at the Santa Ana River;
- Reduced length of bank improvements along the Mission Zanja Channel (Gage Canal to Richardson Street);
- Reduced construction limits at the California/I-10 Citrus Grove; and
- Reduced roadway improvements at Sylvan Park.

Design Option 1 – Train Layover Facility (Waterman Avenue). Under Design Option 1, the proposed train layover facility would be constructed at an alternate site located in the City of San Bernardino, east of Waterman Avenue and immediately north of the existing railroad ROW.

Design Option 2 – Use of Existing Train Layover Facilities. Under Design Option 2, Project-related layover operations would be integrated with existing layover operations at Metrolink's Eastern Maintenance Facility (EMF) and Inland Empire Maintenance Facility (IEMF). This design option would not require bridge improvements at Bridge 5.78 (Bryn Mawr Road) or the flood control improvements of layover infrastructure.

Design Option 3 – Waterman Avenue Station. Under Design Option 3, the rail station located at Tippecanoe Avenue would be relocated to a vacant site east of Waterman Avenue and south of the railroad ROW.

After the consideration of comments received on the Draft EIS/EIR, the Preferred Project Alternative, as described in the Final EIS/EIR with the integration of Design Option 2-Use of Existing Layover Facilities) and Design Option 3-Waterman Avenue Station, was identified as the LPA. This alternative is also the preferred alternative under NEPA. Additional information on the LPA is provided in the section below.

Description of the Project

The Redlands Passenger Rail Project, or Preferred Project Alternative, as described in the Final EIS/EIR, is the subject of this ROD. The Project involves the operation of local transit service along the Redlands Corridor from the E Street Station and San Bernardino Transit Center (SBTC) in Downtown San Bernardino to the University of Redlands, east of Downtown Redlands. Metrolink service would also be extended to Downtown Redlands during peak commute hours. The Project would include construction of new single track infrastructure along a nine mile section of SANBAG right-of-way with an approximately 10,000-foot-long section of passing track or siding, from mile post (MP) 5.5 to MP 7.4. Operations would extend from the E Street Station and four new stations would be built at the following locations: Waterman Avenue, New York Street, Downtown Redlands (Eureka Street) and University Street. Construction is scheduled to begin in late 2015, with revenue service estimated to start in 2018 or 2019.

New service involves local transit operations between downtown San Bernardino and the University of Redlands on 30-minute headways during the peak morning and evening periods, and on one-hour headways during off peak hours and weekends. Up to two Metrolink express trains would run westbound in the AM peak period and eastbound in the PM peak period, originating/terminating at the Downtown Redlands Rail Station. The local transit service consists of three DMU train sets with the express trains being composed of a typical five or six-car Metrolink train set.

Alignment. The alignment would be located primarily within existing SANBAG right-of-way, which varies from 38 to 100 feet in width. In instances where the ROW is 50 feet or less, temporary construction activities could extend up to an additional 10 feet on each side of the ROW. From the Project's western extent, the track alignment would extend east from the E Street Station for approximately a half mile and across Warm Creek (MP 1.1) before turning south, east of Sierra Way. The alignment extends south one and half miles and across Twin Creek (MP 2.2) before transitioning back east, south of Orange Show Road. The alignment then runs east through southeastern portions of San Bernardino for approximately 3.5 miles and crosses the Santa Ana River (MP 3.4) and parallels the Mission Zanja Flood Control Channel, east of the Santa Ana River, for 2.5 miles to MP 6. Bridge replacements would occur at the Warm Creek Bridge, the Santa Ana River Bridge, Bryn Mawr Bridge (Mission Zanja Flood Control Channel), Gage Canal Crossing, and Mill Creek Zanja Bridge. Twin Creek Bridge would require retrofits. The Project would utilize the existing grade separation at the western crossing of Interstate 10 (I-10) and construct new pier protection walls.

South of I-10 and west of California Street, the alignment proceeds east through western portions of Redlands for approximately 2.5 miles before entering Downtown Redlands at MP 8.5. The alignment then proceeds through Downtown Redlands and the Redlands Santa Fe Depot Historic District for approximately one mile before crossing the Mill Creek Zanja at MP 9.4. The existing bridge would be replaced as part of the Project. East of the bridge crossing, the alignment passes under an existing grade separation at the eastern crossing with I-10. East of I-10, the alignment continues south of Sylvan Park and extends into the University of Redlands, east of University Street (MP 10).

The roadway and at-grade crossing closures proposed as part of the Project include D Street, Stuart Avenue, 7th Street, 9th Street and Hilda Street (adjacent to Arrowhead Road). Additionally, Dorothy Street (east of Sierra Way) would be modified to become a one-way right turn out only roadway, and a private at-grade crossing near New York Street would be closed

Stations. The Project includes five station stops with four new at-grade rail stations proposed. Two station stops (E Street and Waterman Avenue) would be located in the City of San Bernardino, while the other three (New York Street, Downtown Redlands, and the University of Redlands) would be located in the City of Redlands. The Project would tie into the E Street Station, which is currently under construction by the Downtown San Bernardino Passenger Rail Project. Each station platform would be

approximately 200 feet in length and constructed within SANBAG's right-of-way; however parking and other improvements may require right-of-way acquisition.

- *E Street Station* –Track improvements and an additional boarding platform would be required west of E Street to align the Project tracks with the E Street Station.
- *Waterman Avenue Station* – The station includes pedestrian and bike facilities and a surface parking lot consisting of 20 parking spaces. This would require the acquisition of the northern portion of an undeveloped, two-acre parcel located immediately north of the intersection of Park Center Circle and Waterman Avenue. The southern portion of the property would be made available for future development consistent with the site's current zoning.
- *New York Street St*ation – This station would be constructed at-grade, north of Redlands Boulevard and west of New York Street. The station improvements include pedestrian and bike facilities and a 30-space surface parking lot. This station would be developed jointly with ESRI, which owns properties surrounding the station site.
- *Downtown Redlands Station* – This station would be constructed at-grade east of Eureka Street in Downtown Redlands. Station improvements include pedestrian and bike facilities and connections to the City of Redland's Park Once Project or a 70-space at-grade surface parking lot.
- *University of Redlands Station* – This station would be located at-grade east of University Street and south of the University of Redlands. Station improvements include pedestrian and bike facilities and connections to the University, including parking facilities. This station would be developed jointly with the University of Redlands, which owns properties surrounding the station site.

Train Layover Facility. The Project-related layover operations would be integrated with existing train layover operations at Metrolink's Eastern Maintenance Facility (EMF) and Inland Empire Maintenance Facility (IEMF). Heavy maintenance or repair activities for the train vehicles would be conducted at the existing EMF facility in the City of Colton.

Basis for Decision

FTA has determined that the Project meets the purpose and need of the Project, as outlined in Chapter 1.0 of the Final EIS/EIR and discussed below.

Travel Demand. The Project will accommodate current and future travel demand. The growing travel demand is parallel with the population and employment forecasts that estimate significant growth in southwestern San Bernardino County through 2035. Though 2035, employment growth within San Bernardino and Redlands is projected to increase by 22 percent. Over that same period, population growth is anticipated to increase by 12 percent in San Bernardino and 14 percent in Redlands. Increased growth will contribute to more roadway congestion and generates more demand for alternative forms of transportation. Accordingly, the Project will meet this objective by providing a new transit option that would provide connectivity to the regional Metrolink system and the existing bus and non-motorized transportation network.

Transit Performance and Travel Time. Currently, travel times for existing bus transit service routes between Redlands and San Bernardino range between 45 to 60 minutes, depending on the bus route used. Due to existing roadway congestion along these routes, the current on-time performance for transit bus service averages approximately 70%. The Project will improve mobility options for the traveling public and reduce travel delays. The operation of passenger rail service along a dedicated transit route would improve transit reliability and on-time performance when compared to existing transit service, which operates in mixed-flow traffic. Implementation of the Project will reduce transit travel times along the

nine-mile Redlands Corridor to approximately 17 minutes, thereby substantially reducing existing transit travel times.

Regional connectivity. The Project will improve regional connectivity and mobility. The region's major highways have limited expansion potential, due in large part to constrained rights-of-way and the cost of right-of-way acquisition. The physical geography of the Redlands Corridor, which is bisected by numerous waterways including the Santa Ana River, has resulted in a discontinuous street network. Commuters rely on highways, such as I-10 to access major employment centers west of the Redlands Corridor in Orange and Los Angeles Counties. The Project will provide an alternative to travel on congested roadways and will improve connections to the regional multimodal transportation system. The Redlands Corridor will serve as a critical transit linkage for local population, activity, and employment centers situated along the corridor and in the Inland Empire, Orange County and Los Angeles County.

Public Involvement and Outreach

As described in Chapter 6.0 of the Final EIS/EIR, extensive outreach to the public and federal, state, and local agencies occurred as part of the preliminary design and environmental process since 2010. The public outreach activities included presentations for community, business, and transportation organizations; meetings with stakeholders; updates to the SANBAG Rail and Transit Committee; distribution of e-blasts; meetings of the Rail to Redlands Working Group; briefings of elected officials; and public meetings and hearing during circulation of the NOP, NOI, and Draft EIS/EIR. Notices and advertisements for public meetings were published in ten publications, including the *Asian Journal* and two Spanish-language publications (*El Latino* and *La Prensa*). SANBAG provided bilingual English/Spanish materials and Spanish-speaking and American Sign Language (ASL) interpreters at all public meetings. Public outreach will continue through construction of the Project.

In April 2012, the Native American Heritage Commission (NAHC) sent a letter recommending outreach to nine Native American groups. In April 2012, in compliance with Section 106 of the National Historic Preservation Act, FTA sent consultation letters to nine Native American groups (including the Fort Mojave Indian Tribe, Gabrielino Tongva Nation, Gabrielino Tongva San Gabriel Band of Mission Indians, Morongo Band of Mission Indians, Pechanga Band of Luiseno Mission Indians, Ramona Band of Cahuilla Mission Indians, San Manuel Band of Mission Indians, Serrano Nation of Indians, and the Soboba Band of Luiseno Indians) and additional local interested parties, public historic or cultural organizations, such as the Chinese Historical Society of Southern California and Redlands Conservancy. SANBAG also directly coordinated with Supervisor James Ramos, past Chairman of the San Manuel Band of Mission Indians, who chairs the Rail to Redlands Working Group.

On July 31, 2012, FTA published a NOI in the Federal Register to provide opportunities for public and agency comments on the purpose and need, scope, and alternatives. The FTA issued the NOA in the Federal Register on August 15, 2014, and circulated the Draft EIS/EIR for public review and comment through September 29, 2013. More than 120 people attended the two public meetings. Two meetings were hosted by SANBAG at ESRI Cafe in Redlands and the "Hotel" in San Bernardino. In total, 68 comment submissions (e.g., comment cards, e-mails, and letters) were received containing 431 individual comments. Responses to these comments were incorporated into Appendix P (Volume 10) of the Final EIS/SEIR.

During and after the close of the Draft EIS/EIR comment period, SANBAG briefed property owners along the alignment, community groups and other stakeholders. Since initiating the outreach program, SANBAG has coordinated and consulted with state and federal agencies, including, but not limited to, U.S. Army Corps of Engineers (USACE), the U.S. Fish and Wildlife Service (USFWS), the Federal Railroad Administration (FRA), the California Department of Fish and Wildlife (CDFW), the California State Historic Preservation Officer (SHPO), the Santa Ana Regional Water Quality Control Board

(RWQCB), the California Public Utilities Commission (CPUC), and the Cities of Redlands and San Bernardino.

Determinations and Findings

Section 106 of the National Historic Preservation Act

Nine architectural resources listed on the National Register of Historic Places (NRHP) are located within the area of potential effect (APE). This includes the Redlands Santa Fe Depot Historic District and eight contributing properties at 345 North Fifth Street, 337 Orange Street, 346 Orange Street, 348 Orange Street, 351 Orange Street, 409 Orange Street, 360 Orange Street, and 21 West Stuart Avenue. Nine additional properties within the APE were determined eligible for listing in the NRHP: 1505 Richardson Street, 337 North Cook Street, 620 New York Street, 440 Oriental Avenue, 1267 West Redlands Boulevard, 420 East Stuart Avenue, 510 East Stuart Avenue, 610 East Stuart Avenue, and 411 North University Street. Construction and operation of the Project would not alter, relocate, or demolish historic architectural properties within the APE in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. With the implementation of mitigation, there would be no adverse effect on historic architectural properties within the APE.

There are five previously recorded archaeological resources within the APE; however none of these resources were found to be eligible for the NRHP. The Gage Canal and Elephants Orchards Packing House have been previously determined not to be eligible to the NRHP. The Mill Creek Zanja, east of Division Street, is listed on the NRHP. The portion of the Mill Creek Zanja within the Project APE located west of Division Street was evaluated and was determined to lack integrity. Therefore, it was deemed ineligible for the NRHP. Although no NRHP-eligible archaeological resources were identified within the APE, the potential for unanticipated discoveries remains within the APE. Therefore, measures for the treatment of unanticipated archeological resources discovered during construction are set forth in the Final EIS/EIR and the Mitigation Monitoring and Reporting Program (MMRP). The MMRP is included as an attachment to this ROD.

FTA determined that the Project would have no adverse effects on historic properties. The SHPO concurred with the delineation of the APE on April 24, 2013 and concurred with the eligibility determinations and finding of no adverse effect to historic properties on August 14, 2014 (See Appendix M of the Final EIS/EIR).

Air Quality and Transportation Conformity

The Project conforms to the Clean Air Act Amendments (40 CFR Part 51) and the Final Transportation Conformity Rule (40 CFR Parts 51 and 93). The Project is identified in the 2012-2035 RTP/SCS adopted on April 4, 2012. The regional emission analysis for the RTP/SCS and, therefore, the individual projects contained in the plan including the Redlands Passenger Rail Project, were determined to be conforming and will have air quality impacts consistent with those identified in the State Implementation Plan (SIP) for achieving the National Ambient Air Quality Standards (NAAQS). Pursuant to 40 CFR Parts 51 and 93 and 23 CFR 450, the Federal Highway Administration (FHWA) and FTA determined that the 2012-2035 RTP/SCS and the 2013 Federal Transportation Improvement Program (FTIP) conformed to the SIP on June 4 and December 13, 2012 respectively. The FHWA and FTA determined that the 2012-2035 RTP/SCS through Amendment No. 1 and the 2013 FTIP through Amendment No. 13-04 (adopted on June 6, 2013) conformed to the SIP on July 15, 2013.

The Project is not considered a project of air quality concern as defined in U.S. Environmental Protection Agency's (EPA) Transportation Conformity Guidance; therefore, a hotspot analysis for $PM_{2.5}$ and PM_{10} is not required to demonstrate conformity with the SIP as required by the Clean Air Act. SCAG's

Transportation Conformity Working Group concurred with this determination on October 3, 2014. Based on Carbon Monoxide (CO) hot-spot modeling, the peak hour implementation of the Project is not expected to result in violations of the state or federal 1- or 8-hour CO standards. Consequently, the Project would not cause or contribute to new air quality violations, worsen existing violations, or delay timely attainment of CO NAAQS.

Section 4(f) Findings

Seven park and recreational resources eligible for protection under Section 4(f) were identified along the Redlands Corridor: Meadowbrook Park and Fields, Jennie Davis Park, Orangewood High School, Franklin Elementary School, Victoria Elementary School, Sylvan Park, and the Santa Ana River Trail. The Project would not result in any use of Meadowbrook Park and Fields, Jennie Davis Park, Orangewood High School, Franklin Elementary School, and Santa Ana River Trail.

Eight historical resources eligible for Section 4(f) protection also border the Redlands Corridor. These include the Victoria Elementary School, the Second Baptist Church, the Redlands Lawn Bowling Club at Sylvan Park and five properties (Redlands Santa Fe Depot, Cope Commercial Company Warehouse, Haight Packing House, Redlands City Transfer, and the brick warehouse at 440 Oriental Avenue), which are contributors to the Redlands Santa Fe Historic District. After implementation of avoidance and minimization measures described in Chapter 3.0 of the FEIS/EIR, the Project would not result in a direct use or constructive use to historic resources protected under Section 4(f). The Project requires temporary occupancy of Redlands Santa Fe Depot, Cope Commercial Company Warehouse, Haight Packing House, Redlands City Transfer, and the brick warehouse at 440 Oriental Avenue. Temporary construction easements would be required for construction access at these locations. These temporary occupancies would be minimized through the application of mitigation measures. The SHPO concurred with the finding of no adverse effect to historic properties under Section 106 on August 14, 2014.

SANBAG has entered into a memorandum of understanding (MOU), dated February 4, 2015, with the Cities of Redlands and San Bernardino to facilitate the implementation of Quiet Zones at all of the at-grade crossings throughout the Project corridor. As a result, the Project does not include sound barriers in the vicinity of any of the Section 4(f) resources. With the implementation of Quiet Zones, Project would not otherwise result in a direct use or temporary occupancy or at Victoria Elementary School and Park, Second Baptist Church, and the Redlands Lawn Bowling Club. With the implementation of avoidance and minimization measures described in the MMRP, the Project would not result in a constructive use of any Section 4(f) resources.

With the implementation of Quiet Zones, the Project would not construct a sound barrier at the Redlands Lawn Bowling Club at Sylvan Park. Access improvements at Park Avenue would be primarily within SANBAG's right-of-way, but it requires approximately 1,380 square foot area at Sylvan Park. This minor encroachment would affect less than 0.02 percent of the park's total 23.3 acre area. The FTA has determined that the Project, including measure(s) to minimize harm (such as avoidance, minimization, mitigation, or enhancement measures) committed to by the SANBAG, will have a *de minimis* impact, as defined in 23 CFR § 774.17, on the resource. The City of Redlands provided a letter in February 2015, indicating its concurrence with this determination.

Endangered Species Act

At the Santa Ana River, the project area includes a small area of designated critical habitat for the federally endangered San Bernardino kangaroo rat (*Dipodomys merriami parvus*) and the federally threatened Santa Ana sucker (*Catostomus santaaneae*) at the Santa Ana River. The Project will impact San Bernardino Kangaroo Rat Critical Habitat and Santa Ana Sucker Critical Habitat where the river provides a sediment source for occupied habitat downstream. Project impacts to the respective designated

critical habitats will be temporary and not significant. The Project may affect, but are not likely to adversely affect critical habitat for the species. Focused surveys did not detect San Bernardino kangaroo rat within the action area. The Santa Ana sucker is not anticipated to occur within the action area due to the lack of suitable habitat. Therefore, the Project is not likely to affect these species.

Suitable habitat occurs within the action area in the vicinity of the Santa Ana River for the federally endangered least Bells vireo (*Vireo bellii pusillus*) and the federally endangered Southwestern willow flycatcher (*Empidonax traillii extimus*) and the federally threatened Western yellow-billed cuckoo (*Coccyzus americanus*). As described in Final EIS/EIR, the Preferred Project Alternative was modified after the Draft EIS/EIR just east of the Santa Ana River and south of SANBAG's right-of-way to avoid a two-acre area of southern cottonwood willow riparian forest that is considered suitable habitat for federally listed species. Focused surveys did not detect Southwestern willow flycatcher or Western yellow-billed cuckoo within the Project action area; therefore, the Project is not likely to affect these listed species.

Focused surveys identified four least Bell's vireo territories, including at least one nesting pair, in the vicinity of the action area. Based on the proximity of the nesting pair to the proposed construction area and with the implementation of the mitigation measures in the MMRP and conservation measures in the Biological Opinion (BO), the Project may affect, but is not likely to jeopardize the continued existence of the least Bell's vireo.

Additionally, a federally endangered Santa Ana River woolly star (*Eriastrum densifolium ssp. sanctorum)* was observed within the project area. The Project is not expected to result in an appreciable reduction in the numbers, reproduction, or distribution of the Santa Ana wooly star. With the implementation of the mitigation measures in the MMRP and conservation measures in BO, the Project may affect, but is not likely to jeopardize the continued existence of the Santa Ana wooly star.

On May 1, 2013, FTA sent a letter to USFWS initiating formal consultation under the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.). On August 9, 2013, USFWS requested additional information. FTA responded accordingly on December 12, 2013 and the consultation was reinitiated on January 7, 2014. Mitigation Measures to avoid and minimize impacts to special-status species developed in consultation with USFWS are described in Chapter 3.0 of the Final EIS/EIR and the MMRP. The USFWS concurred with FTA's effects determinations and issued a BO on February 9, 2015 (included in Appendix I6 of the Final EIS/EIR, Volume 5).

<u>Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act</u>

Within the Project corridor, receiving water bodies include the Santa Ana River, Warm Creek, Twin Creek, Mill Creek Zanja, and the Mission Zanja Flood Control Channel. The majority of these receiving water bodies are unlined, natural streambeds, with the exception of concrete-lined, trapezoidal channel sections at Warm and Twin Creeks. No alterations to these USACE-constructed facilities regulated under Section 10 of the Rivers and Harbors Act are required.

The Project involves activities regulated by Sections 401, 402, and 404 of the Clean Water Act. The Project requires a Clean Water Act Section 404, Nationwide Permit 7, 14, and 33, from USACE for the discharge of fill material into waters of the U.S. as part of the Project's construction. A Clean Water Act Section 401, Water Quality Certification is also required from the Santa Ana Regional Water Quality Control Board (RWQCB), which has been delegated authority by the EPA, to certify that Project-related discharges into waters of the U.S. comply with water quality standards. SANBAG initiated consultation for permit applications with the Los Angeles District of the USACE, and the RWQCB, under Sections 404 and 401 of the Clean Water Act on October 28, 2014.

Earth-disturbing construction activities (e.g., surface grading and removal of vegetation) could increase soil erosion in disturbed areas and deposition of sediments in water bodies. The total disturbed area during construction is roughly 135 acres. The Project will comply with the Clean Water Act and National Pollution Discharge Elimination System (NPDES) standards during and following construction. The Project will be required to comply with the NPDES Construction General Permit and the Statewide Storm Water Permit and incorporate their requirements into construction plans (e.g., temporary erosion control plans) and specifications, including Best Management Practices (BMPs) to manage water quality and runoff from disturbed areas and to prevent uncontrolled storm-water flows, except as allowed for discharge in a public storm-water system.

Additionally, a Storm Water Pollution Prevention Plan (SWPPP) will be prepared for construction activities per the Construction General Permit. The SWPPP will help identify the sources of sediment and other pollutants that affect the quality of storm-water discharges, and include BMPs to reduce or eliminate sediment and other pollutants in storm-water and non-storm-water discharges. Prior to construction and in accordance with the SWPPP, a Spill Prevention, Containment, and Counter-Measure Plan will be prepared to avoid and minimize accidental contamination of water resources.

Executive Order 11988: Floodplain Management

The Project facilities including track infrastructure, bridges, new station structures, and layover facilities would be constructed within a 100-year flood hazard area as mapped on the most recent FIRMs produced by FEMA. The alignment would cross flood zones associated with Santa Ana River, Twin Creek, and Mill Creek. Several sections of the rail corridor are subject to inundation by flooding along the Mission Zanja Channel, Mission Storm Drain, Mill Zanja Creek, and Twin Creek. The Project has been designed in order to minimize potential harm to or within the floodplain consistent with the regulations issued in accordance with Section 2(d) of Executive Order 11988 (Flood Plain Management). The Project-related bridge improvements include floodproofing and other flood protection measures to avoid or minimize flood-related effects, consistent with Section 3(d) of the Executive Order.

As described in Chapter 2 of the FEIS, all new bridges and their associated abutments would be designed to maintain existing flow capacity within each of the respective channel crossings at Warm Creek, Twin Creek, the Santa Ana River, the Mission Zanja Channel, and Mill Creek Zanja. The Project includes bridge supports designed to minimize blockage from waterway debris, thereby reducing obstructions and elevated upstream flood levels. The project would improve capacity of the Mission Zanja Channel east of Bridge 3.9 and reduce the reoccurrence of flooding along this section of the railroad corridor; however, channel capacity restrictions would remain upstream. Construction activities would not alter 100-year floodways, except as approved through project review and permitting, and required design features would comply with conditions included in permits issued under Sections 404 and 401 of the Clean Water Act.

Existing topographical grades along the rail corridor would generally be maintained in the post-construction condition to avoid any major changes to surface drainage within the Mission Zanja Drainage Basin. The Project would develop a storm drainage network in accordance with local flood-control requirements and design criteria on a site-specific basis. Drainage management measures (e.g., channel stabilization, low impact development, etc.) would avoid or accommodate any increase in peak runoff, and proposed structures, channel modifications. Based on hydraulic modeling for the Mission Zanja Channel, west of Tippecanoe, a raise in the current track profile of up to two feet would not result in substantial increases in flood elevations to the south. As a result, the proposed track improvements would not cause an adverse effect to the 100-year water surface profile or result in any increase in flooding associated with the 100-year event on adjacent properties, including existing buildings, structures, or other beneficial uses.

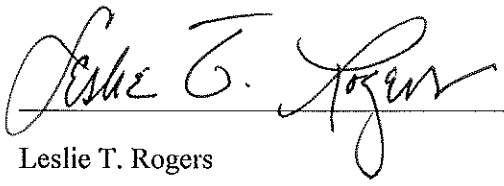
Executive Order 12898: Environmental Justice

High concentrations of minority and/or low-income populations (environmental justice populations) were identified along the railroad corridor within the Cities of San Bernardino, Loma Linda, and Redlands. The Project would result in adverse construction and operational effects related to noise and vibration, hazards and safety concerns, traffic and circulation, land use and land acquisitions, and visual quality. These adverse effects would be predominately borne by environmental justice populations. Given that the impacts are distributed across the project area, effects on environmental justice populations are not appreciably more severe or greater in magnitude than effects that will be suffered by non-environmental justice populations. Mitigation Measures proposed throughout Chapter 3 of the EIS/EIR and contained within the MMRP would minimize or avoid adverse effects throughout the corridor.

Environmental justice populations would experience the most benefit by the Project because of their close proximity and distribution throughout the Study Area. The benefits of the new regional transit service include improved travel times as well as increased access to employment and activity centers. In accordance with Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, in view of the anticipated adverse effects, proposed mitigation measures, and the off-setting benefits, the Project would not result in disproportionately high and adverse human health or environmental effects on low-income or minority populations.

Measures that Mitigate the Adverse Effects of the Project

The proposed mitigation measures were considered during planning and development, in coordination with interested parties. The mitigation commitments are described in the MMRP to ensure fulfillment of all environmental and related commitments in the Final EIS/EIR (see Appendix Q). Any change in such mitigation from the description in the Final EIS/EIR will require a review in accordance with 23 CFR Section 771.129, and must be approved by FTA.



FEB 17 2015

Leslie T. Rogers

Date

Regional Administrator
Federal Transit Administration, Region IX

Attachments: Mitigation Monitoring Reporting Program (MMRP)

MITIGATION MONITORING AND REPORTING PROGRAM

1.0 INTRODUCTION

The California Environmental Quality Act (CEQA) requires a lead or responsible agency to adopt a monitoring and reporting program (MMRP) when approving or carrying out a project (Section 21081.6 of the California Public Resources Code). The purpose of this program is to ensure that when an environmental document, either an Environmental Impact Report (EIR) or a mitigated negative declaration, identifies measures to reduce potential adverse environmental impacts to less than significant levels that those measures are implemented as detailed in the environmental document. As lead agency for the Project, the San Bernardino Associated Governments (SANBAG), acting in its roles as the San Bernardino County Transportation Commission, is responsible for implementation of this MMRP per the requirements of the (CEQA). In its role as the federal lead agency under the National Environmental Policy Act (NEPA), the Federal Transit Administration (FTA), Region IX, will use this MMRP for verifying the implementation of the mitigation measures proposed in conjunction with its issuance of the Record of Decision.

In this context, this MMRP was prepared to provide a monitoring strategy to ensure the implementation of the adopted mitigation measures. Once SANBAG adopts the MMRP, the mitigation monitoring/reporting requirements will be incorporated into the appropriate permits and construction documents (i.e., engineering specifications, engineering and construction plans, real estate entitlements, etc.). Therefore, in accordance with the aforementioned requirements, this MMRP lists each mitigation measure, describes the methods for implementation and verification, and identifies the responsible party or parties as detailed below in Section 3.

2.0 MONITORING AND REPORTING PROCEDURES

This MMRP was developed for the Locally Preferred Alternative (LPA) for SANBAG's Redlands Passenger Rail Project (RPRP or Project) (State Clearinghouse Number 2012041012). The MMRP will be in place through all phases of the Project, including design, construction, and operation, and will facilitate the implementation of mitigation measures proposed to avoid, minimize, or reduce significant environmental effects. SANBAG will be responsible for administering the MMRP and ensuring that all parties, including its contractors, comply with its provisions. SANBAG may delegate implementation and monitoring activities to staff, consultants, or contractors. SANBAG will require that its construction contractors submit an environmental compliance plan for approval by SANBAG and construction manager prior to the beginning construction activities. This plan shall document how the contractor intends to comply with all measures applicable to the contract, including the application of best management practices (BMPs) in accordance with instruction listed in the construction specifications. SANBAG also will ensure that monitoring is documented through systematic compliance verification and reporting and that deficiencies are promptly corrected. The designated environmental compliance manager will track and document compliance with mitigation measures, notify SANBAG of any problems or deficiencies, as appropriate, and take appropriate action to rectify problems.

3.0 MITIGATION MONITORING AND REPORTING PROGRAM IMPLEMENTATION

This MMRP was prepared to verify compliance with individual mitigation measures proposed in the Final Environmental Impact Statement (EIS)/EIR for the Project. Table 1 of this MMRP identifies each mitigation measure by discipline, the entity responsible for its implementation, and the performance standard required to demonstrate compliance with each measure. Certain inspections and reports may require preparation by qualified individuals and these are specified as needed. The timing and method of verification for each measure are also specified.

Table 1. MMRP Mitigation Measures

Mitigation Measure	Timing	Applicable Project Location/ Feature	Primary Responsible Party	Secondary Responsible Party	Verification
Land Use, Planning, and Communities					
LU-1: Minimize Project Land Requirements and Comply with Federal and State Relocation Laws. As part of final design, SANBAG shall maximize opportunities to minimize the Project's land requirements and associated property acquisition. In instances where avoidance is not feasible, SANBAG shall provide just compensation consistent with the requirements of the Uniform Relocation Assistance and Real Property Acquisition Policies Act and California Relocation Act. If the acquisition of one or more properties requires relocation of existing residences or businesses, SANBAG shall provide relocation assistance to residential and business tenants prior to the start of construction.	Final design	Entire Project	SANBAG	None	
Transportation					
TR-1: Prepare a Traffic Management Plan. SANBAG shall prepare a Traffic Management Plan prior to the start of construction, and the provisions of the Traffic Management Plan shall be implemented prior to, and during construction, as appropriate, to address traffic considerations of pedestrian and bicycle access and safety, and vehicular flow. The objective of the Traffic Management Plan will be to reduce construction related effects to traffic, non-motorized forms of transportation (e.g., bicycle and pedestrians), and existing public transit (e.g., buses) and will include the following: • Construction detour plans and designated construction truck access routes for each phase of construction; • Maintain maximum travel lane capacity to the greatest extent possible during construction periods and provide advanced notice to drivers or roadway changes or closures;	Prior to and during construction	Entire Project	SANBAG	Cities of San Bernardino and Redlands	

Table 1. MMRP Mitigation Measures

Mitigation Measure	Timing	Applicable Project Location/ Feature	Primary Responsible Party	Secondary Responsible Party	Verification
• Signage indicating the construction limits, access routes, and entrances to individual business sites and community facilities that may be affected by construction activities. In addition, the construction contractor would supply "open for business" signs to encourage normal business activity during construction; • Pre-planning, outreach, and signage indicating pedestrian and bicycle routes detours; • Coordination with public transit service providers, as necessary; • Heavy trucks and other construction transport vehicles shall avoid the busiest commute hours to the greatest extent possible (weekdays 7 a.m. to 8 a.m. and 5 p.m. to 6 p.m. – High traffic intersections (Greater than 10,000 ADT) – 6:30 a.m. to 8:30 a.m. and 4:30 p.m. to 6:30 p.m.); • Early notification to emergency service providers and area drivers of any road closures or detours and the timeframes of the closures or detours. This information will be posted in a local newspaper, via SANBAG's web site and will be updated on a monthly basis; • Coordination with the Cities of San Bernardino, Loma Linda, and Redlands for community events in the area to accommodate crowds and road closures; • Pavement damage resulting from project construction will be repaired prior to the completion of construction; and • SANBAG shall maximize opportunities for coordinated construction and installation of					

Table 1. MMRP Mitigation Measures

Mitigation Measure	Timing	Applicable Project Location/ Feature	Primary Responsible Party	Secondary Responsible Party	Verification
improvements that occurs outside the SANBAG ROW with the Cities of San Bernardino, Loma Linda, and Redlands to the greatest extent practical.					
TR-2: Existing LOS and V/C Year 2018 and 2038 Impact Roadway Improvements. As part of the Project construction, SANBAG shall coordinate with the appropriate agency in which the intersection improvement is located (Cities of San Bernardino, Loma Linda, Redlands, or Caltrans) to pay SANBAG's "fair share" of the identified roadway improvements prior to the start of operations of the Project in 2018: • **California Street and I-10 Eastbound Off-Ramp –** SANBAG shall coordinate with Caltrans to fund its fair share of construction for a ramp improvement to include a right-turn pocket. The existing right-turn lane will become a shared right-turn lane to accommodate the high number of right turns. The improvements will include replacing existing pedestrian and bicycle facilities, where present. SANBAG shall provide its fair share for the funding of the following improvements prior to the year 2038: • **California Street and I-10 West On-Ramp –** SANBAG shall coordinate with Caltrans to fund its fair share to the construction of a dual southbound right and a dual northbound left turn pocket. The improvements will include replacing existing pedestrian and bicycle facilities, where present. • **Alabama Street and Industrial Avenue –** SANBAG shall coordinate with the City of Redlands to stripe an exclusive westbound right turn lane with 50-feet of storage to accommodate a high number of right turns. The improvements will include	Prior to the start of operations (2038 improvements will be evaluated at 5-year increments following 2018)	Roadway improvements	SANBAG	Cities of San Bernardino and Redlands; Caltrans	

Table 1. MMRP Mitigation Measures

Mitigation Measure	Timing	Applicable Project Location/ Feature	Primary Responsible Party	Secondary Responsible Party	Verification
replacing existing pedestrian and bicycle facilities, where present.					
TR-3: Approval from CPUC for Grade Crossings and Safety Measures. SANBAG shall coordinate with the CPUC prior to the start of construction for re-design and/or closure of all grade crossings to ensure that all grade crossings and safety improvements comply with CPUC standards. SANBAG shall provide verification to the CPUC that all rail safety measures identified in the hazard analysis as part of the "formal application" or "GO 88-B" authorization" from CPUC have been installed.	Final design and post-construction	Grade Crossings	SANBAG	CPUC	
TR-4: Recommended Pre-Signals for Queuing. Prior to the start of operations, pre-signals shall be implemented at the following grade crossing locations and shall be operational prior to the start of 2018: • Eastbound I-10 Ramps and California Street crossing; • Industrial Park Avenue and Alabama Street crossing; and • Redlands Boulevard and Tennessee Street crossing. Prior to 2038 and if warranted based on future intersection operations (as determined through reevaluation in 5-year increments by SANBAG following procedures in the Los Angeles Metropolitan Transportation Authority (MTA) Grade Crossing Policy for Light Rail Transit), pre-signals will be implemented at the following grade crossing locations: • Waterman Avenue and Orange Show Road Crossing (Northbound Approach); • Orange Show Road and Waterman Avenue Crossing (Eastbound Approach;	Prior to the start of operations (2038 improvements will be evaluated at 5-year increments following 2018)	Grade Crossings	SANBAG	CPUC, Cities of San Bernardino and Redlands	

Table 1. MMRP Mitigation Measures

Mitigation Measure	Timing	Applicable Project Location/ Feature	Primary Responsible Party	Secondary Responsible Party	Verification
• Redlands Boulevard and California Street Crossing; and Redlands Boulevard and Alabama Street Crossing.					
TR-5: Transit Operations Realignment. SANBAG will work with affected transit service providers as part of their service realignment process (or major service change) to maximize transit efficiencies offered by interfacing existing transit service with Project operations. SANBAG shall develop a transit integration plan in coordination with local transit service providers to establish a framework for service integration. The plan shall, at a minimum, include an approach or strategy for coordinating existing transit scheduling with proposed train operations, maximizing route interfaces with the proposed station locations, and optimizing existing transit routes to minimize duplication in service.	Prior to the start of operations	Project station stops	SANBAG	Omnitrans	
Visual Quality and Aesthetics					
VQA-1: Screening of Construction Staging Areas. For construction staging areas within 500 feet of a residence, park, or educational facility, the contractor will be required to shield the staging area to the extent feasible and coordinate with the local jurisdiction regarding the type and method of screening, which may include but is not limited to, the use of fence slats, netting, or mesh or tarps. SANBAG shall limit construction to daylight hours to the extent possible. If nighttime lighting or construction is necessary, the SANBAG shall ensure that unshielded lights, reflectors, or spotlights are not located and directed to shine toward or be directly visible from adjacent properties or streets. To the extent possible, SANBAG shall minimize the use of nighttime construction lighting within 500 feet of existing residences. This measure shall be identified on grading plans and in construction contracts.	Prior to and during construction	Entire Project	SANBAG	Cities of San Bernardino and Redlands	

Table 1. MMRP Mitigation Measures

Mitigation Measure	Timing	Applicable Project Location/ Feature	Primary Responsible Party	Secondary Responsible Party	Verification
VQA-2: Enhance Exterior Appearance of Structural Facilities. The external appearance of the stations and layover facility, including the choice of color and materials, shall seek to reduce the visual impact of these facilities on adjacent land uses. Bright reflective materials and colors shall be avoided. As appropriate, the exterior design of these facilities should follow design guidelines provided in applicable land use plans. Minimum exterior design requirements shall include, but are not limited to, the following: • Painting (with earth-colored tones) of structural façades to blend with surrounding land uses; • Maximize the use of textured or other non-reflective exterior surfaces and non-reflective glass to prevent glare; • Use of fencing or structural materials, shall be similar to those used by nearby land uses and compatible with surrounding architecture; • Development of a landscaping plan for each station and layover facility site that uses a combination of locally derived native vegetation, earthen features (e.g., boulders), and, if appropriate, topographical separations (e.g., berms) to maximize site appearance and shield the new facilities from nearby sensitive receptors to the extent feasible; and • Clustering of structural facilities to maximize open space buffering. SANBAG shall coordinate final design plans with the Cities of San Bernardino and Redlands prior to final approval.	Final design	Stations	SANBAG	Cities of San Bernardino and Redlands	

Table 1. MMRP Mitigation Measures

Mitigation Measure	Timing	Applicable Project Location/ Feature	Primary Responsible Party	Secondary Responsible Party	Verification
VQA-3: Tree Replacement. Prior to construction, SANBAG shall have a registered arborist conduct a tree survey to identify native and ornamental trees requiring removal outside SANBAG's ROW. The arborist will identify measures to avoid and minimize indirect impacts on trees, where feasible, and develop a plan for the replacement of trees that cannot be avoided. The plan will include planting and irrigation design details and a weaning schedule for the establishment period. Trees with a diameter at breast height of 6 inches or greater will be replaced at a minimum ratios of 1:1 and consistent with City of Redlands and San Bernardino standards.	Prior to construction	Entire Project	SANBAG	Cities of San Bernardino and Redlands	
VQA-4: Sound Barrier Screening and Surface Treatments. To reduce effects associated with the sound walls, where SANBAG ROW widths allow, drought tolerant landscaping (i.e., trees, vines, and/or shrubs) shall be provided. If the SANBAG ROW width is insufficient to permit landscaping or if landscaping cannot adequately reduce visual impacts, surface treatments that are compatible with surrounding architecture shall be applied to the outside of the sound walls (residential or school facing side). Architectural detailing such as pilasters, wall caps, interesting block patterns, and offset wall layouts shall be used to add visual interest and reduce apparent height of the walls. SANBAG shall coordinate the final design plans with the Cities of San Bernardino and Redlands, as applicable, prior to final approval.	Final design (if constructed)	Sound wall locations	SANBAG	Cities of San Bernardino and Redlands	
VQA-5: Minimize Exterior Lighting in Adjacent Uses. To prevent unintended spillover of lighting, lighting fixtures constructed or relocated as part of the Project shall be oriented and focused onto the specific on-site location intended for illumination (e.g., parking lots) and shielded	Final design	Stations and Layover Facility	SANBAG	Cities of San Bernardino and Redlands	

Table 1. MMRP Mitigation Measures

Mitigation Measure	Timing	Applicable Project Location/ Feature	Primary Responsible Party	Secondary Responsible Party	Verification
away from adjacent sensitive uses (e.g., schools, residential properties) and public rights of way to minimize light spillover onto off-site areas. New driveways shall be located and oriented into parking lots, to the extent feasible, in a manner that will not result in headlights from vehicles entering or exiting the parking areas oriented directly at off-site sensitive uses. SANBAG shall coordinate the final design plans with the Cities of San Bernardino and Redlands, as applicable, prior to final approval.					
Noise and Vibration					
NV-1: Employ Noise-Reducing Measures during Construction. SANBAG shall require its construction contractors to employ measures to minimize and reduce construction noise. Noise reduction measures that shall be implemented to reduce construction noise to acceptable levels may include but are not limited to the following: • Use available noise suppression devices and techniques, including: - Equipping all internal combustion engine-driven equipment with mufflers, air-inlet silencers, and any other shrouds, shields, or other noise-reducing features that are in good operating condition and appropriate for the equipment (5 to 10 dB reduction possible). - Using “quiet” models of air compressors and other stationary noise sources where such technology exists. - Using electrically powered equipment instead of pneumatic or internal combustion-powered equipment, where feasible.	During Construction	Entire Project	SANBAG	Cities of San Bernardino and Redlands	

Table 1. MMRP Mitigation Measures

Mitigation Measure	Timing	Applicable Project Location/ Feature	Primary Responsible Party	Secondary Responsible Party	Verification
- Using noise-producing signals, including horns, whistles, alarms, and bells, for safety-warning purposes only. - Locating stationary noise-generating equipment, construction parking, and maintenance areas as far as reasonable from sensitive receivers when sensitive receivers adjoin or are near the construction Project APE. - Prohibiting unnecessary idling of internal combustion engines (i.e., in excess of 5 minutes). - Placing temporary soundwalls or enclosures around stationary noise-generating equipment when located near noise-sensitive areas (5 to 15 decibel reduction possible). - Ensuring that project-related public address or music systems are not audible at any adjacent receiver. - Notifying adjacent residents in advance of construction work.					
NV-2: Prepare a Community Notification Plan for Project Construction. The construction contractor shall prepare and maintain a community notification plan to address project construction issues the community may have during construction. Components of the plan may include construction phasing to minimize the duration of noise or vibration at any one location. Initial information packets shall be prepared and mailed to all residences within a 500-foot radius of project construction, with updates prepared as necessary to indicate new scheduling or processes. A project liaison shall be identified who will be available to	Prior to and during construction	Entire Project	SANBAG	Cities of San Bernardino and Redlands	

Table 1. MMRP Mitigation Measures

Mitigation Measure	Timing	Applicable Project Location/ Feature	Primary Responsible Party	Secondary Responsible Party	Verification
respond to questions from the community or other interested groups.					
NV-3: Establish Quiet Zones. At-grade crossings shall be designed and constructed to be compatible with the formation of Quiet Zones. Prior to the operation, SANBAG shall coordinate with the City of San Bernardino, City of Loma Linda, and the City of Redlands, to construct and establish quiet zones at the following grade crossings: • South Arrowhead Avenue; • South Sierra Way; • West Central Avenue; • East Orange Show Road; • South Waterman Avenue; • South Tippecanoe Avenue; • South Richardson Street; • Mountain View Avenue; • West Colton Avenue; • Alabama Street • Tennessee Street; • Church Street; and • North University Street	Prior to operation	Grade Crossing Locations	SANBAG	Cities of San Bernardino and Redlands; CPUC; FRA	
NV-4: Construct Sound Barriers. SANBAG shall install up to 12-foot in height sound barriers at priority locations along portions of the rail corridor to reduce noise levels at receivers identified with severe noise impacts following the application of quiet zones.	During construction (if required in the absence of quiet zones)	See Figures 8-2A through G (without quiet zones) and 8-3A-F) of the Noise and Vibration TM (October 2014)– See Appendix H of the Final EIS/EIR)	SANBAG	None	

Table 1. MMRP Mitigation Measures

Mitigation Measure	Timing	Applicable Project Location/ Feature	Primary Responsible Party	Secondary Responsible Party	Verification
NV-5: Wayside Rail Lubrication. SANBAG shall install wayside applicators for all tight-radius curves on the project alignment prior to the start of Project operations. If the wayside applicators are not sufficient to reduce squeal to an acceptable level, additional reduction may be required through customized profiling of the rail to reduce the forces required for trains to negotiate the curve.	Final design and post-construction	All tight-radius curve locations on the project alignment	SANBAG	None	
NV-6: Use Ballast Mats, Resiliently Supported Ties, or Measures of Comparable Effectiveness on Portions of the Rail near Sensitive Receivers. SANBAG shall install track design specifications as part of project design to include the use of ballast mats or resiliently supported ties on portions of the track near sensitive receivers to minimize project-related ground-borne vibration and wheel rail noise generated when the trains pass sensitive receivers. The actual measures and their corresponding placement will be determined following more detailed vibration testing and analysis during final engineering design.	Final design and post-construction	Entire Project	SANBAG	None	
NV-7: Provide Building Noise Insulation to Severe- and Moderate-Impact Residences. For the ten residential structures represented by Receivers 3, 22, and 41, SANBAG will offer to install sound insulation. Treatments may include sealing and relocating vents, caulking and sealing gaps in the building façade and installing new doors and windows that are specially designed to meet acoustical transmission-loss requirements. Acoustical performance ratings are published in terms of Sound Transmission Class (STC) for these special windows. A minimum STC rating of 39 will be used on any window exposed to the noise source.	Final design and during construction	Applicable Receivers	SANBAG	None	

Table 1. MMRP Mitigation Measures

Mitigation Measure	Timing	Applicable Project Location/ Feature	Primary Responsible Party	Secondary Responsible Party	Verification
Biological and Wetland Resources					
BIO-1: Pre-Construction Survey - Conduct Preconstruction Survey for Special Status Plants and Wildlife and, if Found, Implement Avoidance and Compensation Measures. Prior to construction, a qualified biologist retained by SANBAG shall conduct pre-construction surveys for special status plant species including woolly star, slender-horned spineflower, smooth tarplant, and salt spring checkerbloom. Pre-construction surveys will also be required for special status wildlife species including least Bell's vireo, southwestern willow flycatcher, San Bernardino kangaroo rat, yellow-billed cuckoo, burrowing owl, and western spadefoot toad to verify presence or absence in the Project area. If one or more species are detected, then SANBAG shall consult with the USFWS (or CDFW if appropriate) to develop additional minimization measures prior to project construction (if necessary). These additional measures may include construction timing restrictions and/or construction monitoring.	Prior to and during construction	Entire Project	SANBAG	U. S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW)	
BIO-2: Least Bells Vireo (LBV). The following measures will be implemented to minimize direct and indirect impacts to LBV during construction: a. Impacts associated with clearing and grubbing of Southern Cottonwood Willow Riparian Forest (SCWRF) and Southern Willow Scrub (SWS) will be timed to avoid the breeding season of the least Bell's vireo (March 15 to September 15), unless SANBAG provides survey documentation to USFWS that confirms the riparian habitat in not occupied by LBV. b. Temporary impact areas will be restored to pre-grade contours following bridge construction.	Prior to and during construction	Mile Posts 3.3 to 4 (only)	SANBAG	USFWS	

Table 1. MMRP Mitigation Measures

Mitigation Measure	Timing	Applicable Project Location/ Feature	Primary Responsible Party	Secondary Responsible Party	Verification
Natural recruitment is anticipated to occur rapidly due to the large amount of intact native riparian habitat that will remain as a seed source. Additionally, the riparian habitat being impacted is adapted to frequent disturbance. The individual species making up the community tend to have large quantities of seeds and very rapid growth that promote rapid re-establishment. Container planting and seeding has not been proposed due to potential conflicts with County Flood Control Maintenance requirements, high risk of plant material being washed out during subsequent storm events and potential conflicts with future Santa Ana River Trail construction. For erosion control purposes, temporarily impacted areas outside of the active floodplain will be hydroseeded with native grasses and shrubs. i. The temporarily impacted SCWRF and SWS habitat will be monitored annually for five years, until LBV is documented using the re-established habitat or until habitat attains 80 percent cover including both shrub and overstory stratum. If recruitment of SCWRF and SWS species is not evident within two years of project construction or habitat has not attained 60 percent cover within three years, impacts will be treated as permanent and additional mitigation for areas not meeting success criteria shall be provided through in-lieu fee payment to an appropriate mitigation bank for enhancement, restoration or establishment of LBV habitat at a ratio of 1:1.					

Table 1. MMRP Mitigation Measures

Mitigation Measure	Timing	Applicable Project Location/ Feature	Primary Responsible Party	Secondary Responsible Party	Verification
ii. Temporary direct impacts to potentially suitable LBV habitat will be mitigated as follows: The temporal loss of occupied LBV habitat resulting from temporary removal of SCWRF associated with the Mission Zanja Channel shall be mitigated through in-lieu fee payment to an appropriate mitigation bank for enhancement, restoration or establishment of LBV habitat at a ratio of 3:1. The temporal loss of suitable unoccupied LBV habitat resulting from temporary removal of SCWRF and SWS shall be mitigated through in-lieu fee payment to an appropriate mitigation bank for enhancement, restoration or establishment of LBV habitat at a ratio of 2:1.					
c. Permanent direct impacts to occupied LBV habitat (SCWRF) shall be mitigated at a ratio of 3:1 through in-lieu fee payment to an appropriate mitigation bank for enhancement, restoration and/or creation of LBV habitat within the Santa Ana River watershed.					
d. If active LBV nests are identified during pre-construction surveys and noise levels at the nest exceed 60 dBA Leq, noise attenuation structures will be placed or other noise attenuation measures (e.g., reducing the number of construction vehicles or using different types of construction vehicles) will be implemented to reduce noise levels at the nest to 60 dBA Leq (or ambient noise level if greater than 60 dBA Leq). During construction adjacent to these areas, noise monitoring shall occur during the LBV					

Table 1. MMRP Mitigation Measures

Mitigation Measure	Timing	Applicable Project Location/ Feature	Primary Responsible Party	Secondary Responsible Party	Verification
breeding season and be reported daily to USFWS. Construction activities that create noise in excess of the aforementioned levels will cease operation until effective noise attenuation measures are in place to the extent practicable.					
BIO-3: MBTA Covered Species. Prior to habitat removal during the avian breeding season (February 15-August 31), a qualified biologist shall conduct a pre-construction nest survey (in suitable areas) no more than 3 days prior to ground disturbing activities for migratory birds. Pre-construction surveys will be preformed year-round between MP 3.3 and 4.0 with the timing and implementation done in coordination with the CDFW and USFWS. Should an active nest of any MBTA covered species occur within or adjacent to the project impact area, a 100-foot buffer (300 feet for raptors) shall be established around the nest and no construction shall occur within this area until a qualified biologist determines the nest is no longer active or the young have fledged.	Prior to and during construction	Mile Posts 3.3 to 4 (only)	SANBAG	USFWS	
BIO-4: Protection of Sensitive Plants and Habitats. SANBAG shall require the construction contractor to implement the following measures to protect sensitive plants and habitats during project-related construction. • SANBAG shall designate an approved biologist (project biologist) who will be responsible for overseeing compliance with protective measures for the biological resources during clearing and work activities within and adjacent to areas of native habitat. The project biologist will be familiar with the local habitats, plants, and wildlife and maintain communications with the contractor to ensure that issues relating to biological resources are	Prior to and during construction	Mile Post 3.3 to 4	SANBAG	USFWS and CDFW	

Table 1. MMRP Mitigation Measures

Mitigation Measure	Timing	Applicable Project Location/ Feature	Primary Responsible Party	Secondary Responsible Party	Verification
appropriately and lawfully managed. The project biologist will review final plans, designate areas that need temporary fencing, and monitor construction. The biologist will monitor activities within designated areas during critical times such as vegetation removal, the installation of Best Management Practices (BMPs) and fencing to protect native species, and ensure that all avoidance and minimization measures are properly constructed and followed. • Project employees and contractors that will be on-site shall complete environmental worker-awareness training conducted by the project biologist. The training will advise workers of potential impacts to the sensitive habitat and listed species and the potential penalties for impacts to such habitat and species. At a minimum, the program will include the following topics: occurrences of the listed species and sensitive vegetation communities in the area, a physical description and their general ecology, sensitivity of the species to human activities, legal protection afforded these species, penalties for violations of Federal and State laws, reporting requirements, and work features designed to reduce the impacts to these species; and to the extent practicable, promote continued successful occupation of areas adjacent to the work footprint. Included in this program will be color photos of the listed species, which will be shown to the employees. Following the education program, the photos will be posted in the contractor and resident engineer's office, where they will remain through the duration of					

Table 1. MMRP Mitigation Measures

Mitigation Measure	Timing	Applicable Project Location/ Feature	Primary Responsible Party	Secondary Responsible Party	Verification
the work. Photos of the habitat in which sensitive species are found will also be posted on-site. The contractor will be required to provide SANBAG with evidence of the employee training (e.g., sign in sheet or stickers) upon request. Employees and contractors will be instructed to immediately notify the project biologist of any incidents, such as construction vehicles that move outside of the work area boundary. The project biologist will be responsible for notifying the USFWS within 72 hours of any similar incident. • Prior to construction, SANBAG shall delineate the construction area (including staging and laydown areas) between Mile Posts 3.3 and 4.0 and erect exclusionary construction fencing along the perimeter of the identified construction area to protect adjacent sensitive habitats (SWS, SCWRF, RAFSS, and Santa Ana wooly star). Limits of the exclusionary fencing shall be confirmed by the project biologist prior to habitat clearing. Exclusionary fencing shall be maintained throughout the duration of construction work from Mile Posts 3.3 to 4.0. Exclusionary fencing can be removed at the conclusion of construction work as approved by the project biologist. All construction-related vehicles and equipment storage shall occur in the construction area and/or previously disturbed areas as approved by the project biologist. Project-related vehicle traffic shall be restricted to established access roads, construction areas, storage areas, and staging and parking areas.					

Table 1. MMRP Mitigation Measures

Mitigation Measure	Timing	Applicable Project Location/ Feature	Primary Responsible Party	Secondary Responsible Party	Verification
If construction activity extends beyond the exclusionary fencing into sensitive vegetation communities, areas of disturbance shall be quantified and an appropriate restoration approach shall be developed in consultation with USFWS and CDFW. For example, if construction extends beyond the limits of the exclusionary fencing, temporarily disturbed areas shall be restored to the natural (preconstruction) conditions, which may include the following: salvage and stockpiling of topsoil, re-grading of disturbed sites with salvaged topsoil, and re-vegetation with native locally available species.					
BIO-5: Burrowing Owl. SANBAG will conduct take avoidance (pre-construction) surveys for burrowing owl within 30 days prior to initiating ground disturbance activities. These surveys will be completed in no less than 14 days prior to construction. If burrowing owl is identified, the following shall apply: • If burrowing owl is identified during the breeding season (February 1 through August 31) then an appropriate buffer will be established by the biological monitor in accordance with the 2012 Staff Report on Burrowing Owl Mitigation (CDFW 2012). Construction within the buffer will be avoided until a qualified biologist determines that burrowing owl is no longer present or until young have fledged and a CDFW-approved exclusion plan has been implemented. In addition to avoidance of the occupied habitat, off-site mitigation will be provided as described below: - Replacement of occupied habitat with occupied habitat: 1.5 times 6.5 (9.75) acres per pair or single bird.	Prior to construction	Entire Project	SANBAG	CDFW	

Table 1. MMRP Mitigation Measures

Mitigation Measure	Timing	Applicable Project Location/ Feature	Primary Responsible Party	Secondary Responsible Party	Verification
- Replacement of occupied habitat with habitat contiguous to currently occupied habitat: 2 times 6.5 (13.0) acres per pair or single bird. - Replacement of occupied habitat with suitable unoccupied habitat: 3 times 6.5 (19.5) acres per pair or single bird. • If burrowing owl is identified during the non-breeding season (September 1 through January 31), then a 50 meter buffer will be established by the biological monitor. Construction within the buffer will be avoided until a qualified biologist determines that burrowing owl is no longer present or until a CDFW-approved exclusion plan has been implemented.					
BIO-6: Secure Clean Water Act (CWA) Section 404 Permit and Implement All Permit Conditions to Ensure No Net Loss of Functions of Wetlands, Other Waters of the U.S., and Waters of the State). Before the approval of grading or other ground disturbing activities within 50 feet of jurisdictional areas, SANBAG shall obtain a CWA Section 404 permit, Section 401 water quality certification, and CDFW 1602 Streambed Alteration Agreement. As part of the Section 404 permitting process, if the USACE (and/or CDFW) requires compensatory mitigation, a draft wetland mitigation and monitoring plan (MMP) shall be developed for the selected Build Alternative. The MMP shall be consistent with USACE's and EPA's April 10, 2008 Final Rule for Comp Compensatory Mitigation for Losses of Aquatic Resources (33 CFR Parts 325 and 332 and 40 CFR Part 230). Potential mitigation for impacts to federal and state jurisdictional areas may occur at the following ratios:	Prior to construction	Warm Creek (Historic), Twin Creek, Santa Ana River, Mission Zanja Channel, and Mill Creek Zanja	SANBAG	U. S. Army Corps of Engineers (USACE), Los Angeles District, CDFW, and Regional Water Quality Control Board (RWQCB), Santa Ana Region	

Table 1. MMRP Mitigation Measures

Mitigation Measure	Timing	Applicable Project Location/ Feature	Primary Responsible Party	Secondary Responsible Party	Verification
• USACE Wetland - Permanent: 3:1 - Temporary: restoration (in-kind) • USACE Waters - Permanent: 1:1 - Temporary: restoration (in-kind) • CDFW Riparian - Permanent: 3:1 (SWS, RAFSS, and SCWRF) - Permanent: 1:1 (unvegetated stream bank) - Temporary: restoration (in-kind)					
BIO-7. Reseeding for Wooly Star. Seeds from the closest known occurrences of woolly-star plants found both upstream and downstream of Bridge 3.4 shall be collected in the fall prior to construction of the SAR crossing. If construction activities require the loss of the single wooly-star at the SAR crossing, the collected seeds will be broadcast in the temporary impact areas, near the impacted woolly-star plant, after construction activities are complete and soils have been restored to pre-Project contours. 1. Seed collection and broadcast methodologies will be proposed by a qualified seed collector approved by the Service prior to seed collection in a Santa Ana Woolly-Star Management Plan. 2. Seed harvest shall be from a minimum of three plants per collection location, limited to no more than 50 percent of the available seeds from any one woolly-star plant. 3. Seeds shall be held at the appropriate temperature and humidity for the shortest length of time necessary prior to planting.	Prior to, during, and following construction	Mile Posts 3.4 to 4	SANBAG	CDFW	

Table 1. MMRP Mitigation Measures

Mitigation Measure	Timing	Applicable Project Location/ Feature	Primary Responsible Party	Secondary Responsible Party	Verification
4. Planting of seeds shall be coordinated to occur prior to the first rains of the season, typically during early fall. 5. If the woolly-star plant known in the Project area is avoided, collected seeds will be hand broadcast near the parental plants where they were collected. If SANBAG confirms that removal of the one individual is required during final design, SANBAG will purchase ILF or mitigation credits from a qualified mitigation program to address the Project's temporal affect on woolly-star during the up to three-year construction period. Credits will be purchased to cover affects to the on-site individual and off-site parental plants.					
Floodplains, Hydrology, and Water Quality					
HWQ-1: Prepare Drainage Plan(s) for Structural Facilities. SANBAG shall prepare a site specific Drainage Plan for all major structural facilities constructed in conjunction with the Project, including stations and parking areas, track improvements, and the proposed layover facility. The Final Drainage Plan shall incorporate measures to maintain on-site runoff during peak conditions to pre-construction discharge levels. Design specifications for the detention and/or infiltration facilities shall provide sufficient temporary storage capacity to attenuate runoff to pre-Project conditions. These improvements will be coordinated with the applicable jurisdictions, including the Cities of Redlands and San Bernardino and the SBCFCD, as appropriate.	Final design	Entire Project	SANBAG	Cities of San Bernardino and Redlands, and the SBCFCD	
HWQ-2: Prepare and Implement a SWPPP. The construction contractor will develop a SWPPP that complies with the requirements of the NPDES General Construction Permit (Order 2009-0009-DWQ as amended by Order No. 2010-0014-DWQ and 2012-0006-DWQ) for Risk Level 2	Final design, during construction, and post-construction	Entire Project	SANBAG	RWQCB	

Table 1. MMRP Mitigation Measures

Mitigation Measure	Timing	Applicable Project Location/ Feature	Primary Responsible Party	Secondary Responsible Party	Verification
projects and implement the BMPs described in the SWPPP. The SWPPP shall identify specific actions and BMPs relating to the prevention of stormwater pollution from project-related construction sources by identifying a practical sequence for site restoration, BMP implementation, contingency measures, responsible parties, and agency contacts. The SWPPP shall reflect localized surface hydrological conditions and shall be reviewed and approved by SANBAG prior to commencement of work and shall be made conditions of the contract with the contractor. The SWPPP shall be prepared by a qualified SWPPP developer with BMPs selected to achieve maximum pollutant removal and that represent the best available technology that is economically achievable. Emphasis for BMPs shall be placed on controlling discharges of oxygen-depleting substances, floating material, oil and grease, acidic or caustic substances or compounds, and turbidity. BMPs for soil stabilization and erosion control practices and sediment control practices will also be required. Performance and effectiveness of these BMPs shall be determined either by visual means where applicable (i.e., observation of above-normal sediment release), or by actual water sampling in cases where verification of contaminant reduction or elimination, (inadvertent petroleum release) is required to determine adequacy of the measure. Following construction, SANBAG will ensure the provision of sufficient drainage inlet and outlet protection through the use of energy dissipaters, vegetated riprap, and/or other appropriate BMPs to slow runoff velocities and prevent erosion at discharge locations from the rail station and parking areas.					

Table 1. MMRP Mitigation Measures

Mitigation Measure	Timing	Applicable Project Location/ Feature	Primary Responsible Party	Secondary Responsible Party	Verification
HWQ-3: Prepare and Implement a Flow Diversion Plan for Construction. SANBAG or SANBAG's construction contractor shall develop a Flow Diversion Plan(s) for in-channel construction activities proposed within Warm Creek (Historic)(Bridge 1.1); Twin Creek (Bridge 2.2), SAR (Bridge 3.4), Zanja Channel (Bridges 3.9, and 5.8, and bank improvements), and Mill Creek Zanja (Bridge 9.4). SANBAG's contractor shall incorporate measures to minimize changes to flood flow elevation(s) during construction, address accumulation of floating debris, provide measures that minimize sedimentation to surface waters, and include contingency measures in the event of substantial rainfall.	During construction	Warm Creek (Historic)(Bridge 1.1); Twin Creek (Bridge 2.2), SAR (Bridge 3.4), Zanja Channel (Bridges 3.9, and 5.8, and bank improvements), and Mill Creek Zanja (Bridge 9.4).	SANBAG		
HWQ-4: Prepare a Natural Hazard Management Plan. SANBAG shall develop a Natural Hazard Management Plan for the Project. The Natural Hazard Management Plan will include a flood monitoring and evacuation plan for all Project infrastructure located within a delineated 100-year flood zone based on the most recent FEMA mapping. The Plan shall include protocols and procedures for emergency response in the event of a flood, the investigation and repair of track, station, and bridge facilities following inundation, and the provision of interim transit until Project operations resume.	Prior to operation	Entire Project	SANBAG	None	
HWQ-5: Flood-Proofing of Critical Infrastructure. Where feasible, stations and building pads for the proposed train layover facility shall be designed such that the finished floor elevation will be one-foot above the base 100-year flood elevation, where established.	Final design	Stations at Downtown Redlands and University Street	SANBAG	None	
HWQ-6: Incorporate Post-Construction Runoff BMPs into Project Drainage Plan, Final WQMP, and Industrial SWPPP. The Project Drainage Plan, Final WQMP, and the	Final design and post-construction	Entire Project	SANBAG	None	

Table 1. MMRP Mitigation Measures

Mitigation Measure	Timing	Applicable Project Location/ Feature	Primary Responsible Party	Secondary Responsible Party	Verification
NPDES Industrial SWPPP shall demonstrate treatment, control, and management of the on- and off-site discharge of stormwater to existing drainage systems or drainage features. The final Drainage Plan shall provide both short- and long-term drainage solutions to ensure the proper sequencing of drainage facilities and the final WQMP will ensure sufficient treatment of runoff generated from Project impervious surfaces prior to off-site discharge. SANBAG shall ensure the provision of sufficient outlet protection through the use of energy dissipaters, vegetated rip-rap, soil protection, and/or other appropriate BMPs to slow runoff velocities and prevent erosion at discharge locations for the station platforms, parking areas, and layover facility. A long-term maintenance plan shall be developed and implemented to support the functionality of drainage control devices. The layover facility layout(s) shall also include sufficient container storage and on-site containment and pollution-control devices for drainage facilities to avoid the off-site release of water quality pollutants, including, but not limited to oil and grease, fertilizers, treatment chemicals, and sediment. These measures shall be reflected in the final Industrial SWPPP and WQMP for applicable facilities. The NPDES Industrial SWPPP shall incorporate required maintenance practices and housekeeping to maximize the long-term effectiveness of post-construction BMPs.					
Geology, Soils, and Seismicity					
GEO-1: Prepare Final Geotechnical Report for the Project and Implement Recommended Measures. Facility design for all Project components shall comply with the site-specific design recommendations as provided by a licensed geotechnical or civil engineer to be retained by SANBAG.	Design, prior to and post-construction	Entire Project	SANBAG	None	

Table 1. MMRP Mitigation Measures

Mitigation Measure	Timing	Applicable Project Location/ Feature	Primary Responsible Party	Secondary Responsible Party	Verification
The final geotechnical and/or civil engineering report shall address and make recommendations on the following: • Site preparation; • Soil bearing capacity; • Appropriate sources and types of fill; • Liquefaction; • Lateral spreading; • Settlement; • Landslides (with emphasis on improvements that border the Mission Zanja Flood Control Channel); • Hydroconsolidation; • Compressible/Collapsible soils; • Corrosive soils; • Structural foundations; and • Grading practices. In addition to the recommendations for the conditions listed above, the geotechnical report shall include subsurface testing of soil and groundwater conditions, and shall determine appropriate foundation designs that are consistent with the latest version of the CBC, as applicable at the time building and grading permits are pursued. All recommendations contained in the final geotechnical engineering report shall be implemented by SANBAG.					
Hazardous Waste and Materials					
HAZ-1: Prepare and Implement a Construction Hazardous Materials Management Plan and Operational Hazardous Materials Business Plan. Prior to operation, SANBAG shall prepare and implement a Hazardous Materials Management Plan (HMMP) and Hazardous	Prior to construction (HMMP) and operation (HMBP)	Entire Project	SANBAG	None	

Table 1. MMRP Mitigation Measures

Mitigation Measure	Timing	Applicable Project Location/ Feature	Primary Responsible Party	Secondary Responsible Party	Verification
Materials Business Plan (HMBP) for the Project. The HMMP shall provide for safe storage, containment, and disposal of chemicals and hazardous materials related to Project construction, including the proper disposal of waste materials. The HMBP will provide for safe storage, containment, and disposal of chemicals and hazardous materials related to Project operations. The HMMP and HMBP shall include, but shall not be limited to, the following: • A description of hazardous materials and hazardous wastes used; • A description of handling, transport, treatment, and disposal procedures, as relevant for each hazardous material or hazardous waste; • Preparedness, prevention, contingency, and emergency procedures, including emergency contact information; • A description of personnel training including, but not limited to: (1) recognition of existing or potential hazards resulting from accidental spills or other releases; (2) implementation of evacuation, notification, and other emergency response procedures; (3) management, awareness, and handling of hazardous materials and hazardous wastes, as required by their level of responsibility; • Instructions on keeping Materials Safety and Data Sheets (MSDS) on-site for each on-site hazardous chemical; and • Identification of the locations of hazardous material storage areas, including temporary storage areas, which shall be equipped with secondary containment sufficient in size to contain the volume of the largest container or tank.					

Table 1. MMRP Mitigation Measures

Mitigation Measure	Timing	Applicable Project Location/ Feature	Primary Responsible Party	Secondary Responsible Party	Verification
HAZ-2: Pre-Demolition Investigation. Prior to the demolition of any structures within the Project footprint, a survey shall be conducted for the presence of hazardous building materials such as asbestos-containing materials, lead based paints, and other materials falling under Universal Waste requirements. The results of this survey shall be submitted to SANBAG and the City of San Bernardino's Department of Environmental Health or City of Redlands Department of Environmental Health, as applicable. If any hazardous building materials are discovered, a plan for there proper removal shall be prepared in accordance with applicable requirements of the California Division of Occupational Safety and Health and the County of San Bernardino Environmental Health Services. The contractor performing the work will be required to have a license in the State of California, and possess a C-21, A or B classification. Further and if required, the contractor or their subcontractor will be required to possess a California Contractor License (ASB) to perform any asbestos related work. Prior to any demolition activities, the contractor will be required to secure the site and ensure the disconnection of utilities.	Prior to demolition of any structures	Entire Project	SANBAG	City of San Bernardino Department of Environmental Health or City of Redlands Department of Health, as applicable	
HAZ-3: Prepare Phase I and/or Phase II ESA for Indeterminate or High-Risk Sites. Prior to grading, further investigation at any of the identified sites of concern with an indeterminate or high risk-ranking shall be conducted, if it is known that ground disturbance at those sites would exceed 18 inches within 50 feet of the site of concern. The additional investigation shall be in the form of a site-specific ASTM-compliant Phase I ESA investigation. The Phase I ESA recommendation would determine if a Phase II Preliminary Site Investigation (drilling and sampling) would be required, as appropriate. Both the Phase I and Phase II	Prior to construction	Entire Project	SANBAG	None	

Table 1. MMRP Mitigation Measures

Mitigation Measure	Timing	Applicable Project Location/ Feature	Primary Responsible Party	Secondary Responsible Party	Verification
ESA investigations would be completed prior to parcel acquisition (therefore, prior to any construction activity). The Project shall comply with recommendations provided in the Phase I ESA and/or Phase II ESA(s).					
HAZ-4: Halt Construction Work if Potentially Hazardous Materials are Encountered. All construction contractors shall immediately stop all subsurface activities in the event that potentially hazardous materials are encountered, an odor is identified, or considerably stained soil is visible. Contractors shall follow all applicable local, state, and federal regulations regarding discovery, response, disposal, and remediation for hazardous materials encountered during the construction process.	During construction	Entire Project	SANBAG	None	
HAZ-5: Keep Construction Area Clear of Combustible Materials. SANBAG shall ensure, through the enforcement of contractual obligations that during construction, staging areas, welding areas, or areas slated for development using spark-producing equipment shall be cleared of dried vegetation or other materials that could serve as fire fuel. The contractor shall keep these areas clear of combustible materials in order to maintain a firebreak. Any construction equipment that normally includes a spark arrester shall be equipped with an arrester in good working order. This includes, but is not limited to, vehicles, heavy equipment, and chainsaws.	During construction	Entire Project (Emphasis Mile Posts 3 to 6)	SANBAG		
HAZ-6: Provide Accessible Fire Suppression Equipment. Work crews shall be required to have sufficient fire suppression equipment readily available to ensure that any fire resulting from construction activities is immediately extinguished. All off-road equipment using internal combustion engines shall be equipped with spark arrestors.	During construction	Entire Project	SANBAG	None	

Table 1. MMRP Mitigation Measures

Mitigation Measure	Timing	Applicable Project Location/ Feature	Primary Responsible Party	Secondary Responsible Party	Verification
Cultural and Historic Resources					
CUL-1: Structural Evaluations. In order to determine the structural stability of the Redlands Depot, Cope Commercial Company Warehouse, Haight Packing House, Redlands City Transfer, and the brick warehouse at 440 Oriental Avenue, structural evaluations shall be prepared by a qualified engineer for these five buildings prior to the commencement of construction. The structural evaluations will also address maximum allowable levels of vibration during construction and, if appropriate, will recommend reduced levels of stabilization in conjunction with vibration monitoring. Qualified recommendations within the structural evaluation shall be adhered to, as appropriate. Permanent stabilization will follow the Secretary of the Interior's guidelines for the treatment of historic properties; if the buildings are temporarily stabilized for the duration of construction activities, when removed, the buildings will be restored to their pre-construction condition when the stabilization measures are removed.	Final design and prior to construction	Redlands Depot, Cope Commercial Company Warehouse, Haight Packing House, Redlands City Transfer, and the brick warehouse at 440 Oriental Avenue	SANBAG	State Historic Preservation Officer (SHPO), if required	
CUL-2a: Minimize Indirect Visual Effects of Potential Sound Barriers. Visual surface treatments and drought-tolerant landscaping will be implemented as necessary to minimize indirect effects on the setting and feeling of the Redlands Lawn Bowling Club portion of Sylvan Park and the Second Baptist Church from introduction of sound barriers (if constructed). The surface treatments and landscaping for the sound barrier at the Redlands Lawn Bowling Club will be designed and implemented to harmonize the barrier with the surrounding pastoral park landscape. If a sound barrier is necessary at the Second Baptist Church, surface treatments will be designed and implemented to harmonize the barrier with the Spanish Colonial Revival architecture of the church building. Drought tolerant landscaping will be incorporated into the design of the barrier at the church as needed**.**	Final design and post-construction (if required)	Redlands Lawn Bowling Club portion of Sylvan Park and the Second Baptist Church	SANBAG	Cities of Redlands and San Bernardino	

Table 1. MMRP Mitigation Measures

Mitigation Measure	Timing	Applicable Project Location/ Feature	Primary Responsible Party	Secondary Responsible Party	Verification
CUL-2b: Conduct Potential Noise Insulation Work at Second Baptist Church in Accordance with Secretary of Interior Standards and Guidelines and Applicable Preservation Briefs. Sound-attenuating insulation may be necessary for the Second Baptist Church building. If sound-attenuating insulation measures are implemented at the church building, the work will be conducted in accordance with the Secretary of the Interior's Standards for Rehabilitation with Guidelines for Applying the Standards (Hume et al. 1990) and applicable National Park Service preservation briefs, including #3 (Improving Energy Efficiency in Historic Buildings); #22 (The Preservation and Repair of Historic Stucco); #24 (Heating, Ventilating, and Cooling Historic Buildings: Problems and Recommended Approaches); and # 30 (The Preservation and Repair of Historic Clay Tile Roofs). SANBAG will select and implement the recommended insulation measures in coordination with the property owner and SHPO.	Prior to operations (if required)	Second Baptist Church	SANBAG	SHPO, if required	
CUL-3: Off-Site Replacement of Citrus Trees Removed from California/I10-Grove. SANBAG shall coordinate with the City of Redlands, including the Citrus Preservation Commission, to provide for the planting of citrus trees at properties within the Redlands Historical Preserve of Citrus to compensate for the trees removed from the California/I-10 Grove in association with the Preferred Project Alternative. The number of citrus trees planted will be equal to the number of trees removed from the California/I-10 Grove. The types of trees to be planted will be determined through consultation between SANBAG and the City of Redlands, including the Citrus Preservation Commission.	Prior to construction	California/I-10 Grove	SANBAG	City of Redlands, Citrus Preservation Commission	

Table 1. MMRP Mitigation Measures

Mitigation Measure	Timing	Applicable Project Location/ Feature	Primary Responsible Party	Secondary Responsible Party	Verification
CUL-4: Construction Monitoring. Full-time monitoring for archaeological deposits will be conducted in the Project APE in the vicinity of the Redlands Chinatown site (and a 50-foot buffer on each side of the site boundary) during ground disturbing construction activities. Monitoring will be conducted in accordance with a Construction Monitoring and Discovery Plan to be prepared for the project. Monitoring will occur under the supervision of an archaeologist who meets the Secretary of the Interior's Professional Qualifications Standards. *Unanticipated Discoveries*. In the event an unanticipated discovery of archaeological resources occurs during construction, the following measures will be implemented immediately following the discovery: • All construction within a 50-foot radius of the resource will be halted until a qualified archaeologist can evaluate the resource. • FTA and SHPO will be notified in the event of an unanticipated discovery. • If the discovery is determined to be significant or potentially significant by the qualified archaeologist, the adverse effects under Section 106 to portions of archeological resources determined to be eligible for the NRHP would be resolved in consultation with SHPO through the following tasks: - Discussion with project engineers to determine if impacts can be avoided/minimized, including consideration of preservation in place - Recovery and analysis of archaeological material and associated data	During construction	Project APE in the vicinity of the Redlands Chinatown site	SANBAG	SHPO, if required	

Table 1. MMRP Mitigation Measures

Mitigation Measure	Timing	Applicable Project Location/ Feature	Primary Responsible Party	Secondary Responsible Party	Verification
- Preparation of a data recovery report or other reports - Recovered archaeological material shall be provided to an accredited archaeological repository. Archaeological monitor qualification requirements, detailed approaches to archaeological monitoring of various project elements, and the procedures to follow in the event that unanticipated archaeological resources or human remains are discovered will be defined in the Construction Monitoring and Discovery Plan. *Stop Work if Unanticipated Human Remains Are Encountered*. If human remains are exposed during construction, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the county coroner has made the necessary findings as to origin and disposition pursuant to PRC 5097.98. If the coroner determines the remains to be Native American, the coroner must contact the Native American Heritage Commission and the Project must comply with state laws relating to the disposition of Native American burials that are under the jurisdiction of the Native American Heritage Commission (PRC Section 5097). Construction must halt in the area of the discovery of human remains, the area must be protected, and consultation and treatment would occur as prescribed by law**.**					
Parklands, Community Services, and Other Public Facilities					
PCS-1: Coordinate Trail Planning with Local Jurisdictions. SANBAG will implement the following activities to minimize Project-related conflicts with proposed trails:	Final design	Bridge 3.4 and Orange Blossom Trail	SANBAG	San Bernardino County Parks and Recreation Department and Public Works	

Table 1. MMRP Mitigation Measures

Mitigation Measure	Timing	Applicable Project Location/ Feature	Primary Responsible Party	Secondary Responsible Party	Verification
• Santa Ana River Trail - SANBAG shall coordinate final design and construction of Bridge 3.4 with the San Bernardino County Department of Public Works, Transportation Design Division, and Parks and Recreation Department to integrate the trail as contemplated in the SANBAG's Non-Motorized Transportation Plan (2011) (NMTP), so as to maintain it's planned future continuity along the Santa Ana River. If the trail is constructed and operational in advance of the bridge structure, SANBAG will maintain trail access during the course of construction, to the extent feasible. In instances, where trail closures are required the construction contractor will be required to minimize the duration of the closure and support the County with any noticing, outreach, or implementation of temporary detours. • Orange Blossom Trail - SANBAG shall update the NMTP (2011) as part of it's next cycle update, to include the realignment of the trail segment of the Orange Blossom Trail that is currently shown as being located within the railroad right-of-way, so as to not conflict with the proposed project. SANBAG will coordinate with the City of Redlands and the County Flood Control District to determine available rights-of-way for the placement of the trail and, if necessary, realign the trail to take advantage of connections via existing roadway and other public right-of-ways.				Department, City of Redlands, and the San Bernardino County Flood Control District	

Table 1. MMRP Mitigation Measures

Mitigation Measure	Timing	Applicable Project Location/ Feature	Primary Responsible Party	Secondary Responsible Party	Verification
Safety and Security					
SS-1: Develop Safety and Security Management Plan. Prior to construction, SANBAG shall coordinate and consult with local safety and crime prevention authorities to develop a Safety and Security Management Plan (SSMP) for the track alignment, bridges, parking facilities, and station areas. The SSMP shall include a station surveillance element to be developed in coordination with the local jurisdiction and private properties owners, as applicable. If a non-FRA compliant DMU vehicle type is selected for the Project, the SSMP shall include a plan element that includes appropriate levels of safety as may be necessary to facilitate a shared-use operation.	Final design and post construction	Entire Project	SANBAG	Cities of San Bernardino and Redlands	
SS-2: Fencing. SANBAG's contractor shall erect temporary fencing and visual screening for staging areas and provide security personnel during construction to minimize trespassing and vandalism throughout the duration of construction.	Prior to and during construction	Entire Project	SANBAG	None	