

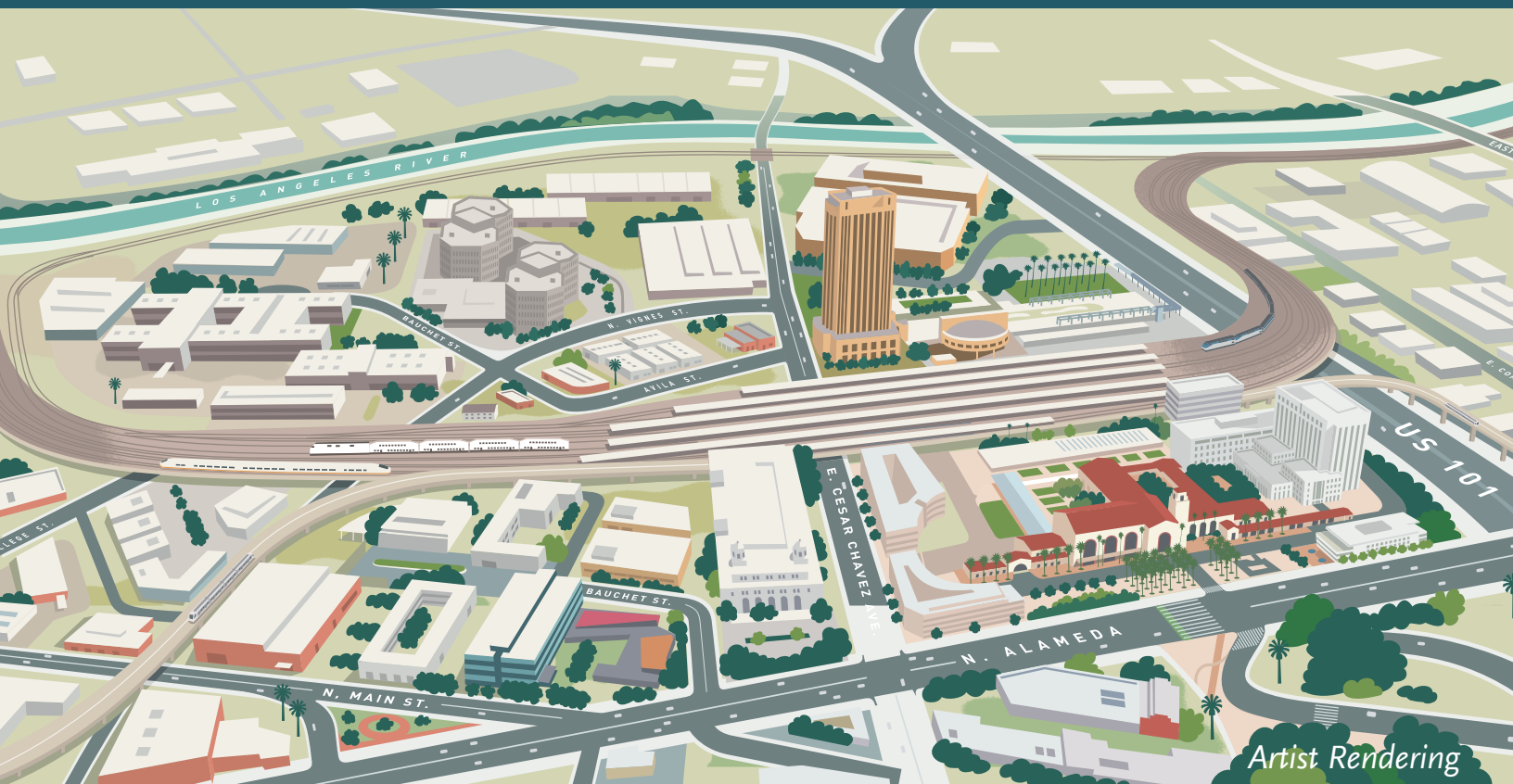
# Link Union Station

## Final Supplemental Environmental Impact Report

### Final Revised Mitigation Monitoring and Reporting Program

State Clearinghouse No. 2016051071

October 2025



Independent of Metro's actions as the CEQA lead agency, the California High-Speed Rail Authority (Authority), as the NEPA lead agency pursuant to the NEPA Assignment MOU between FRA and the State of California dated July 23, 2019 (renewed July 22, 2024), is considering issuing a Combined Final EIS/Record of Decision for the Link Union Station Project.

Authority NEPA review and approval for the Project is in progress. Final documents, including the Mitigation Monitoring Reporting Plan (MMRP), will be published when the NEPA process is complete, and the Authority has signed the NEPA Record of Decision.



**Metro**

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## ACRONYMS

AB	Assembly Bill
BMP	best management practice
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CBC	California Building Code
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CGP	construction general permit
CHC	Cultural Heritage Commission
CHSRA	California High-Speed Rail Authority
CRMMP	Cultural Resource Mitigation and Management Plan
DTSC	Department of Toxic Substance Control
EIR	environmental impact report
ESA	environmental site assessment
FTA	Federal Transit Administration
HABS	Historic American Buildings Survey
HACLA	Housing Authority of the City of Los Angeles
HCM	Historic-Cultural Monument
HMMP	Hazardous materials management plan
HSR	High-Speed Rail
IGP	industrial general permit
LA	Los Angeles
LABOE	Los Angeles Bureau of Engineering
LADOT	City of Los Angeles Department of Transportation
LAHCM	Los Angeles Historic-Cultural Monument
LAUS	Los Angeles Union Station
LID	low impact development
LOSSAN	Los Angeles-San Diego-San Luis Obispo
LUC	Land Use Covenant
MBTA	Migratory Bird Treaty Act
Metro	Los Angeles County Metropolitan Transportation Authority
MMRP	Mitigation Monitoring and Reporting Program
MOU	memorandum of understanding
NAHC	Native American Heritage Commission
NPDES	National Pollutant Discharge Elimination System
OHR	Office of Historic Resources
OSHA	Occupational Safety and Health Administration
PAH	polynuclear aromatic hydrocarbon
PMP	Paleontological Mitigation Plan
PRC	Public Resources Code
RIO	River Improvement Overlay District
ROW	right-of-way;
RWQCB	Regional Water Quality Control Board
SCAQMD	South Coast Air Quality Management District; SCORE=Southern California Optimized Rail Expansion
SCRRA	Southern California Regional Rail Authority
SEIR	Supplemental Environmental Impact Report

SWRCB	State Water Resources Control Board
SWPPP	stormwater pollution prevention plan
TMP	traffic management plan
TPH	total petroleum hydrocarbons
VOC	volatile organic compound
WEAP	worker environmental awareness program

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## 1.0 Introduction

Consistent with Section 21081.6 of the Public Resources Code, it is required that a lead agency adopts a “reporting or monitoring program for the changes made to the project or conditions of project approval, adopted to mitigate or avoid significant effects on the environment” (Section 15097 of the California Environmental Quality Act [CEQA] Guidelines provides additional direction on mitigation monitoring or reporting). As CEQA lead agency, Metro is responsible for administering and implementing the Mitigation Monitoring and Reporting Program (MMRP). The measures contained in the MMRP were developed by Metro in consultation with appropriate agencies, as well as with input received from the public.

The primary purpose of the MMRP is to ensure that the mitigation measures identified in the Final Environmental Impact Report (EIR) (June 2019), and any subsequent addenda including CEQA Addendum No. 1 (October 2021), and the Final Supplemental Environmental Impact Report (SEIR) (October 2025) are implemented, effectively minimizing the identified environmental effects.

Table 1 includes the mitigation measures and Offsetting Mitigation Measures (OMMs) for the CEQA Modified Proposed Project considered in the Final SEIR. Table 2 includes mitigation measures and OMMs for the Malabar Yard railroad improvements. The OMMs are tracked similar to the mitigation measures in the Final SEIR. One OMM was added to Table 1 for the Modified Proposed Project and eleven OMMs were added to Table 2 for the Malabar Yard railroad improvements.

Minor changes and refinements to the mitigation measures that resulted after Metro’s approval of CEQA Addendum No.1 in October 2021 are indicated by ~~strikeout~~ (deleted) and underline (inserted) markings in Table 1 and Table 2 below. Each mitigation measure identified in Table 1 and Table 2 is categorized by topic and corresponding number, with identification of:

- Compliance Action/Deliverable – The criteria that would determine when the measure has been accomplished and/or the monitoring actions to be undertaken to ensure the measure has been implemented.
- Responsible Party – The entity accountable for implementing the action/deliverable.
- Enforcement Agency – The entity accountable for overseeing the implementation of mitigation.
- Implementation Phase (A or B) – The phase of the project when implementation would occur (as applicable for Modified Proposed Project only).
- Monitoring/Compliance Schedule – The compliance/monitoring schedule depends upon the progression of the overall project. Therefore, specific dates are not used within the “Schedule” column. Instead, schedule describes a logical succession of events (e.g., prior to construction, construction).

- Verification of Compliance – The monitor verifies completion of the particular mitigation measure by initialing and dating this column. Conclusion of the monitoring program concludes when all required signatures are obtained in the Verification of Compliance column.

Metro will implement an Environmental Management System consisting of strategic planning, policies, and procedures; organizational structure; staffing and responsibilities; milestones; schedule; and resources devoted to achieving Metro's environmental commitments. The Environmental Management System will also track the implementation of environmental requirements and compliance reports. This system will rely on data from the construction manager/general contractor, consultants, pre-construction services and permitting activities, monitoring, inspections, and other compliance activities. This process will be managed by Metro to demonstrate compliance activities and progress relevant to their regulatory requirements.

Table 1. Mitigation Monitoring and Reporting Program: CEQA Modified Proposed Project								
Mitigation Measures		Compliance Action/Deliverable	Responsible Party	Enforcement Agency	Implementation Phase (A or B)	Monitoring/Compliance Schedule	Verification of Compliance	
							Initial	Date
Land Use and Planning								
LU-1	Enhance Neighborhood Connectivity: Consistent with the Los Angeles River Revitalization Master Plan, RIO Overlay District guidelines, LAUS Sustainable Neighborhood Assessment, City of Los Angeles Mobility Plan, Metro’s LA River Path Project, and Metro’s Los Angeles Union Station Forecourt and Esplanade Improvements Project, to mitigate the identified significant impact, Metro, in coordination with the City of Los Angeles, shall implement either Class II or IV type bike lanes that consist of only pavement striping and bollards (no additional right-of-way and no raised median will be required) along Commercial Street from Alameda Street to Center Street, enhancing neighborhood connectivity south of US-101. If additional funding is identified, a dedicated bicycle/pedestrian bridge over US-101 could be constructed in addition to the new bicycle lanes described above.	Incorporate contractor responsibilities into applicable construction documents (plans and specifications)	Metro	Metro	Phase A or B	During Final Design of these specific improvements	—	—
		Prepare infrastructure plans for review and approval by the City of Los Angeles	Metro	City of Los Angeles	Phase A or B	During Final Design of these specific improvements	—	—
		Implement either Class II or IV type bike lanes along Commercial Street from Alameda Street to Center Street	Contractor	City of Los Angeles	Phase A or B	Construction	—	—
Transportation and Traffic								
TR-1	Prepare a Construction TMP: During the final engineering phase and at least 30 days prior to construction, a construction TMP shall be prepared by the contractor and reviewed and approved by Metro, LADOT, and Caltrans, where applicable.  The street closure schedules in the construction TMP shall be coordinated among between the construction contractor, LADOT, Caltrans (if ramps are involved), private businesses, public transit and bus operators, emergency service providers, Los Angeles Unified School District, and residents to minimize construction-related vehicular traffic impacts during the peak-hour. The signal timing at affected intersections and on and off ramps shall also be adjusted to reduce detoured traffic volumes and maintain traffic flow to the safest degree feasible. LADOT and Caltrans shall be notified in advance of street closures, detours, or temporary lane reductions. During planned closures, traffic shall be re-routed to adjacent streets via clearly marked detours and notice shall be provided in advance to applicable parties (nearby residences, emergency service providers, public transit and bus operators, the bicycle community, businesses, and organizers of special events). The TMP shall identify proposed closure schedules and detour routes, as well as construction traffic routes, including haul truck routes, and preferred delivery/haul-out locations and hours so as to avoid heavily congested areas during peak hours, where feasible. The following provisions shall be included in the TMP:  • Traffic flow shall be maintained, particularly during peak hours, to the degree feasible.  • Access to adjacent businesses shall be maintained during business hours via existing or temporary driveways, and residences at all times, as feasible.  • Metro or the contractor shall post advance notice signs prior to construction in areas where access to local businesses could be affected. Metro shall provide signage to indicate new ways to access businesses and community facilities, if affected by construction.  • Metro shall notify LADOT and Caltrans in advance of street closures, detours, or temporary lane reductions.	Incorporate contractor responsibilities into applicable construction documents (plans and specifications)	Metro	Metro	Phase A and B	During Final Design	—	—
		Prepare TMP	Contractor	Metro/City of Los Angeles/Caltrans	Phase A and B	Prior to Construction	—	—
		Implement TMP during construction	Contractor	Metro/City of Los Angeles/Caltrans	Phase A and B	Construction	—	—



Mitigation Measures	Compliance Action/Deliverable	Responsible Party	Enforcement Agency	Implementation Phase (A or B)	Monitoring/Compliance Schedule	Verification of Compliance	
						Initial	Date
<ul style="list-style-type: none"> <li>Metro shall coordinate with LADOT and Caltrans to adjust the signal timing at affected intersections and on- or off-ramps to mitigate detoured traffic volumes.</li> <li>Closed-circuit television cameras shall be installed at some of the impacted intersections (as approved by LADOT) to monitor traffic in real-time by the Automated Traffic Surveillance and Control department of LADOT during construction. This will allow the city to alleviate congestion by manually changing signal timing parameters, such as allowing more green time to congested movements.</li> <li>Contractor shall avoid concurrent closures of Cesar Chavez Avenue and Vignes Street north of LAUS.</li> </ul>							
<b>TR-2 Prepare Rail Operations Temporary Construction Staging Plan:</b> During final engineering design and prior to construction, Metro shall prepare a memorandum of understanding (MOU) with each current rail operator, including, but not limited to SCRRA, LOSSAN, and Amtrak, to outline mutually agreed upon on-time performance goals to be achieved throughout construction, and how construction sequencing and railroad operational protocols <u>shall</u> <del>would</del> be incorporated into applicable construction documents (plans and specifications).  Prior to construction, Metro and the construction contractor shall prepare detailed temporary construction staging plans for each phase of construction that the contractor <del>would</del> <u>implements</u> to maintain mutually agreed upon on-time performance goals while minimizing impacts on pedestrians and passengers at LAUS. Prior to construction, Metro and the construction contractor shall also coordinate with current rail operators to ensure that any rail-to-bus or rail-to-rail connections are uninterrupted throughout construction. Detailed temporary construction staging plans shall be deemed acceptable by the current rail operators prior to commencement of construction activities that could reduce on-time performance.  Throughout the duration of construction, SCRRA shall <u>monitor on-time performance during construction and</u> participate in weekly construction coordination meetings to ensure that the mutually agreed upon on-time performance is met.	Prepare MOUs	Metro	Current Rail Operators (SCRRA, LOSSAN, Amtrak)	Phase A and B	Prior to Construction	—	—
	Incorporate contractor responsibilities into applicable construction documents (plans and specifications)	Metro	Metro	Phase A and B	During Final Design	—	—
	Prepare temporary construction service plans	Metro/Contractor	Metro and Current Rail Operators (SCRRA, LOSSAN, Amtrak)	Phase A and B	Prior to Construction		
	Participate in weekly construction coordination meetings	Metro, in coordination with SCRRA, Amtrak and LOSSAN Rail Corridor Agency	Metro	Phase A and B	During Construction	—	—
<b>TR-3 Implement Malabar Yard Railroad Improvements in the City of Vernon (46th Street and 49th Street):</b> Metro and BNSF shall implement the following two railroad improvements at BNSF’s Malabar Yard:  <ul style="list-style-type: none"> <li><b>49th Street Closure:</b> Closure of the 49th Street at-grade railroad crossing would accommodate approximately 3,350 track feet of freight storage capacity at the BNSF Malabar Yard. Closure of 49th Street facilitates storage of empty intermodal train car sets that are no longer able to be stored at the BNSF West Bank Yard. One of the two design options considered for the closure of the at grade crossing at 49th Street shall be implemented.</li> <li><b>46th Street Connector:</b> An approximately 1,000-foot segment of new track between two existing track segments would provide a dedicated connection for freight trains serving local customers to travel between BNSF’s Malabar Yard and BNSF’s Los Angeles Junction. One of the two design options considered for the new track connection along 46th Street shall be implemented.</li> </ul> The timing for implementation and operation of this mitigation measure shall be before elimination of tracks at the West Bank Yard unless Metro and CHSRA, in its capacity as NEPA lead agency, mutually agree and conclude removing those tracks first would not cause adverse freight rail impacts.	Closure of 49 <sup>th</sup> Street and construction of the 46 <sup>th</sup> Street Connector	Metro/Contractor	Metro	Phase A	During Construction		

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Mitigation Measures		Compliance Action/Deliverable	Responsible Party	Enforcement Agency	Implementation Phase (A or B)	Monitoring/Compliance Schedule	Verification of Compliance	
							Initial	Date
Aesthetics								
AES-1	Aesthetic Treatments: Retaining walls in Segments 1 and 2 and the sound walls in Segment 1 of the Project study area shall be designed in consideration of the scale and architectural style of the adjacent William Mead Homes, Care First Village, and Mozaic Apartments. Based on feedback received during project development from residents of the William Mead Homes property, Metro shall coordinate with HACLA regarding aesthetic enhancements to the retaining wall/sound wall at that location. Materials, color, murals, landscaping, and/or other aesthetic treatments shall be integrated into the design of the retaining walls/sound walls to minimize the dominance and scale of the retaining walls/sound walls. Before construction is complete, Metro shall be responsible for the structural maintenance of the sound wall. In most cases, right-of-way agreements require the property owner to perform routine wall maintenance. Additionally, Metro shall collaborate with HACLA and Care First Village to determine the aesthetics and materials for the sound wall. As the property owner, HACLA and Care First Village shall enter into a maintenance agreement with Metro.	Coordinate with HACLA on aesthetic enhancements	Metro	Metro	Phase B	During Final Design	—	—
		Incorporate aesthetic treatments into applicable construction documents (plans and specifications)	Metro	Metro		During Final Design	—	—
		Apply aesthetic treatments	Contractor	City of Los Angeles (HACLA)		During Construction	—	—
AES-2	Minimize Nighttime Work and Screen Direct Lighting: Nighttime construction activities near residential areas shall be avoided to the extent feasible. If nighttime work is required, the construction contractor shall install temporary lighting in a manner that directs light toward the construction area and shall install temporary shields as necessary so that light does not spill over into residential areas.	Incorporate contractor responsibilities into applicable construction documents (plans and specifications)	Metro	Metro	Phase A and B	Prior to Construction	—	—
		Direct light toward the construction area and install temporary shields (as needed)	Contractor	Metro		During Construction	—	—
AES-3	Screen Direct Lighting and Glare: During final design, all new or replacement lighting shall comply with Metro Rail Design Criteria (Metro 2013), SCRRA Design Criteria Manual (SCRRA 2014), Illuminating Engineering Society standards (Illuminating Engineering Society 2011a, 2011b, 2014), maximum allowable CALGreen glare ratings (California Building Standards Code 2013 – Title 24, Part 11), and Leadership in Energy and Environmental Design® (LEED®) standards for new construction. In addition, all permanent lighting maximum allowable CALGreen glare ratings (California Building Standards Code 2013 – Title 24, Part 11) and shall be designed to be directed away from residential units. Screening elements, including landscaping, shall also be incorporated into the design, where feasible. Low-reflective glass and materials shall also be incorporated into the design of the new canopies to reduce daytime glare impacts.	Incorporate lighting, screening, and glare requirements into applicable construction documents (plans and specifications)	Metro	Metro	Phase A and B	During Final Design	—	—
		Install permanent lighting that meets CalGreen requirements directed away from residences and install screening elements as needed.	Contractor	Metro		During Construction	—	—

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Air Quality and Global Climate Change								
AQ-1	<p><b>Fugitive Dust Control:</b> In compliance with SCAQMD Rule 403, during clearing, grading, earthmoving, or excavation operations, fugitive dust emissions shall be controlled by regular watering or other dust preventive measures using the following procedures, as specified in SCAQMD Rule 403:</p> <ul style="list-style-type: none"><li>Minimize land disturbed by clearing, grading, and earth moving, or excavation operations to prevent excessive amounts of dust.</li><li>Provide an operational water truck on site at all times; use watering trucks to minimize dust; watering should be sufficient to confine dust plumes to the project work areas; watering shall occur at least twice daily with complete coverage, preferably in the late morning and after work is done.</li><li>Suspend grading and earth moving when wind gusts exceed 25 miles per hour unless the soil is wet enough to prevent dust plumes.</li><li>Securely cover trucks when hauling materials on or off site.</li><li>Stabilize the surface of dirt piles if not removed immediately.</li><li>Limit vehicular paths and limit speeds to 15 miles per hour on unpaved surfaces and stabilize any temporary roads.</li><li>Minimize unnecessary vehicular and machinery activities.</li><li>Sweep paved streets at least once per day where there is evidence of dirt that has been carried on to the roadway.</li><li>Revegetate or stabilize disturbed land, including vehicular paths created during construction to avoid future off-road vehicular activities.</li></ul> <p>The following measures shall also be implemented to reduce construction emissions:</p> <ul style="list-style-type: none"><li><del>The construction contractor shall prepare and update on a monthly basis</del> Prepare a comprehensive inventory list of all heavy-duty off-road (portable and mobile) equipment (50 horsepower and greater) (i.e., make, model, engine year, horsepower, emission rates) that could be used an aggregate of 40 or more hours throughout the duration of construction to demonstrate how the construction fleet is consistent with the requirements of Metro’s Green Construction Policy.</li><li>Ensure that all construction equipment is properly tuned and maintained.</li><li>Minimize idling time to 5 minutes, whenever feasible, which saves fuel and reduces emissions.</li><li>Utilize existing power sources (e.g., power poles) or clean fuel generators rather than temporary power generators, whenever feasible.</li><li>Arrange for appropriate consultations with CARB or SCAQMD to determine registration and permitting requirements prior to equipment operation at the site and obtain CARB Portable Equipment Registration with the state or a local district permit for portable engines and portable engine-driven equipment units used at the project work site, with the exception of on-road and off-road motor vehicles, as applicable.</li></ul> <p>These control techniques shall be included in project specifications and shall be implemented by the construction contractor.</p>	Incorporate contractor responsibilities into applicable construction documents (plans and specifications)	Metro	Metro	Phase A and B	During Final Design	—	—
		Implement dust control measures	Contractor	Metro		During Construction	—	—

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AQ-2	<b>Compliance with U.S. EPA’s Tier 4 Exhaust Emission Standards and Renewable Diesel Fuel for Off-Road Equipment:</b> In compliance with Metro’s Green Construction Policy, all off-road diesel powered construction equipment greater than 50 horsepower shall comply with U.S. EPA’s Tier 4 final exhaust emission standards (40 CFR Part 1039). In addition, if not already supplied with a factory-equipped diesel particulate filter, all construction equipment shall be outfitted with best available control technology devices certified by the CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine, as defined by CARB regulations.  In addition to the use of Tier 4 equipment, all off-road construction equipment shall be fueled using 100 percent renewable diesel.	Incorporate contractor responsibilities into applicable construction documents (plans and specifications)	Metro	Metro	Phase A and B	During Final Design	—	—
		Use construction equipment that meets Tier 4 exhaust emissions standards.	Contractor	Metro		During Construction	—	—
AQ-3	<b>Adaptive Air Quality Mitigation Plan:</b> Prior to implementation of regional/intercity rail run-through service, an Adaptive Air Quality Mitigation Plan shall be prepared by Metro, in coordination with the SCRRA, as the operator of the commuter rail service in Southern California and the program manager and grant recipient of the SCORE Program, Amtrak, and the LOSSAN Rail Corridor Agency. The Plan shall identify the methodology and requirements for annual emission inventories to be prepared by Metro, based on actual/current train movements and corresponding pollutant concentrations through the Year 2040.  Mitigation Plan Requirements: Upon implementation of regional/intercity run-through service, and on an annual basis, Metro shall compile and summarize the current Metrolink, Pacific Surfliner, and Amtrak long-distance train schedules to determine the actual level of daily and peak-period train movements (including non-revenue train movements) that operate through LAUS.  On an annual basis, Metro shall retain the services of an air quality specialist to conduct an annual emissions inventory to determine if actual train movements through LAUS are forecasted to increase criteria pollutant emissions to a level that would exceed the SCAQMD significance thresholds or diesel pollutant concentrations to a level that would exceed the SCAQMD’s 10 in a million threshold at any residential land use in the p Project study area. An annual report shall be prepared by Metro that summarizes the quantitative results of pollutant emissions and diesel pollutant concentrations in the p Project study area. If pollutant emissions and diesel pollutant concentrations are projected to exceed the SCAQMD thresholds, the regional and intercity rail operators in coordination with Metro, who has authority as the owner of Union Station, and California State Transportation Agency, shall either implement rail fleet emerging technologies consistent with 2018 California State Rail Plan Goal 6: Practice Environmental Stewardship, Policy 4: Transform to a Clean and Energy Efficient Transportation System (Caltrans 2018a, pg. 10 and 110), or reduce the train movements through LAUS to lower the criteria pollutant emissions below the SCAQMD significance thresholds and the diesel pollutant concentrations below the SCAQMD thresholds in the Pproject study area.  After implementation of emerging technologies, Metro shall continue to prepare an emissions inventory in coordination with SCRRA, Amtrak, and the LOSSAN Rail Corridor Agency annually to report the quantitative results of criteria pollutant emissions and diesel pollutant concentrations in the Pproject study area. The annual report shall include an analysis of the actual (current) and proposed changes in train schedules relative to criteria pollutant emissions and diesel pollutant concentration levels in the Pproject study area. The report shall be prepared annually by December 31 of each year, beginning the calendar year after implementation of regional/intercity rail run-through service through 2040 and shall include results of the emissions inventory and effectiveness of the measures implemented.  Rail Fleet Emerging Technologies: To achieve a reduction of criteria pollutant emissions below the SCAQMD thresholds and diesel pollutant concentrations below a level that would not exceed SCAQMD thresholds, the regional and intercity rail operators may replace, retrofit, or supplement some or all of their existing fleet with	Prepare an Adaptive Air Quality Mitigation Plan	Metro, in coordination with SCRRA, Amtrak and LOSSAN Rail Corridor Agency	Metro, in coordination with SCAQMD	Phase A and B	Prior to implementation of run-through service	—	—
		Compile current train schedules/Determine actual train movements	Metro	Metro		Annually by November 1 through 2040	—	—
		Retain air quality specialist to conduct annual emissions inventory	Metro	Metro		Annually by November 1 through 2040	—	—
		Prepare Annual Report	Metro	Metro		Annually by December 31 through 2040	—	—
		Incorporate rail fleet emerging technology requirements into existing and/or future funding and/or operating agreements with provisions that require regional and intercity rail operators to replace, retrofit, or supplement some or all of their existing fleet with zero or low-emission features or reduce train movements through LAUS (only if Annual Report identifies an increase in health risks	Metro, in coordination with SCRRA, Amtrak and LOSSAN Rail Corridor Agency	Metro, in coordination with SCAQMD		Within 60 days of completing Annual Report (if SCAQMD thresholds are anticipated to be exceeded)	—	—

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						Initial	Date
zero or low-emission features. The types of emerging technologies that can be implemented, include, but are not limited to the following: <ul style="list-style-type: none"> <li>Electric multiple unit systems.</li> <li>Diesel multiple units.</li> <li>Battery-hybrid multiple units.</li> <li>Renewable diesel and other alternative fuels.</li> </ul> Metro shall coordinate with regional rail/intercity rail operators to incorporate these emerging technologies into existing and/or future funding and/or operating agreements to reduce locomotive exhaust emissions in the project study area.	associated with diesel pollutant concentrations that would exceed SCAQMD thresholds)						
Noise and Vibration							
<b>NV-1</b> <del>Construct Sound Walls: Prior to reaching forecasted maximum daily regional/intercity train movements through LAUS in 2031 (770trains). As early as possible in the Project construction phase, including prior to any demolition, and in any event prior to substantial construction-related activities, Metro shall construct a two permanent sound walls. The first sound wall shall be located between the William Mead Homes and the train tracks near the railroad right-of-way and shall extend up to 22 feet in height and 1,144 feet long to reduce operational noise impacts at William Mead Homes. The second sound wall shall be located between the Care First Village and the train tracks near the railroad right-of-way and shall extend to 13-feet in height and 347 feet long to reduce operational noise impacts at Care First Village. The sound wall shall be constructed of materials that achieve similar reductions or insertion loss at impacted receptors and shall have a surface density of at least 4 pounds per square foot. Metro may construct the sound wall earlier than 2031 to reduce construction-related noise impacts and/or moderate operational noise impacts from increased train movements that may occur as early as 2026.</del>	Incorporate design requirements into sound wall	Metro	Metro	Phase B	During Final Design	—	—
	Incorporate contractor responsibilities into applicable construction documents (plans and specifications)	Metro	Metro		During Final Design	—	—
	Construct sound wall	Contractor	Metro		During Construction	—	—
<b>NV-2</b> <b>Employ Noise- and Vibration-Reducing Measures during Construction:</b> The construction contractor shall employ measures to minimize and reduce construction noise and vibration. <u>Through weekly and monthly meetings with Metro and the contractor, the means and methods to comply with the overall contract specifications and applicable mitigation measures shall be discussed with Metro and applicable parties prior to implementation.</u> Noise and vibration reduction measures that would be implemented include, but are not limited to, the following: <ul style="list-style-type: none"> <li>Design considerations and project layout:                             <ul style="list-style-type: none"> <li>Construct temporary noise walls, such as temporary walls or piles of excavated material, between <del>noisy</del> construction activities and noise-sensitive receivers.</li> <li>Acoustic blankets or soundproof window inserts along facades of sensitive buildings as deemed necessary by the construction contractor.</li> <li>Reroute truck traffic away from residential streets, if possible, and select streets with fewest residences if no alternatives are available.</li> <li>When in use, Site-locate equipment on the construction site as far away from noise-sensitive sites as possible.</li> </ul> </li> </ul>	Incorporate contractor responsibilities into applicable construction documents (plans and specifications)	Metro	Metro	Phase A and B	During Final Design	—	—
	Implement noise and vibration reduction measures	Contractor	Metro		During Construction	—	—
	Monitor noise and vibration levels at William Mead Homes and Mozaic Apartments during the loudest/most vibration intensive activities and notify Metro if FTA criteria is exceeded	Metro	Metro		During Construction	—	—



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Mitigation Measures	Compliance Action/Deliverable	Responsible Party	Enforcement Agency	Implementation Phase (A or B)	Monitoring/Compliance Schedule	Verification of Compliance	
						Initial	Date
<ul style="list-style-type: none"><li>Construct walled enclosures around especially noisy activities or clusters of noisy equipment (i.e., e.g., shields can be used around pavement breakers and loaded vinyl curtains can be draped under elevated structures).</li><li>Sequence of operations:<ul style="list-style-type: none"><li>Restrict pile driving to daytime periods.</li><li>Combine noisy loud operations to occur in the same time period.<ul style="list-style-type: none"><li>The total noise level produced would not be <del>significantly</del> <u>substantially</u> greater than the level produced if the operations were performed separately.</li></ul></li><li>Avoid nighttime activities to the maximum extent feasible.<ul style="list-style-type: none"><li>Sensitivity to noise increases during the nighttime hours in residential neighborhoods.</li></ul></li></ul></li><li>Alternative construction methods:<ul style="list-style-type: none"><li>Avoid use of an impact pile driver in noise and/or vibration-sensitive areas, where possible.<ul style="list-style-type: none"><li>Drilled piles or the use of a sonic or vibratory pile driver are quieter alternatives where the geological conditions permit their use.</li></ul></li><li>Use specially-quieted equipment, such as quieted and enclosed air compressors and properly-working mufflers on all engines.</li><li>Select quieter demolition methods, where possible (e.g., sawing bridge decks into sections that can be loaded onto trucks results in lower cumulative noise levels than impact demolition by pavement breakers).</li><li>Use vibratory rollers in static mode (vibrating motor turned down or off) when operating in close proximity to sensitive buildings.</li></ul></li></ul> <p>In an effort to keep construction noise levels below FTA’s construction noise <del>or</del> <u>and</u> vibration criteria, Metro shall monitor noise and vibration during the loudest and most vibration intensive types of construction activities. Continuous construction noise and vibration monitoring shall be conducted at the first row of residences at William Mead Homes, <u>Care First Village, the Metro Gateway Childhood Development Center, and Mozaic Apartments</u>, within <u>approximately</u> 300 feet of construction activities, <del>approximately</del>. Monitors shall be deployed closest to the construction activity because demonstration of compliance with the construction thresholds at the nearest locations guarantees compliance <del>farther</del> <u>further</u> away. If FTA’s construction noise or vibration criteria are exceeded, the contractor shall be alerted and directed by Metro to incorporate additional noise and vibration reduction methods (examples above).</p>	Implement additional noise reduction methods (if FTA’s construction noise and vibration criteria are exceeded)	Contractor	Metro		During Construction	—	—
NV-3 <b>Prepare a Community Notification Plan for Project Construction:</b> To proactively address community concerns related to construction noise and vibration, prior to construction, Metro and/or the construction contractor shall prepare and maintain a community notification plan. Components of the plan shall include initial information packets prepared and mailed to all residences within a 500-foot radius of project construction. Updates to the plan shall be prepared as necessary to indicate changes to the construction schedule or other processes. Metro shall identify a project liaison to be available to respond to questions <u>and complaints</u> from the community or other interested groups.	Incorporate contractor responsibilities into applicable construction documents (plans and specifications)	Metro	Metro	Phase A and B	During Final Design	—	—
	Prepare community notification plan/Identify project liaison	Contractor	Metro		Prior to Construction	—	—

Table 1. Mitigation Monitoring and Reporting Program: CEQA Modified Proposed Project							
Mitigation Measures	Compliance Action/Deliverable	Responsible Party	Enforcement Agency	Implementation Phase (A or B)	Monitoring/Compliance Schedule	Verification of Compliance	
						Initial	Date
	Mail information packets to all residences within 500 feet of construction area	Contractor	Metro		During Construction	—	—
<b>Biological Resources</b>							
<b>BIO-1</b> <b>Bats:</b> Preconstruction surveys for roosting special-status bats (including western mastiff bats and western yellow bats) and other native bat species shall be conducted by a Metro-approved qualified bat biologist within 2 weeks prior to construction. Surveys shall be conducted where suitable habitat and/or bridge structures that will be removed or that will have modifications to the substructure are present. All locations with suitable roosting habitat (including potential maternity roosts) shall be surveyed using an appropriate combination of structure inspection, exit counts, acoustic surveys, or other suitable methods. Surveys shall be conducted during the appropriate season and time of day/night to ensure detection of day- and night-roosting bats (i.e., preferably one daytime and one nighttime survey shall be conducted at each location with suitable roosting habitat during the maternity season, May 1 through August 31). If no roosts are detected, trees that provide suitable roosting habitat may be removed under the guidance of the qualified bat biologist.  If a roost is detected, passive exclusion shall include monitoring the roost for 3 days to determine if the roost is active. If the roost is determined to support a reproductive female with young, the roost shall be avoided until it is no longer active. If the roost remains active during the 3 monitoring days and observations confirm it is not a maternity colony, a temporary bat exclusion device shall be installed under the supervision of a CDFW-Metro-approved qualified bat biologist. At the discretion of the biologist, based on his or her expertise, an alternative roosting structure(s) may be constructed and installed prior to the installation of exclusion devices. Exclusion <u>shall be</u> conducted during the fall (September or October) to avoid trapping flightless young inside during the summer months or torpid (overwintering) individuals during the winter. If it cannot be determined whether an active roost site supports a maternity colony, the roost site shall not be disturbed, and construction within 300 feet shall be postponed or halted until the roost is vacated and the young are volant (able to fly). Exclusion efforts shall be monitored on a weekly basis and continued for the duration of project construction activities and removed when no longer necessary.  The following avoidance and minimization measures shall be implemented during construction: <ul style="list-style-type: none"> <li>• All work conducted on bridges shall occur during the day. If this is not feasible, lighting and noise shall be directed away from night roosting and foraging areas.</li> <li>• Combustion equipment (such as generators, pumps, and vehicles) shall not be parked or operated under a bridge. Construction personnel shall not be present directly under a roosting colony. Construction activities shall not severely restrict airspace access to the roosts.</li> <li>• Removal of mature trees that provide suitable bat roosting habitat shall be conducted outside of the maternity season (May 1 through August 31); that is, removal shall be conducted between September 1 and April 30. Because bats may be present in a torpid state during the winter, suitable roosting habitat shall be removed before the onset of cold weather, <u>generally when temperatures drop below 40 degrees Fahrenheit</u>, (approximately November 1) or as determined by a qualified bat biologist). <u>Should removal of mature trees that provide suitable bat roosting habitat be necessary after the cold weather, a qualified bat biologist shall conduct pre-construction surveys when temperatures are greater than 40 degrees Fahrenheit to ensure that bats are not present during removal.</u></li> <li>• When removing palm trees, the dead fronds shall be removed first before felling the palm to allow any bats to escape.</li> </ul>	Incorporate contractor responsibilities into applicable construction documents (plans and specifications)	Metro	Metro	Phase A and B	During Final Design	—	—
	Retain a qualified bat biologist	Metro	Metro		Prior to Tree Removal/Bridge Removal	—	—
	Conduct preconstruction bat surveys	Metro	Metro		During Construction	—	—
	Implement avoidance measures and/or temporary bat exclusion devices (only if a roost with active nest is detected)	Metro	Metro		During Construction	—	—

Mitigation Measures	Compliance Action/Deliverable	Responsible Party	Enforcement Agency	Implementation Phase (A or B)	Monitoring/Compliance Schedule	Verification of Compliance	
						Initial	Date
<b>BIO-2</b> <b>MBTA Species:</b> Vegetation removal shall be conducted outside of the bird nesting season (February 1 through September 30) to the extent feasible. If vegetation removal cannot be conducted outside of the nesting season, a CDFW-Metro-approved qualified bird biologist shall conduct preconstruction surveys to locate active nests within <u>72 hours</u> <del>7 days</del> prior to vegetation removal in each area with suitable nesting habitat. If nesting birds are found during preconstruction surveys, an exclusionary buffer (150 feet for passerines and 500 feet for raptors) suitable to prevent nest disturbance shall be established by the biologist. The buffer may be reduced based on species-specific and site-specific conditions as determined by the qualified biologist. This buffer shall be clearly marked in the field by construction personnel under the guidance of the biologist, and construction or vegetation removal shall not be conducted within the buffer until the biologist determines that the young have fledged or the nest is no longer active.  Exclusionary devices (hard surface materials, such as plywood or plexiglass, flexible materials, such as vinyl, or a similar mechanism that keeps birds from building nests) shall be installed over suitable nest sites at the bridges that will be removed or that will have modifications to the substructure before the nesting season (February 1 through September 30) to prevent nesting at the bridges by bridge- and crevice-nesting birds (i.e., swifts and swallows). Netting shall not be used as an exclusionary material because it can injure or kill birds, which would be in violation of the MBTA.  In addition, if work on existing bridges with potential nest sites that will be removed or will have modifications to the substructure is to be conducted between February 1 and September 30, all bird nests shall be removed prior to February 1. Immediately prior to nest removal, a qualified biologist shall inspect each nest for the presence of torpid bats, which are known to use old swallow nests. <del>Nest removal</del> Removal of <u>partially constructed nests</u> shall be conducted under the guidance and observation of a qualified biologist. Removal of <u>partially constructed</u> swallow nests on bridges that are under construction shall be repeated as frequently as necessary to prevent nest completion <del>unless a nest exclusion device has already been installed</del> . <del>Nest removal</del> Removal of nest materials and exclusion device installation shall be monitored by a qualified biologist. Such exclusion efforts shall be continued to keep the structures free of swallows until October or the completion of construction.  <u>All Project personnel and contractors who will be on site during construction shall complete mandatory training conducted by the Project Biologist or a designated qualified biologist. Any new Project personnel or contractors that come on board after the initiation of construction shall also be required to complete the mandatory Worker Environmental Awareness Program training before they commence with work. The training shall advise workers of potential impacts on biological and potentially jurisdictional resources. At a minimum, the training shall include the following topics: (1) locations where special-status species may occur; (2) the purpose for resource protection; (3) protective measures to be implemented in the field; (4) environmentally responsible construction practices; and (5) the protocol to resolve conflicts that may arise at any time during the construction process.</u>	Incorporate contractor responsibilities into applicable construction documents (plans and specifications)	Metro	Metro	Phase A and B	During Final Design	—	—
	Retain a qualified bird biologist	Metro	Metro		Prior to Construction	—	—
	Conduct preconstruction bird surveys	Metro	Metro		Within 7 days prior to vegetation removal	—	—
	Implement/mark exclusionary buffer (only if nesting birds identified during pre-construction surveys)	Contractor	Metro		Prior to vegetation removal until nest is no longer active	—	—
	Install exclusionary devices (only if suitable nests are identified during preconstruction surveys)	Contractor	Metro	Phase B	Prior to February 1 (before bridge modifications at Vignes Street and Cesar Chavez Avenue)	—	—
	Remove bird nests	Contractor	Metro	Phase B	Prior to February 1 (before bridge modifications at Vignes Street and Cesar Chavez Avenue)	—	—
<b>BIO-3</b> <b>Protected Trees:</b> Preconstruction surveys for protected trees (native trees 4 inches or more in cumulative diameter, as measured at 4.5 feet above the ground level, that are subject to protection under <u>the City of Los Angeles Protected Tree and Shrub Regulations</u> (Ordinance No. 186873477404), <u>and LA Metro's Tree Policy, Preservation of Protected Trees of the City of Los Angeles' municipal code</u> , including oaks ( <u>Valley Oak</u> [ <i>Quercus lobata</i> ], California Live Oak [ <i>Quercus agrifolia</i> ], or any other tree of the oak genus indigenous to California but excluding the Scrub Oak [ <i>Quercus berberidifolia</i> ]), southern California black walnut ( <i>Juglans californica</i> ), western sycamore ( <i>Platanus racemora</i> ), and California bay ( <i>Umbellularia californica</i> ); shall be conducted by a registered consulting arborist with the American Society of Consulting Arborists at least 120	Retain a registered arborist to conduct preconstruction surveys and prepare a Protected Tree Report	Metro	Metro	Phase A and B	180 days prior to Construction	—	—
	Conduct preconstruction protected tree surveys	Metro	Metro		120 days prior to Construction	—	—



Table 1. Mitigation Monitoring and Reporting Program: CEQA Modified Proposed Project								
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						Initial	Date	
days prior to construction. The locations and sizes of all protected trees shall be identified prior to construction and overlaid on project footprint maps to determine which trees may be protected in accordance with Ordinance No. 186873477404. The registered consulting arborist shall prepare a Protected Tree Report and shall submit three copies to the City of Los Angeles Department of Public Works. Any protected trees that must be removed due to project construction shall be replaced at a 2:1 ratio (or up to a 4:1 ratio for protected trees on private property) except when the protected tree is relocated on the same property, the City of Los Angeles has approved the tree for removal, and the relocation is economically reasonable and favorable to the survival of the tree. Each replacement tree shall be at least a 15-gallon specimen, measuring 1 inch or more in diameter, 1 foot above the base, and shall be at least 7 feet in height measured from the base.	Prepare Protected Tree Report	Metro	Metro		Prior to Construction	—	—	
	Replace and/or relocate protected trees (as needed)	Metro	Metro		Within one year of removal of protected trees	—	—	
Hydrology and Water Quality								
HWQ-1	<b>Prepare and Implement a SWPPP:</b> During construction, Metro shall comply with the provisions of the NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (CGP) (Order No. 2009-0009-DWQ, NPDES No. CAS000002) and any subsequent amendments (Order No. 2010-0014-DWQ, and Order No. 2012-0006-DWQ, and Order No. 2022-0057-DWQ), which are currently in effect. However, during construction of the Project, Order Number 2022-0057-DWQ may be in effect. This permit was adopted on September 8, 2022 and will become effective on September 1, 2023as they relate to Project construction activities. Construction activities shall not commence until a waste discharger identification number is received from the Stormwater Multiple Application and Report Tracking System. The contractor shall implement all required aspects of the SWPPP during project construction. Metro shall comply with the Risk Level 2 sampling and reporting requirements of the CGP. A rain event action plan shall be prepared and implemented by a qualified SWPPP developer within 48 hours prior to a rain event of 50 percent or greater probability of precipitation according to the National Oceanic and Atmospheric Administration. A Notice of Termination shall be submitted to State Water Resources Board (SWRCB) within 90 days of completion of construction and stabilization of the site.	Incorporate contractor responsibilities into applicable construction documents (plans and specifications)	Metro	Metro	Phase A and B	During Final Design	—	—
		Prepare and submit Notice of Intent	Contractor/Metro	SWRCB		Prior to Construction		
		Prepare SWPPP/	Contractor	Metro/RWQCB		Prior to Construction	—	—
		Implement SWPPP (including preparation of rain event action plans)	Contractor	RWQCB		During Construction	—	—
		Prepare and submit Notice of Termination	Contractor/Metro	SWRCB		90 days prior to completion of construction	—	—
HWQ-2	<b>Final Water Quality BMP Selection (Caltrans ROW):</b> Metro shall comply with the provisions of the <del>Caltrans Statewide NPDES Permit (Order No. 2012-0011-DWQ, NPDES No. CAS000003), effective July 1, 2013 (known as the Caltrans MS4 permit)</del> Caltrans MS4 Permit (Order Number 2022-0033-DWQ) and Time Schedule Order (Order Number 2022-0089-DWQ) that was adopted June 22, 2022, and became effective January 1, 2023, and any applicable provisions of the Caltrans SWMP for long-term BMPs. This post-construction requirement shall only apply to the US-101 overhead viaduct improvements. Metro shall prepare a stormwater data report for the plans, specifications, and estimate phase that will address post-construction BMPs for the US-101 overhead viaduct in accordance with the Caltrans <i>Project Planning and Design Guide</i> (latest edition).	Incorporate applicable NPDES requirements (for the portions of project within Caltrans ROW) into applicable construction documents (plans and specifications)	Metro	Caltrans	Phase A and B	Final Design	—	—
		Prepare a stormwater data report	Metro	Caltrans		Final Design	—	—
HWQ-3	<b>Final Water Quality BMP Selection (Railroad ROW):</b> For the portion of the Pproject outside Caltrans ROW, and not under the jurisdiction of the City of Los Angeles, Metro shall comply with the NPDES General Permit for Waste Discharge Requirements for Stormwater Discharges from Small MS4 (Order No. 2013-0001-DWQ, NPDES No. CAS000004), effective July 1, 2013 (known as the Phase II permit).	Incorporate applicable NPDES requirements into plans into applicable construction documents (plans and specifications)	Metro	Metro	Phase A and B	Final Design	—	—

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Mitigation Measures		Compliance Action/Deliverable	Responsible Party	Enforcement Agency	Implementation Phase (A or B)	Monitoring/Compliance Schedule	Verification of Compliance	
							Initial	Date
HWQ-4	<b>Final Water Quality BMP Selection (City of Los Angeles):</b> Metro shall comply with the NPDES Waste Discharge Requirements for MS4 Discharges within the Coastal Watersheds of Los Angeles and Ventura Counties <del>County, Except Those Discharges Originating from the City of Long Beach</del> MS4(Order No. 2012-0175 <u>R4-2021-0105</u> , NPDES No. CAS0040044), effective <del>December 28, 2012</del> <u>September 11, 2021</u> (known as the Phase I Permit). This post-construction requirement shall apply to the entire Project except for those portions under the jurisdiction of the Caltrans MS4 Permit and the Phase II Permit. Metro shall prepare a final LID report in accordance with the City of Los Angeles <i>Planning and Land Development Handbook for Low Impact Development</i> (LID Manual), May 9, 2016. This document shall identify the required BMPs to be in place prior to Project operation and maintenance.	Incorporate applicable NPDES requirements (project wide) into applicable construction documents (plans and specifications)	Metro	Metro	Phase A and B	Final Design	—	—
		Prepare a final LID report	Metro	City of Los Angeles		Final Design	—	—
HWQ-5	<b>Comply with Local Dewatering Requirements:</b> The contractor shall comply with the provisions of the General Waste Discharge Requirements for Discharges of Groundwater from Construction and Project Dewatering to Surface Waters in Coastal Watersheds of Los Angeles and Ventura Counties (Order No. R4-2013-0095, NPDES Permit No. CAG994004), effective July 6, 2013 (known as the Dewatering Permit), as they relate to discharge of non-stormwater dewatering wastes. The two options to discharge shall be to the local storm drain system and/or to the sanitary sewer system, and the contractor shall obtain a permit from the RWQCB and/or the City of Los Angeles, <del>respectively</del> .	Incorporate contractor responsibilities into applicable construction documents (plans and specifications)	Metro	Metro	Phase A and B	During Final Design	—	—
		Obtain Dewatering Permits (as needed)	Contractor	RWQCB/City of Los Angeles		Prior to Construction (Dewatering Activities)	—	—
HWQ-6	<b>Comply with Local Dewatering Requirements for Contaminated Sites:</b> The contractor shall comply with the provisions of the General Waste Discharge Requirements for Discharges of Treated Groundwater from Investigation and/or Cleanup of Volatile Organic Compounds-Contaminated Sites to Surface Waters in Coastal Watersheds of Los Angeles and Ventura Counties (Order No. R4-2013-0043, NPDES Permit No. CAG914001), effective April 7, 2013 (known as the Dewatering Permit for contaminated sites), for discharge of non-stormwater dewatering wastes from contaminated sites affected during construction. The two options to discharge shall be to the local storm drain system and/or to the sanitary sewer system, and the contractor shall require a permit from the RWQCB and/or the City of Los Angeles, respectively.	Incorporate contractor responsibilities into applicable construction documents (plans and specifications)	Metro	Metro	Phase A and B	During Final Design	—	—
		Obtain Dewatering Permits for Contaminated Sites (as needed)	Contractor	RWQCB/City of Los Angeles		Prior to Construction (Dewatering Activities on Contaminated Sites)	—	—
HWQ-7	<b>Prepare and Implement Industrial SWPPP for Relocated, Regulated Industrial Uses:</b> Metro shall comply with the NPDES General Permit for Stormwater Discharges Associated with Industrial Activities (IGP; Order No. 2014-0057-DWQ, <u>as amended by Order No. 2015-0122-DWQ</u> , NPDES No. CAS000001) for demolished, relocated, or new industrial-related properties impacted by the project. This shall include preparation of industrial SWPPP(s), as applicable.	Incorporate contractor responsibilities into applicable construction documents (plans and specifications)	Metro	Metro	Phase A and B	During Final Design	—	—
		Prepare Industrial SWPPP for relocated, regulated industrial uses	Contractor	RWQCB		Prior to Construction (on Industrial Sites)	—	—
Geology and Soils								
GEO-1	<b>Prepare Final Geotechnical Report:</b> During final design, a final geotechnical report shall be prepared by a licensed geotechnical engineer (to be retained by Metro). The final geotechnical report shall address and include site-specific design recommendations on the following: <ul style="list-style-type: none"><li>Site preparation</li></ul>	Prepare final geotechnical report	Metro	Metro	Phase A and B	During Final Design	—	—
		Incorporate site-specific recommendations of the final geotechnical report	Metro	Metro		During Final Design	—	—

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						Initial	Date	
<ul style="list-style-type: none"> <li>Soil bearing capacity</li> <li>Appropriate sources and types of fill</li> <li>Liquefaction</li> <li>Lateral spreading</li> <li>Corrosive soils</li> <li>Structural foundations</li> <li>Grading practices</li> </ul> <p>The recommendations shall be prepared to mitigate the risk of seismic ground shaking and ground failure, including liquefaction. In addition to the recommendations for the conditions listed above, the report shall include results of subsurface testing of soil and groundwater conditions, and shall provide recommendations as to the appropriate foundation designs that are consistent with the latest version of the CBC, as applicable at the time building and grading permits are pursued. Additional recommendations shall be included in that report to provide guidance for design of project-related infrastructure in accordance with Metro Rail Design Criteria, Manual for Railway Engineering, California High-Speed Train Project Design Criteria, California Amendments to the American Association of State Highway and Transportation Officials Load and Resistance Factor Design Bridge Design Specifications, and applicable local city codes (Appendix L of this EIR). The project shall be designed and constructed to comply with the site-specific recommendations as provided in the final geotechnical report to be prepared.</p>	into applicable construction documents (plans and specifications)							
	Construct infrastructure per the site-specific geotechnical recommendations	Contractor	Metro		During Construction	—	—	
Hazards and Hazardous Materials								
<b>HAZ-1 Prepare a Construction Hazardous Materials Management Plan:</b> Prior to construction, an HMMP shall be prepared by Metro that outlines provisions for safe storage, containment, and disposal of chemicals and hazardous materials, contaminated soils, and contaminated groundwater used or exposed during construction, including the proper locations for disposal. The HMMP shall be prepared to address the area of the project footprint, and would include, but shall not be limited to, the following: <ul style="list-style-type: none"> <li>A description of hazardous materials and hazardous wastes used (29 CFR 1910.1200).</li> <li>A description of handling, transport, treatment, and disposal procedures, as relevant for each hazardous material or hazardous waste (29 CFR 1910.120).</li> <li>Preparedness, prevention, contingency, and emergency procedures, including emergency contact information (29 CFR 1910.38).</li> <li>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 (29 CFR 1910).</li> <li>Instructions on keeping Safety Data Sheets on site for each on-site hazardous chemical (29 CFR 1910.1200).</li> <li>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 (29 CFR 1910.120).</li> </ul>	Incorporate contractor responsibilities into applicable construction documents (plans and specifications)	Metro	Metro	Phase A and B	Prior to Construction	—	—	
	Prepare Hazardous Materials Management Plan	Contractor	Metro		Prior to Construction	—	—	
	Implement Hazardous Materials Management Plan	Contractor	Metro		During Construction	—	—	

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Mitigation Measures	Compliance Action/Deliverable	Responsible Party	Enforcement Agency	Implementation Phase (A or B)	Monitoring/Compliance Schedule	Verification of Compliance	
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<b>HAZ-2 Prepare Project-wide Phase II ESA (based on completed Phase I ESA):</b> Prior to final design, a Phase II Environmental Site Investigation shall be prepared to focus on likely sources of contamination (based on the completed Phase I ESA) for properties within the project footprint that would be affected by excavation. Phase II activities shall consist of: <ul style="list-style-type: none"> <li>Collection of soil, groundwater, and soil vapor samples from borings, for geologic analysis and collection/submittal of samples to an environmental laboratory for implementation of an analytical program. Sampling shall be based on the findings of the Phase I ESA for the project area.</li> <li>Laboratory analysis of samples for contaminants of concern, which vary by location, but may include: VOCs, PAHs, TPHs, and California Title 22 metals.</li> </ul> A Phase II ESA Report shall be prepared that summarizes the results of the drilling and sampling activities, and provides recommendations based on the investigation's findings. Metro shall implement the Phase II ESA findings. The Phase II ESA shall be conducted under the direct supervision of a Professional Geologist, licensed in the State of California, with expertise in environmental site assessments and evaluation of contaminated sites.	Prepare Phase II ESA Investigation	Metro	Metro	Phase A and B	Prior to Final Design	—	—
	Incorporate contractor responsibilities into applicable construction documents (plans and specifications)	Metro	Metro		Prior to Construction	—	—
	Implement Phase II recommendations/findings	Contractor	Metro		During Construction	—	—
<b>HAZ-3 Prepare a General Construction Soil Management Plan:</b> Prior to construction, Metro shall prepare a General Construction Soil Management Plan that includes general provisions for how soils will be managed within the project footprint for the duration of construction. Any soil imported to the project site for backfill shall be certified clean prior <u>per DTSC's Information Advisory Clean Imported Fill Material</u> to use. General soil management controls to be implemented by the contractor and the following topics shall be addressed within the Soil Management Plan: <ul style="list-style-type: none"> <li>General worker health and safety procedures</li> <li>Dust control</li> <li>Management of soil stockpiles</li> <li>Traffic control</li> <li>Stormwater erosion control using BMPs</li> </ul>	Incorporate contractor responsibilities into applicable construction documents (plans and specifications)	Metro	Metro	Phase A and B	During Final Design	—	—
	Prepare Construction Soil Management Plan (project wide)	Contractor	Metro		Prior to Construction	—	—
	Implement Construction Soil Management Plan (project wide)	Contractor	Metro		During Construction	—	—
	Provide proof of certified clean imported soil	Contractor	Metro		During Construction	—	—
<b>HAZ-4 Prepare Parcel-Specific Soil Management Plans and Health and Safety Plans:</b> Prior to construction, <del>the contractor shall prepare Metro shall prepare</del> parcel-specific Soil Management Plans for known contaminated sites and LUC-adjudicated sites for submittal and approval by DTSC. The plans shall include specific hazards and provisions for how soils will be managed for known contaminated sites and LUC-adjudicated sites. The nature and extent of contamination <u>is expected to vary</u> <del>varies</del> widely across the project footprint, and the findings of a Phase II ESA will provide additional details on what is expected to be encountered during <u>construction</u> . The parcel-specific Soil Management Plan shall provide parcel-specific requirements addressing the following: <ul style="list-style-type: none"> <li>Soil disposal protocols.</li> <li>Protocols governing the discovery of unknown contaminants.</li> <li>Management of soil on properties within the project footprint with LUCs or known contaminants.</li> </ul>	Incorporate contractor responsibilities into applicable construction documents (plans and specifications)	Metro	Metro	Phase A and B	During Final Design	—	—
	Prepare parcel specific soil management plans (for known contaminated sites/LUC-adjudicated sites)	Metro/Contractor	DTSC		Prior to Construction	—	—
	Retain a Certified Industrial Hygienist to	Metro	Metro		Prior to Construction	—	—

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<p>Prior to construction on individual properties with LUCs or known contaminants, parcel-specific HASPs shall also be prepared <del>by contractors undertaking work activities for and submittal submitted to and approval by DTSC for approval</del>. The HASPs shall be prepared to meet OSHA requirements, Title 29 of the CFR 1910.120 and CCR Title 8, Section 5192, and all applicable federal, state and local regulations and agency ordinances related to the proposed management, transport, and disposal of contaminated media during implementation of work and field activities. The HASPs shall be signed and sealed by a Certified Industrial Hygienist, licensed by the American Board of Industrial Hygiene. In addition to general construction soil management plan provisions, the following parcel-specific HASPs provisions shall also be implemented:</p> <ul style="list-style-type: none"><li>• Training requirements for site workers who may be handling contaminated material</li><li>• Chemical exposure hazards in soil, groundwater, or soil vapor that are known to be present on a property</li><li>• Mitigation and monitoring measures that are protective of site worker and public health and safety</li></ul> <p>Prior to construction, Metro shall coordinate proposed soil management measures and reporting activities with stakeholders and regulatory agencies with jurisdiction, to establish an appropriate monitoring and reporting program that meets all federal, state, and local laws for the project, and each of the contaminated sites.</p>	prepare parcel specific health and safety plans (for known contaminated sites/LUC-adjudicated sites)							
	Prepare a parcel specific health and safety plans (for known contaminated sites/LUC-adjudicated sites)	Metro/Contractor	DTSC		Prior to Construction	—	—	
	Coordinate proposed soil management measures and reporting activities with appropriate agencies including but not limited to SCRRA, City of Los Angeles, RWQCB	Metro	Metro		Prior to Construction	—	—	
HAZ-5	<b>Land Use Covenant Sites and Coordination with the DTSC:</b> Prior to construction on properties with an LUC, Metro shall coordinate with the DTSC regarding any plans specified in HAZ-4, construction activities, and/or public outreach activities needed to verify that construction activities on properties with LUCs would be managed in a manner protective of public health and the environment.	Incorporate contractor responsibilities into applicable construction documents (plans and specifications)	Metro	Metro	Phase A and B	During Final Design	—	—
		Coordinate with DTSC on LUC sites	Metro/Contractor	DTSC		Prior to Construction (on LUC sites)	—	—
HAZ-6	<b>Halt Construction Work if Potentially Hazardous Materials/Abandoned Oil Wells are Encountered:</b> <u>Contractors shall stop work and follow procedures outlined in the HMMP and soil management plans immediately upon discovery if potentially hazardous materials or abandoned oil wells are encountered.</u> Contractors shall follow all applicable local, state, and federal regulations regarding discovery, notification, response, disposal, and remediation for hazardous materials, <u>underground storage tanks, asbestos containing materials (e.g., transite pipes),</u> and/or abandoned oil wells encountered during the construction process.	Incorporate contractor responsibilities into applicable construction documents (plans and specifications)	Metro	Metro	Phase A and B	Prior to Construction	—	—
		Halt work if potentially hazardous materials/abandoned wells are encountered	Contractor	Metro		During Construction	—	—
HAZ-7	<b>Compliance with the City of Los Angeles Building Code Methane Regulations:</b> Prior to final design, Metro shall verify that the design of infrastructure improvements located within Methane Buffer Zones (as defined by LABOE) comply with the City of Los Angeles Building Code regulations set forth in Ordinances 175790 and 180619. The ordinances require evaluation of methane hazards and mitigation of a methane hazard, if one exists, depending on the severity of the hazard.	Verify compliance with City of Los Angeles Building Code Methane Regulations	Metro	City of Los Angeles	Phase A and B	During Final Design	—	—



Table 1. Mitigation Monitoring and Reporting Program: CEQA Modified Proposed Project

Mitigation Measures		Compliance Action/Deliverable	Responsible Party	Enforcement Agency	Implementation Phase (A or B)	Monitoring/Compliance Schedule	Verification of Compliance	
							Initial	Date
HAZ-8	<b>Pre-Demolition Investigation:</b> Prior to the demolition of any structures, constructed prior to the 1970s, a survey shall be conducted for the presence of hazardous building materials, such as <del>asbestos-containing materials, lead-based paints</del> ACBs, LBPs, and other materials falling under the Universal Waste requirements. <u>An asbestos survey report signed by a Certified Asbestos Consultant shall be prepared prior to any demolition or renovation in accordance with Rule 1403 (d)(1)(A) of the SCAQMD.</u> The results of this survey shall be submitted to Metro, and applicable stakeholders as deemed appropriate by Metro, <u>and the survey report shall be submitted to the SCAQMD with an application for a Rule 1403 permit.</u> If any hazardous building materials are discovered, prior to demolition of any structures, a plan for proper removal shall be prepared in accordance with applicable OSHA and the Los Angeles County Department of Public Health requirements. The contractor performing the work shall be required to implement the removal plan and shall be required to have a C-21 license in the State of California and possess an A or B classification. If asbestos-related work is required, the contractor or their subcontractor shall be required to possess a California Contractor License (Asbestos Certification). Prior to any demolition activities, the contractor shall be required to secure the site and ensure the disconnection of utilities.	Incorporate contractor responsibilities into applicable construction documents (plans and specifications)	Metro	Metro	Phase A and B	During Final Design	—	—
		Conduct pre-demolition survey (for buildings constructed prior to 1970 that require demolition)	Contractor	Metro		Prior to Building Demolition	—	—
		Prepare Removal Plan (only if hazardous building materials are discovered during the pre-demolition survey)	Contractor	OSHA/Los Angeles County Department of Public Health		Prior to Building Demolition	—	—
		Provide proof of appropriate licenses and certifications	Contractor	Metro		Prior to Building Demolition	—	—
		Secure the site and disconnect utilities	Contractor	Metro		Prior to Building Demolition	—	—
		Implement Removal Plan	Contractor	Metro		During Building Demolition	—	—
		<b><i>Cultural and Paleontological Resources</i></b>						
CUL-1	<b>Archaeological Treatment Plan (ATP):</b> Prior to construction, Metro shall retain <u>a qualified archaeologist, herein defined as a person who meets the Secretary of Interior's Professional Qualification Standards in Archaeology and is experienced in the analysis and evaluation of the types of material anticipated to be encountered, to develop an ATP that details the actions to be taken to resolve adverse effects on historic property CA-LAN-1575/H and the procedures to address inadvertent discoveries. The California SHPO, Caltrans, and consulting Native American tribes shall be afforded 30 days to review and comment on the draft ATP, consistent with the timeline for consultation under Section 106 of the NHPA (36 CFR 800). Once relevant comments are addressed, the revised ATP shall be submitted to SHPO for 30-day review and concurrence.</u> The ATP shall be prepared consistent with the Secretary of Interior's Standards and Guidelines for <u>Archaeological Documentation and the California OHP <i>Archaeological Resources Management Reports: Recommended Contents and Format</i> (OHP 1990).</u> The ATP shall include, at a minimum, the following elements: <ul style="list-style-type: none"><li><b>Research design</b> – The ATP shall include a robust research design to be used in evaluating whether archaeological features and deposits that may be encountered contribute to the NRHP eligibility of CA-LAN-1575/H under Criterion D, and in recovering scientific data from those features and deposits that are determined to contribute. The research design shall discuss the results of previous archaeological research in the Los Angeles Basin, present research questions relevant to the types of</li></ul>	Prepare ATP	Metro	Metro	Phase A and B	Prior to Construction		
		Develop a site-specific sensitivity model	Metro			Prior to Construction		
		Retain archaeological and Native American monitors for all phases of work with potential to impact Archaeological Site CA LAN 1575/H or other previously undiscovered archaeological resources related to ethnohistoric or prehistoric archaeological deposits	Metro/Contractor			Prior to Construction and During Construction		
		Prepare public outreach and educational plan	Metro			Prior to Construction		

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<p>features and deposits that are expected to be encountered, and outline the data requirements necessary to successfully address the research questions.</p> <ul style="list-style-type: none"><li><b>Site-specific sensitivity model</b> – The ATP shall include provisions for the development of a site-specific sensitivity model to guide efforts to avoid or minimize adverse effects on known portions of CA-LAN-1575/H. The sensitivity model shall compare Project-related infrastructure, based on final design, to available information on previous disturbance from as-built plans, historical maps, geotechnical borings, and past archaeological reports that identify fill depth. A three-dimensional model, a series of stratigraphic profiles, or other relatable graphic depiction shall be created to assist in determining the level of sensitivity for encountering buried archaeological features or deposits for each element of the Project design. Consulting tribes shall have an opportunity to review the sensitivity model and provide insight informed by traditional tribal knowledge.</li><li><b>Phased testing, evaluation, and data recovery of known features and deposits</b> – Based on the results of the site-specific sensitivity model, protocols for phased testing, significance evaluation, and data recovery of known features and deposits shall be developed. Due to the extreme constraints posed by the location of the Project (affecting public transportation through closure of roads, transit, etc.), testing shall occur as part of the preconstruction activities. The ATP shall include a summary of anticipated features and artifacts potentially associated with CA-LAN-1575/H, including references to the pertinent research domains and data requirements contained in the research design, as well as standards for documentation, evaluation, data recovery, and analysis. The ATP shall rely on OSHA requirements regarding the safety of testing, evaluation, and data recovery locations and the potential for encountering contaminated soils or other hazards.</li><li><b>Archaeological and Native American monitoring</b> – The ATP shall include the locations and protocols to be used for archaeological and Native American monitoring during construction and provisions for determining monitoring locations based on final design, potential impacts to archaeological resources as assessed through the site-specific sensitivity model, and the potential to impact tribal resources including human remains that may be contained in both intact and disturbed contexts (e.g., previously disturbed soils or fill). The ATP shall include the requirement that archaeological monitoring take place under the supervision of an Archaeological Field Director meeting the minimum professional qualifications as defined in 2016 by the Society for California Archaeology, along with the demonstrated ability to identify human and non-human remains. The ATP shall also include requirements that all Archaeological Monitors for project construction have completed at least 12 semester units of undergraduate or graduate coursework in archaeology plus 12 months of archaeological-related field experience in California. The ATP shall rely on OSHA requirements regarding the safety of monitoring locations and the potential for encountering contaminated soils or other hazards.</li><li><b>Provisions for the inadvertent discovery of archaeological features or deposits</b> – The ATP shall include provisions for the accidental discovery of archaeological features or deposits during construction. These provisions shall include stop work protocols, notification procedures, and methodology for assessing the nature and significance of the find. If the feature or deposit is determined to be significant under Criterion D, then data recovery and analysis procedures outlined for known resources shall be implemented.</li><li><b>Provisions for the inadvertent discovery of human remains, associated and unassociated funerary objects, sacred objects, and objects of cultural patrimony</b> – The ATP shall contain provisions for the accidental discovery of human remains, associated and unassociated funerary objects, sacred objects, and objects of cultural patrimony. These provisions shall include stop work protocols, notification procedures, and provisions for the treatment (including reburial in an appropriate location) of the human remains and associated objects in a respectful manner as determined through consultation with the Native American tribe identified by the Native American Heritage Commission as the Most Likely Descendant, and in accordance with applicable regulations.</li></ul>	<p>Conduct WEAP training with a qualified archaeologist to all ground-disturbing construction personnel</p>	<p>Metro/Contractor</p>			<p>Prior to Construction and during construction as new personnel join the project</p>		

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Mitigation Measures	Compliance Action/Deliverable	Responsible Party	Enforcement Agency	Implementation Phase (A or B)	Monitoring/Compliance Schedule	Verification of Compliance	
						Initial	Date
<ul style="list-style-type: none"> <li><b>Public participation or outreach plan for CA-LAN-1575/H</b> – The ATP shall include provisions for the development of a public participation or outreach plan for CA-LAN-1575/H that includes continued consultation with Native American tribes, cultural resource professionals, and other potential stakeholders, such as local historical societies. The plan may include preparation of visual/educational exhibits or murals within LAUS and development of an application for handheld electronic devices, or other published or digital educational material that may be used to inform the public regarding the significance of Historic Chinatown or earlier use and sacredness of the area as it relates to Native Americans. Any materials prepared for public distribution shall comply with applicable regulations regarding the confidentiality of culturally sensitive data and information about archaeological resources.</li> <li><b>Cultural resource worker environmental awareness program (WEAP) training</b> – The ATP shall include provisions for the development of cultural resource WEAP training to be delivered by a qualified archaeologist to all ground-disturbing construction personnel, including education on the consequences of unauthorized collection of artifacts, a review of discovery protocols, and explanation of mitigation requirements for work in archaeologically sensitive areas.</li> <li><b>Standards for reporting</b> – The ATP shall include standards for reporting the results of archaeological testing, evaluation, data recovery, and monitoring activities. All reports shall be consistent with the Secretary of Interior’s Standards and Guidelines for Archaeological Documentation and the California OHP’s <i>Archaeological Resources Management Reports: Recommended Contents and Format</i>.</li> <li><b>Guidelines for curation</b> – The ATP shall include guidelines for the ownership and curation of archaeological data and collections, in compliance with 36 CFR 79 and the California Guidelines for the Curation of Archeological Collections (May 7, 1993).</li> </ul> <p><b>Covenant for transfer of responsibilities under Section 5024 of the California Public Resources Code</b> – The ATP shall contain provisions for the negotiation of a covenant between the tribes, Caltrans, Metro and SHPO in order to transfer Caltrans’ responsibilities under Section 5024 of the California Public Resources Code to Metro for the acquisition of the parcel in Caltrans ROW on the south side of U.S. 101 at Commercial Street, located within the boundary of archaeological site CA-LAN-1575/H. The covenant cannot be completed until the CEQA environmental document and Section 106 agreement documents have received SHPO concurrence, as the final mitigation measures must also be included in the covenant.</p>							
<p><b>CUL-2 Built Environment Treatment Plan (BETP):</b> Prior to construction, Metro shall retain a qualified architectural historian, herein defined as a person who meets the Secretary of the Interior’s Professional Qualification Standards in Architectural History, to develop a BETP that details the actions to be taken to resolve adverse effects on the built environment historic properties. The California SHPO and continuing consulting parties with specific interest in the historic properties shall be afforded 30 days to review and comment on the draft BETP, consistent with the timeline for consultation under Section 106 of the NHPA (36 CFR 800). Once relevant comments are addressed, the revised BETP shall be submitted to SHPO for 30-day review and concurrence.</p> <p>The BETP shall include, at a minimum, the following elements:</p> <ul style="list-style-type: none"> <li><b>HABS documentation</b> – The BETP shall include provisions for the documentation to HABS standards of LAUS character-defining features proposed for demolition or alteration. The documentation shall be completed by a qualified architectural historian or historian who meets the Secretary of the Interior’s Professional Qualification Standards in History or Architectural History and submitted to the Library of Congress as an addendum to HABS CA-2158. The level of HABS documentation will be selected by the National Park Service Regional Office and shall include, at a minimum, large-format photographic recordation and a written description of character-defining features of LAUS proposed for demolition or alteration that were not included in previous HABS documentation (HABS CA-2158, CA-2158-A, CA-2158-B, CA-2158-C, and CA-2158-D). At a minimum, the following character-defining features shall be reviewed for inclusion in this documentation:</li> </ul>	<p>Conduct HABS-Like documentation and further documentation for all character defining features at LAUS</p> <p>Consult with SHPO and the City of Los Angeles CHC and OHR during early design phases of the Project</p> <p>Prepare protection and response plans for unanticipated effects and inadvertent damage to historical built environment resources</p>	Metro	Metro	Phase A and B	<p>During Final Design</p> <p>During Final Design</p> <p>Prior to Construction and During Construction</p>		



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<ul style="list-style-type: none"><li>o <u>Pedestrian passageway</u></li><li>o <u>Ramps</u></li><li>o <u>Railings</u></li><li>o <u>Platforms</u></li><li>o <u>Butterfly shed canopies</u></li><li>o <u>South retaining wall</u></li><li>o <u>Terminal Tower</u></li><li>o <u>Car Supply/Maintenance Building</u></li><li>o <u>Cesar Chavez Avenue Undercrossing</u></li><li>o <u>Vignes Street Undercrossing (this bridge, which was constructed as part of LAUS, does not require additional individual HABS documentation)</u></li><li>• <u>Restoration of the existing LAUS passenger concourse</u> – The BETP shall include provisions for the restoration of the existing LAUS passenger concourse (west of the pedestrian passageway) to its 1939 appearance in accordance with the Secretary of the Interior’s Standards for Restoration, where feasible, from an engineering and constructability standpoint. This includes possible redesign of the entrance to the Metro Red Line to be more compatible with the historic LAUS design. The Secretary of the Interior’s Standards for Rehabilitation shall be followed where restoration is not feasible.</li><li>• <u>Educational display for LAUS</u> – The BETP shall include provisions for the development of an educational display for LAUS that could be viewed by the public to demonstrate the history of LAUS and how it was used by past railroad passengers.</li><li>• <u>Relocation of the Terminal Tower</u> – The BETP shall include provisions to evaluate the feasibility by a multi-disciplinary team (e.g., architectural historian, structural, civil, geotechnical, and railroad engineers) to reorient at grade, vertically raise, or relocate the Terminal Tower. If any of those preservation methods are determined infeasible by the multi-disciplinary team, the Terminal Tower will be demolished.</li><li>• <u>Cesar Chavez Avenue Undercrossing, Vignes Street Undercrossing, and south retaining wall design plans</u> – The BETP shall include provisions for the development of design plans for the replacement of the Cesar Chavez Avenue and Vignes Street Undercrossings and alterations to the south retaining wall that are compatible with the historic character of LAUS, including assessing the feasibility of rehabilitation options that preserve historically significant portions of these structures as design progresses.</li><li>• <u>North Main Street Bridge design plans</u> – The BETP shall include provisions for the development of design plans for work on the character-defining features of North Main Street Bridge, including, but not limited to, its sidewalks, decking, and wingwalls, in accordance with the Secretary of Interior’s Standards for the Treatment of Historic Properties, to the extent feasible.</li><li>• <u>Design review</u> – The BETP shall identify parties—including SHPO, the City of Los Angeles OHR, and the City of Los Angeles CHC—to be consulted during early design phases of the Project regarding the following items:<ul style="list-style-type: none"><li>o <u>alterations to or demolition of character-defining features of LAUS</u></li><li>o <u>restoration of the existing LAUS passenger concourse</u></li><li>o <u>educational display for LAUS</u></li></ul></li></ul>							

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Mitigation Measures	Compliance Action/Deliverable	Responsible Party	Enforcement Agency	Implementation Phase (A or B)	Monitoring/Compliance Schedule	Verification of Compliance		
						Initial	Date	
<ul style="list-style-type: none"> <li>o <u>alterations to character-defining features of the North Main Street Bridge</u></li> <li>Metro shall take into consideration the feedback received in progressing the design to completion.</li> <li>• <b>Response plans</b> – The BETP shall include requirements for the development of protection and response plans for unanticipated effects and inadvertent damage to historical built environment resources.</li> </ul>								
<b>HIST-3</b> <b>Friedman Bag Company:</b> Textile Division Building-City of Los Angeles Office of Historical Resources Review and Consultation and HABS-Like Documentation: Prior to demolition, the character-defining features of the historical resource shall be photographed in a manner similar to HABS standards, submitted to OHR for review and approval, and the archival documentation shall be donated to a suitable repository, such as the City of Los Angeles Public Library.	Conduct HABS-like documentation of the Freidman Bag Company building	Metro	<del>Metro</del> City of Los Angeles OHR	Phase A	Prior to Building Demolition (Friedman-Bay Company building)	—	—	
	Submit documentation to OHR for review and approval	Metro	Metro		Prior to Building Demolition (Friedman-Bay Company building)	—	—	
	Donate archival documentation to a suitable repository	Metro	Metro		Prior to Operation of Run-Through Service	—	—	
<b>PAL-1</b> <del>Prepare a Paleontological Mitigation Plan (PMP).</del> It is anticipated that Quaternary older alluvium or Puente Formation, which <u>are geologic units that have a high sensitivity level, would be impacted during construction if excavation activities extend to depths as shallow as 6 feet below the natural ground surface. Metro shall retain A PMP shall be prepared by Metro's a qualified p</u> Paleontologist to prepare a PMP using final excavation plans to determine where these geologic units would be impacted, and Metro shall implement the PMP prior to the start of any ground-disturbing construction activities <u>if it is determined that such activities would encounter Quaternary older alluvium or Puente Formation.</u> The PMP shall include site-specific impact mitigation recommendations and specific procedures for construction monitoring and fossil discovery.  The PMP shall include a requirement for full-time paleontological monitoring if excavations would occur within native Quaternary older alluvium and/or Puente Formation, <del>with the exception of pile-driving activities. While pile-driving activities for foundation construction may impact paleontologically sensitive sediments due to the need for foundations to be within firm strata, this activity is not conducive to paleontological monitoring, as fossils would be destroyed by the construction process.</del> Monitoring is not recommended for excavations that only impact artificial fill and Quaternary <u>younger</u> alluvium.  The PMP shall detail a discovery protocol in the event potentially significant paleontological resources are encountered during construction. For example, the contractor shall halt <del>surface-disturbing</del> activities in the immediate area (within a 25-foot radius of the discovery), and <del>a</del> Metro's qualified paleontologist shall make an immediate evaluation of the significance and appropriate treatment of the encountered paleontological resources in accordance with the PMP. If necessary, appropriate salvage measures and mitigation measures shall be developed in <u>consultation with the responsible agencies and in conformance with federal and state guidelines and best practices.</u> Construction activities may continue in other areas of the <del>project</del> Project site while evaluation and treatment of the discovered paleontological resources take place. Work may not resume in the discovery area until it has been authorized by <u>Metro's a qualified paleontologist.</u>	Retain qualified paleontologist to prepare a PMP	Metro	Metro	Phase A and B	Prior to Construction	—	—	
	Prepare PMP	Metro	Metro		Prior to Construction	—	—	
	Implement PMP including full-time paleontological monitoring, discovery protocols, salvage measures, and evaluation and treatment of discovered paleontological resources	Metro	Metro		During Construction	—	—	
<b>PAL-2</b> <b>Paleontological WEAP Training:</b> Metro's qualified paleontologist shall prepare a paleontological resource-focused WEAP training that shall be <del>given delivered</del> to all ground-disturbing construction personnel, <del>All site workers shall be required to complete WEAP training with a focus on paleontological resources,</del>	Prepare a paleontological resource-focused WEAP Training.	Metro	Metro	Phase A and B	Prior to Construction	—	—	

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						Initial	Date
including a review of what to do of protocols to follow in the case of an unanticipated fossil discovery, as identified in the PMP.	Provide WEAP training to all ground-disturbing construction personnel	Contractor	Metro		Prior to Construction and during construction as new personnel join the project	—	—
<b>PAL-3</b> <b>Curation:</b> Metro shall make arrangements for the curation in perpetuity of significant fossils recovered during construction shall be curated by Metro in perpetuity at an accredited repository, such as the Natural History Museum of Los Angeles County. These fossils shall be prepared, identified, and catalogued for curation (but not prepared for a level of exhibition of any salvaged specimens) by Metro's qualified paleontologist. This includes removal of all or most of the enclosing sediment to reduce the specimen volume, increase surface area for the application of consolidants or preservatives, provide repairs and stabilization of fragile or damaged areas on a specimen, and allow identification of the fossils. All field notes, photographs, stratigraphic sections, and other data associated with the recovery of the specimens shall be deposited with the institution receiving the specimens.	Prepare, identify, and catalogue significant fossils recovered for curation	Metro	Metro	Phase A and B	During Construction	—	—
	Provide significant fossils recovered field notes, photographs, stratigraphic sections, and other data associated with the recovery of the specimens to an accredited repository for curation	Metro	Metro		Post Construction	—	—
	Incorporate Native American monitor requirements into ATP GRMMP (see Mitigation Measure CUL-1 HIST-5 above)	Metro	Metro		During Construction (at LAUS)	—	—
<b>OMM AQ-4 Construction Air Quality Monitoring at William Mead Homes.</b> Prior to the start of construction, Metro will develop a construction air quality monitoring plan specific to William Mead Homes in coordination with HACLA, South Coast Air Quality Management District (SCAQMD), and the US Environmental Protection Agency (USEPA). This construction air quality monitoring plan will identify locations along the fence line and within the William Mead Homes property for stationary air quality monitoring to be set up during the phases of construction for the adjacent sound wall construction, throat track reconstruction, and elevated rail yard. The construction air quality monitoring plan will identify the monitoring methodology, inspection procedures, threshold levels for alerts, compliance measures in the event of an alert, and reporting requirements. Compliance measures to be implemented by the construction contractor may include, but are not limited to, additional watering or use of dust suppressants, limiting vehicle speed to 5mph on unpaved surfaces, covering open-bodied trucks, and installing wheel washing stations or rumble plates. The construction air quality monitoring plan will also provide contact information for a construction representative to be identified for inquiries by residents of the William Mead Homes community and guidance for community notifications.  Metro will be responsible for operating and maintaining the air quality monitoring equipment during construction. Metro will have a dust control supervisor on-site during construction to ensure the construction air quality monitoring plan is being followed and that the air quality monitoring equipment remains operational during the phases of construction for the adjacent sound wall construction, throat track reconstruction, and elevated rail yard. The dust control supervisor will maintain a daily log of the construction activity by location, verify the air monitoring measurements, and coordinate back to Metro for validation of the data before release to the public.	Develop a construction air quality monitoring plan specific to William Mead Homes	Metro	Metro	Phase A and B	Prior to construction and during construction		

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Notes:  
AB=Assembly Bill; BMP=best management practice; Caltrans=California Department of Transportation; CARB=California Air Resources Board; CBC=California Building Code; CCR=California Code of Regulations; CEQA=California Environmental Quality Act; CFR=Code of Federal Regulations; CGP=construction general permit; CHC=Cultural Heritage Commission; CHSRA=California High-Speed Rail Authority; CRMMP=Cultural Resource Mitigation and Management Plan; DTSC=Department of Toxic Substance Control; EIR=environmental impact report; ESA=environmental site assessment; FTA=Federal Transit Administration; HABS=Historic American Buildings Survey; HACLA=Housing Authority of the City of Los Angeles; HCM=Historic-Cultural Monument; HMMP=Hazardous materials management plan; HSR=High-Speed Rail; IGP=industrial general permit; LA=Los Angeles; LABOE=Los Angeles Bureau of Engineering; LADOT=City of Los Angeles Department of Transportation; LAHCM=Los Angeles Historic-Cultural Monument; LAUS=Los Angeles Union Station; LID=low impact development; LOSSAN=Los Angeles-San Diego-San Luis Obispo; LUC=Land Use Covenant; MBTA=Migratory Bird Treaty Act; Metro=Los Angeles County Metropolitan Transportation Authority; MOU=memorandum of understanding; NAHC=Native American Heritage Commission; NPDES=National Pollutant Discharge Elimination System; OHR=Office of Historic Resources; OSHA=Occupational Safety and Health Administration; PAH=polynuclear aromatic hydrocarbon; PMP=Paleontological Mitigation Plan; PRC=Public Resources Code; RIO=River Improvement Overlay District; ROW=right-of-way; RWQCB=Regional Water Quality Control Board; SCAQMD=South Coast Air Quality Management District; SCORE=Southern California Optimized Rail Expansion; SCRRA=Southern California Regional Rail Authority; SWRCB=State Water Resources Control Board; SWPPP=stormwater pollution prevention plan; TMP=traffic management plan; TPH=total petroleum hydrocarbons; VOC=volatile organic compound; WEAP=worker environmental awareness program

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Table 2. Mitigation Monitoring and Reporting Program: Malabar Yard Railroad Improvements							
Mitigation Measures		Compliance Action/Deliverable	Responsible Party	Enforcement Agency	Monitoring/Compliance Schedule	Verification of Compliance	
						Initial	Date
Transportation and Traffic							
MY TR-1	<b>Prepare a Construction TMP for Malabar Yard Railroad Improvements</b> During the final engineering phase and at least 30 days prior to implementation of the Malabar Yard railroad improvements, a construction TMP shall be prepared by the contractor and reviewed and approved by Metro and the City of Vernon.  Any identified street closure schedules in the construction TMP shall be approved by the City of Vernon and coordinated among the construction contractor, Metro, BNSF, private businesses, public transit and bus operators, the bicycle community, Los Angeles Unified School District, and emergency service providers to minimize construction-related vehicular and non-vehicular traffic impacts during the peak hour. During planned closures, traffic shall be rerouted to adjacent streets via clearly marked detours and notice shall be provided 5 business days in advance to applicable parties (emergency service providers, public transit and bus operators, businesses, bicycle community, and organizers of special events). The TMP shall identify proposed closure schedules and detour routes, as well as construction traffic routes, including haul truck routes, and preferred delivery/haul-out locations and hours to avoid heavily congested areas during peak hours, where feasible and to maintain safe bicycle and pedestrian access during construction. The following provisions shall be included in the TMP: <ul style="list-style-type: none"><li>Traffic flow shall be maintained, particularly during peak hours, to the degree feasible.</li><li>Access to adjacent businesses shall be maintained during business hours via existing or temporary driveways, as feasible.</li><li>Metro or the contractor shall post advance-notice signs prior to construction in areas where access to local businesses could be affected. Metro shall provide signage to indicate new ways to access businesses and community facilities, if affected by construction.</li><li>Metro or the contractor shall notify City of Vernon in advance of street closures, detours, or temporary lane reductions.</li></ul>	Incorporate contractor responsibilities into applicable construction documents (plans and specifications)	Metro	Metro	During Final Design	—	—
		Prepare TMP	Contractor	Metro/City of Vernon	Prior to Construction	—	—
		Implement TMP	Contractor	Metro/City of Vernon	During Construction	—	—
MY TR-2	<b>Temporary Restriping and Adding a Right-turn Overlap Phase in Westbound Direction of the Vernon Avenue/Santa Fe Avenue Intersection:</b> During the final engineering phase and at least 30 days prior to implementation of the Malabar Yard railroad improvements, Metro and BNSF shall obtain approval from the City of Vernon to temporarily restripe the westbound shared through/right-turn lane to a westbound right-turn-only lane at Vernon Avenue and add a right-turn overlap phase in the same direction. The temporary restriping shall remain in place for the duration of construction. Upon completion of the Malabar Yard railroad improvements, the lane shall be returned to its original condition as a shared through/right-turn lane and the right-turn overlap phase shall be eliminated.	Incorporate contractor responsibilities into applicable construction documents (plans and specifications)	Metro	Metro	During Final Design	—	—
		Install restriping	Contractor	City of Vernon	During Construction	—	—

Table 2. Mitigation Monitoring and Reporting Program: Malabar Yard Railroad Improvements							
Mitigation Measures	Compliance Action/Deliverable	Responsible Party	Enforcement Agency	Monitoring/Compliance Schedule	Verification of Compliance		
					Initial	Date	
<b>MY TR-3 Restriping of the Santa Fe Avenue/Pacific Boulevard Intersection:</b> During the final engineering phase and at least 30 days prior to implementation of the Malabar Yard railroad improvements, Metro and BNSF shall obtain approval from the City of Vernon to restripe one eastbound through lane to an eastbound turn lane at Vernon Avenue.	Incorporate contractor responsibilities into applicable construction documents (plans and specifications)	Metro/BNSF	Metro	During Final Design	—	—	
	Install restriping	Contractor	City of Vernon	During Construction			
<b>MY TR-4 Restriping of the Pacific Boulevard/Fruitland Avenue Intersection (Future Horizon Year 2040):</b> In the Future Horizon Year (2040), Metro and BNSF, in coordination with the City of Vernon, shall restripe the northbound shared through/right-turn lane to a right-turn-only lane and a through lane at Pacific Boulevard.	Incorporate contractor responsibilities into applicable construction documents (plans and specifications)	Metro/BNSF	Metro	During Final Design	—	—	
	Install restriping	Contractor	City of Vernon	During Construction			
<b>MY TR-5 Add a New Vehicular Lane on the Fruitland Avenue Roadway Segment between Santa Fe Avenue and Pacific Boulevard (Future Horizon Year 2040):</b> In the Future Horizon Year (2040), Metro and BNSF, in coordination with the City of Vernon, shall add a new westbound vehicular lane on Fruitland Avenue.	Incorporate contractor responsibilities into applicable construction documents (plans and specifications)	Metro/BNSF	Metro	During Final Design	—	—	
	Install new lane	Contractor	City of Vernon	During Construction			
<b>MY TR-6 Obtain Required Approvals for At-Grade Railroad Crossings:</b> For all new and existing at-grade railroad crossing modifications, Metro and BNSF shall obtain required approvals from the City of Vernon and submit a Formal Application to the CPUC in accordance with the process outlined in the Rules of Practice and Procedure (effective May 2021). In accordance with the provisions of CPUC Rule 2.4 <i>CEQA Compliance</i> , the Formal Application shall include the Link US Final EIR (June 2019) and Final EIS/SEIR.	Prepare Plans for At-Grade Crossings	Metro/BNSF	Metro	Prior to Construction	—	—	
	Submit Formal Application to CPUC	Metro	City of Vernon/CPUC	Prior to Construction			
<b>Air Quality and Global Climate Change</b>							
<b>MY AQ-1 Fugitive Dust Control:</b> In compliance with SCAQMD Rule 403, during clearing, grading, earthmoving, or excavation operations, fugitive dust emissions shall be controlled by regular watering or other dust preventive measures using the following procedures, as specified in SCAQMD Rule 403: <ul style="list-style-type: none"> <li>Minimize land disturbed by clearing, grading, and earth moving, or excavation operations to prevent excessive amounts of dust</li> <li>Provide an operational water truck on site at all times; use watering trucks to minimize dust; watering should be sufficient to confine dust plumes to the project work areas; watering shall occur at least twice daily with complete coverage, preferably in the late morning and after work is done</li> <li>Suspend grading and earth moving when wind gusts exceed 25 miles per hour unless the soil is wet enough to prevent dust plumes</li> <li>Securely cover trucks when hauling materials on or off site</li> <li>Stabilize the surface of dirt piles if not removed immediately</li> </ul>	Incorporate contractor responsibilities into applicable construction documents (plans and specifications)	Metro/BNSF	Metro	During Final Design	—	—	
	Implement dust control measures	Contractor	Metro	During Construction	—	—	



Table 2. Mitigation Monitoring and Reporting Program: Malabar Yard Railroad Improvements						
Mitigation Measures	Compliance Action/Deliverable	Responsible Party	Enforcement Agency	Monitoring/Compliance Schedule	Verification of Compliance	
					Initial	Date
<ul style="list-style-type: none"> <li>Limit vehicular paths and limit speeds to 15 miles per hour on unpaved surfaces and stabilize any temporary roads</li> <li>Minimize unnecessary vehicular and machinery activities</li> <li>Sweep paved streets at least once per day where there is evidence of dirt that has been carried on to the roadway</li> <li>Revegetate or stabilize disturbed land, including vehicular paths created during construction to avoid future off-road vehicular activities</li> </ul> <p>The following measures shall also be implemented to reduce construction emissions:</p> <ul style="list-style-type: none"> <li>Prepare a comprehensive inventory list of all heavy-duty off-road (portable and mobile) equipment (50 horsepower and greater) (i.e., make, model, engine year, horsepower, emission rates) that could be used an aggregate of 40 or more hours throughout the duration of construction to demonstrate how the construction fleet is consistent with the requirements of Metro's Green Construction Policy</li> <li>Ensure that all construction equipment is properly tuned and maintained</li> <li>Minimize idling time to 5 minutes, whenever feasible, which saves fuel and reduces emissions</li> <li>Utilize existing power sources (e.g., power poles) or clean fuel generators rather than temporary power generators, whenever feasible</li> <li>Arrange for appropriate consultations with CARB or SCAQMD to determine registration and permitting requirements prior to equipment operation at the site and obtain CARB Portable Equipment Registration with the state or a local district permit for portable engines and portable engine-driven equipment units used at the project work site, with the exception of on-road and off-road motor vehicles, as applicable</li> </ul> <p>These control techniques shall be included in project specifications and shall be implemented by the construction contractor.</p>						
<b>MY AQ-2 Compliance with U.S. EPA's Tier 4 Exhaust Emission Standards and Renewable Diesel Fuel for Off-Road Equipment:</b> In compliance with Metro's Green Construction Policy, all off-road diesel powered construction equipment greater than 50 horsepower shall comply with U.S. EPA's Tier 4 final exhaust emission standards (40 CFR Part 1039). In addition, if not already supplied with a factory-equipped diesel particulate filter, all construction equipment shall be outfitted with best available control technology devices certified by the CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine, as defined by CARB regulations.  In addition to the use of Tier 4 equipment, all off-road construction equipment shall be fueled using 100 percent renewable diesel.	Incorporate contractor responsibilities into applicable construction documents (plans and specifications)	Metro/BNSF	Metro	During Final Design	—	—
	Use construction equipment that meets Tier 4 exhaust emissions standards	Contractor	Metro	During Construction	—	—



Table 2. Mitigation Monitoring and Reporting Program: Malabar Yard Railroad Improvements						
Mitigation Measures	Compliance Action/Deliverable	Responsible Party	Enforcement Agency	Monitoring/Compliance Schedule	Verification of Compliance	
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<b>Biological Resources</b>						
<b>MY BIO-1</b> <b>MBTA Species:</b> During construction, vegetation removal shall be conducted outside of the bird nesting season (February 1 through September 30) to the extent feasible. If vegetation removal cannot be conducted outside of the nesting season, a CDFW approved qualified avian biologist shall conduct preconstruction surveys to locate active nests within 72 hours prior to vegetation removal in each area with suitable nesting habitat, including surrounding buildings, eaves, telephone poles, bushes, or trees. If nesting birds are found during preconstruction surveys, an exclusionary buffer (150 feet for passerines and 500 feet for raptors) suitable to prevent nest disturbance shall be established by the biologist. The buffer may be adjusted based on species specific and site-specific conditions as determined by the qualified biologist or consultation from the wildlife agencies. This buffer shall be clearly marked in the field by construction personnel under the guidance of the biologist, and construction or vegetation removal shall not be conducted within the buffer until the biologist determines that the young have fledged or the nest is no longer active.  Exclusionary devices (hard surface materials, such as plywood or plexiglass, flexible materials, such as vinyl, or a similar mechanism that keeps birds from building nests) shall be installed over suitable nest sites at the bridges that will be removed or that will have modifications to the substructure before the nesting season (February 1 through September 30) to prevent nesting at the bridges by bridge- and crevice-nesting birds (i.e., swifts and swallows). Netting shall not be used as an exclusionary material because it can injure or kill birds, which would be in violation of the MBTA.  Removal of partially constructed nests shall be conducted under the guidance and observation of a qualified biologist. Removal of partially constructed swallow nests shall be repeated as frequently as necessary to prevent nest completion. Removal of nest materials and exclusion device installation shall be monitored by a qualified biologist. Such exclusion efforts shall be continued to keep the structures free of swallows until October or the completion of construction. Metro’s Resident Engineer or designated contractor shall ensure that all Project personnel and contractors who will be on site during construction complete mandatory training conducted by the Project Biologist or a designated qualified biologist. Any new Project personnel or contractors that come on board after the initiation of construction shall also be required to complete the mandatory Worker Environmental Awareness Program training before they commence with work. The training shall advise workers of potential impacts on jurisdictional resources. At a minimum, the training shall include the following topics: (1) occurrences of special-status species and special-status vegetation communities in the Project area (including vegetation communities subject to USACE, CDFW, and Regional Water Quality Control Board [RWQCB] jurisdiction), (2) the purpose for resource protection; (3) protective measures to be implemented in the field, including strictly limiting activities, vehicles, equipment, and construction materials to the fenced to avoid jurisdictional resource areas in the field (i.e., avoid areas delineated on maps or on the Project site by fencing); (4) environmentally responsible construction practices;	Incorporate contractor responsibilities into applicable construction documents (plans and specifications)	Metro/BNSF	Metro	During Final Design	—	—
	Retain a qualified bird biologist	Metro/BNSF	Metro	Prior to Construction	—	—
	Conduct preconstruction bird surveys	Metro/BNSF	Metro	Within 7 days prior to vegetation removal	—	—
	Implement/mark exclusionary buffer (only if nesting birds identified during pre-construction surveys)	Contractor	Metro	Prior to vegetation removal until nest is no longer active	—	—
	Install exclusionary devices (only if suitable nests are identified during preconstruction surveys)	Contractor	Metro	Prior to February 1 (before work that may affect nesting birds would occur)	—	—
	Remove bird nests	Contractor	Metro	Prior to February 1 (before work that may affect nesting birds would occur)	—	—

Table 2. Mitigation Monitoring and Reporting Program: Malabar Yard Railroad Improvements						
Mitigation Measures	Compliance Action/Deliverable	Responsible Party	Enforcement Agency	Monitoring/Compliance Schedule	Verification of Compliance	
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and (5) the protocol to resolve conflicts that may arise at any time during the construction process.						
<b>MY BIO-2 Protected Trees:</b> Prior to construction, City-owned trees (outside of private property) shall be identified and overlaid on Project footprint maps to determine which trees may be protected in accordance with the City of Vernon's Tree Ordinance (Code of Ordinances, Chapter 12.24, Street Trees). Prior to removal of any City-owned tree, Metro shall prepare a Tree Removal/Tree Protection Plan for review and approval by the City of Vernon Public Works Department that identifies: <ul style="list-style-type: none"> <li>Trees proposed to be cut or removed.</li> <li>Trees proposed to be retained; and</li> <li>Trees proposed to be provided in replacement of the trees that are to be cut or removed.</li> </ul> All street trees shall be planted per the street tree master plan on file in the City of Vernon Public Works Department. In addition, all construction shall preserve and protect the health of trees to remain, relocated trees, and new trees planted to replace those removed in accordance with Section 12.24.090 of the City's Tree Ordinance.	Prepare Tree Removal/Tree Protection Plan	Metro/BNSF	Metro/Vernon	Prior to Construction	—	—
	Replace and/or relocate protected trees (as needed)	Metro/BNSF	Metro/Vernon	Within one year of removal of protected trees	—	—
<b>Hydrology and Water Quality</b>						
<b>MY HWQ-1 Prepare and Implement a SWPPP for the Malabar Yard Railroad Improvements:</b> During construction, Metro or BNSF shall comply with the provisions of the NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Order No. 2009-0009-DWQ, NPDES No. CAS000002) and any subsequent amendments (Order No. 2010-0014-DWQ, and Order No. 2012-0006-DWQ), which are currently in effect. However, during construction of the Malabar Yard railroad improvements, Order Number 2022-0057-DWQ may be in effect. This permit was adopted on September 8, 2022, and will become effective on September 1, 2023. Construction activities shall not commence until a waste discharger identification number is received from the Stormwater Multiple Application and Report Tracking System. The contractor shall implement all required aspects of the SWPPP during Project construction. Metro or BNSF shall comply with the Risk Level 2 sampling and reporting requirements of the construction general permit (CGP). A rain event action plan shall be prepared and implemented by a qualified SWPPP developer within 48 hours prior to a rain event of 50 percent or greater probability of precipitation according to the National Oceanic and Atmospheric Administration. A Notice of Termination shall be submitted to the SWRCB within 90 days of completion of construction and stabilization of the site.	Incorporate contractor responsibilities into applicable construction documents (plans and specifications)	Metro/BNSF	Metro	During Final Design	—	—
	Prepare and submit Notice of Intent	Contractor/Metro/BNSF	SWRCB	Prior to Construction		
	Prepare SWPPP	Contractor	Metro/RWQCB	Prior to Construction	—	—
	Implement SWPPP (including preparation of rain event action plans)	Contractor	RWQCB	During Construction	—	—
	Prepare and submit Notice of Termination	Contractor/Metro/BNSF	SWRCB	90 days prior to completion of construction	—	—
<b>MY HWQ-2 Comply with Local Dewatering Requirements for the Malabar Yard Railroad Improvements:</b> The contractor shall comply with the provisions of the General Waste Discharge Requirements for Discharges of Groundwater from Construction and Project Dewatering to Surface Waters in Coastal Watersheds	Incorporate applicable NPDES requirements into plans into applicable construction documents (plans and specifications)	Metro/BNSF	Metro	During Final Design	—	—

Table 2. Mitigation Monitoring and Reporting Program: Malabar Yard Railroad Improvements						
Mitigation Measures	Compliance Action/Deliverable	Responsible Party	Enforcement Agency	Monitoring/Compliance Schedule	Verification of Compliance	
					Initial	Date
of Los Angeles and Ventura Counties (Order No. R4-2013-0095, NPDES Permit No. CAG994004), effective July 6, 2013 (known as the Dewatering Permit), as they relate to discharge of non-stormwater dewatering wastes. The two options to discharge shall be to the local storm drain system and/or to the sanitary sewer system, and the contractor shall obtain a permit from the RWQCB and/or the City of Vernon.	Obtain Dewatering Permits (as needed)	Contractor	RWQCB/City of Vernon	Prior to Construction (Dewatering Activities)	—	—
<b>MY HWQ-3 Comply with Local Dewatering Requirements for Contaminated Sites for the Malabar Yard Railroad Improvements:</b> The contractor shall comply with the provisions of the General Waste Discharge Requirements for Discharges of Treated Groundwater from Investigation and/or Cleanup of VOC Contaminated Sites to Surface Waters in Coastal Watersheds of Los Angeles and Ventura Counties (Order No. R4-2013-0043, NPDES Permit No. CAG914001), effective April 7, 2013 (known as the Dewatering Permit for contaminated sites), for discharge of non-stormwater dewatering wastes from contaminated sites impacted during construction. The two options to discharge shall be to the local storm drain system and/or to the sanitary sewer system, and the contractor shall require a permit from the RWQCB and/or the City of Vernon.	Incorporate applicable NPDES requirements into plans into applicable construction documents (plans and specifications)	Metro/BNSF	Metro	During Final Design	—	—
	Obtain Dewatering Permits (as needed)	Contractor	RWQCB/City of Vernon	Prior to Construction (Dewatering Activities)	—	—
<b>MY HWQ-4 Prepare and Implement Industrial SWPPP for Relocated, Regulated Industrial Uses for the Malabar Yard Railroad Improvements:</b> Metro or BNSF shall comply with the NPDES General Permit for Stormwater Discharges Associated with Industrial Activities (IGP; Order No. 2014-0057-DWQ, as amended by Order No. 2015-0122-DWQ, NPDES No. CAS000001) for demolished, relocated, or new industrial-related properties impacted by the railroad improvements. This shall include preparation of industrial SWPPP(s), as applicable	Incorporate applicable NPDES requirements (project wide) into applicable construction documents (plans and specifications)	Metro/BNSF	Metro	During Final Design	—	—
<b>MY HWQ-5 Final Water Quality BMP Selection (City of Vernon and Railroad ROW) for the Malabar Yard Railroad Improvements:</b> For the Malabar Yard railroad improvements in the City of Vernon, Metro or BNSF shall comply with the NPDES Waste Discharge Requirements for MS4 Discharges within the Coastal Watersheds of Los Angeles and Ventura Counties (Order No. R4-2021-0105, NPDES No. CAS004004), effective September 11, 2021 (known as the Phase I Permit). Metro or BNSF shall also prepare a final LID report in accordance with the City of Vernon's <i>Low Impact Development Guidance Manual</i> . This document shall identify the required BMPs to be in place prior to Project operation and maintenance.	Incorporate contractor responsibilities into applicable construction documents (plans and specifications)	Metro/BNSF	Metro	During Final Design	—	—
<b>Geology and Soils</b>						
<b>MY GEO-1 Prepare Final Geotechnical Report:</b> During final design, a final geotechnical report shall be prepared by a licensed geotechnical engineer (to be retained by Metro). The final geotechnical report shall address and include site-specific design recommendations on the following:	Prepare final geotechnical report	Metro/BNSF	Metro	During Final Design	—	—
	Incorporate site-specific recommendations of the final geotechnical report into applicable	Metro/BNSF	Metro	During Final Design	—	—

Table 2. Mitigation Monitoring and Reporting Program: Malabar Yard Railroad Improvements						
Mitigation Measures	Compliance Action/Deliverable	Responsible Party	Enforcement Agency	Monitoring/Compliance Schedule	Verification of Compliance	
					Initial	Date
<ul style="list-style-type: none"> <li>Site preparation</li> <li>Soil bearing capacity</li> <li>Appropriate sources and types of fill</li> <li>Liquefaction</li> <li>Lateral spreading</li> <li>Corrosive soils</li> <li>Structural foundations</li> <li>Grading practices</li> </ul> <p>The recommendations shall be prepared to mitigate the risk of seismic ground shaking and ground failure, including liquefaction. In addition to the recommendations for the conditions listed above, the report shall include results of subsurface testing of soil and groundwater conditions and shall provide recommendations as to the appropriate foundation designs that are consistent with the latest version of the CBC, as applicable at the time building and grading permits are pursued. Additional recommendations shall be included in that report to provide guidance for design of project-related infrastructure in accordance with Metro Rail Design Criteria, Manual for Railway Engineering, California High-Speed Train Project Design Criteria, California Amendments to the American Association of State Highway and Transportation Officials Load and Resistance Factor Design Bridge Design Specifications, and applicable local city codes (Appendix L of this EIR). The project shall be designed and constructed to comply with the site-specific recommendations as provided in the final geotechnical report to be prepared.</p>	construction documents (plans and specifications)					
	Construct infrastructure per the site-specific geotechnical recommendations	Contractor	Metro	During Construction	—	—
<b>Hazards and Hazardous Materials</b>						
<b>MYHAZ-1 Prepare a Construction Hazardous Materials Management Plan (HMMP):</b> Prior to construction, an HMMP shall be prepared by Metro that outlines provisions for safe storage, containment, and disposal of chemicals and hazardous materials, contaminated soils, and contaminated groundwater used or exposed during construction, including the proper locations for disposal. The HMMP shall be prepared to address the area of the project footprint, and would include, but shall not be limited to, the following: <ul style="list-style-type: none"> <li>A description of hazardous materials and hazardous wastes used (29 CFR 1910.1200)</li> <li>A description of handling, transport, treatment, and disposal procedures, as relevant for each hazardous material or hazardous waste (29 CFR 1910.120)</li> <li>Preparedness, prevention, contingency, and emergency procedures, including emergency contact information (29 CFR 1910.38)</li> <li>A description of personnel training including, but not limited to: (1) recognition of existing or potential hazards resulting from accidental spills</li> </ul>	Incorporate contractor responsibilities into applicable construction documents (plans and specifications)	Metro/BNSF	Metro	During Final Design	—	—
	Prepare Hazardous Materials Management Plan	Contractor	Metro	Prior to Construction	—	—
	Implement Hazardous Materials Management Plan	Contractor	Metro	During Construction	—	—

Table 2. Mitigation Monitoring and Reporting Program: Malabar Yard Railroad Improvements						
Mitigation Measures	Compliance Action/Deliverable	Responsible Party	Enforcement Agency	Monitoring/Compliance Schedule	Verification of Compliance	
					Initial	Date
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 (29 CFR 1910) <ul style="list-style-type: none"> <li>Instructions on keeping Safety Data Sheets on site for each on-site hazardous chemical (29 CFR 1910.1200)</li> <li>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 (29 CFR 1910.120).</li> </ul>						
<b>MYHAZ-2 Prepare Project-wide Phase II ESA (based on completed Phase I ESA):</b> Prior to final design, a Phase II Environmental Site Investigation shall be prepared to focus on likely sources of contamination (based on completed Phase I ESA) for properties within the Project footprint for the selected design options that would be affected by excavation. Phase II activities shall consist of: <ul style="list-style-type: none"> <li>Collection of soil, groundwater, and soil vapor samples from borings, for geologic analysis and collection/submittal of samples to an environmental laboratory for implementation of an analytical program. Sampling shall be based on the findings of the Phase I ESA for the project area.</li> <li>Laboratory analysis of samples for contaminants of concern, which vary by location, but may include: VOCs, PAHs, TPHs, and California Title 22 metals.</li> </ul> A Phase II ESA Report shall be prepared that summarizes the results of the drilling and sampling activities, and provides recommendations based on the investigation's findings. Metro shall implement the Phase II ESA findings. The Phase II ESA shall be conducted under the direct supervision of a Professional Geologist, licensed in the State of California, with expertise in environmental site assessments and evaluation of contaminated sites.	Prepare Phase II ESA Investigation	Metro/BNSF	Metro	Prior to Final Design	—	—
	Incorporate contractor responsibilities into applicable construction documents (plans and specifications)	Metro/BNSF	Metro	During Final Design	—	—
	Implement Phase II recommendations/findings	Contractor	Metro	During Construction	—	—
<b>MYHAZ-3 Prepare a General Construction Soil Management Plan:</b> Prior to construction, Metro shall prepare a General Construction Soil Management Plan that includes general provisions for how soils will be managed within the Project footprint for the selected design options for the duration of construction. Any soil imported to the project site for backfill shall be certified clean prior to use. General soil management controls to be implemented by the contractor and the following topics shall be addressed within the Soil Management Plan: <ul style="list-style-type: none"> <li>General worker health and safety procedures</li> <li>Dust control</li> <li>Management of soil stockpiles</li> <li>Traffic control</li> <li>Stormwater erosion control using BMPs</li> </ul>	Incorporate contractor responsibilities into applicable construction documents (plans and specifications)	Metro/BNSF	Metro	During Final Design	—	—
	Prepare Construction Soil Management Plan (project wide)	Contractor	Metro	Prior to Construction	—	—
	Implement Construction Soil Management Plan (project wide)	Contractor	Metro	During Construction	—	—
	Provide proof of certified clean imported soil	Contractor	Metro	During Construction	—	—



Table 2. Mitigation Monitoring and Reporting Program: Malabar Yard Railroad Improvements						
Mitigation Measures	Compliance Action/Deliverable	Responsible Party	Enforcement Agency	Monitoring/Compliance Schedule	Verification of Compliance	
					Initial	Date
<b>MYHAZ-4 Prepare Parcel-Specific Soil Management Plans and Health and Safety Plans (HASP):</b> Prior to construction, Metro shall prepare parcel-specific Soil Management Plans for known contaminated sites and LUC-adjudicated sites for submittal and approval by DTSC. The plans shall include specific hazards and provisions for how soils will be managed for known contaminated sites and LUC-adjudicated sites. The nature and extent of contamination varies widely across the Project footprint for the selected design options, and the parcel-specific Soil Management Plan shall provide parcel-specific requirements addressing the following: <ul style="list-style-type: none"><li>• Soil disposal protocols</li><li>• Protocols governing the discovery of unknown contaminants</li><li>• Management of soil on properties within the project footprint with LUCs or known contaminants</li></ul> Prior to construction on individual properties with LUCs or known contaminants, a parcel-specific HASPs shall also be prepared for submittal and approval by DTSC. The HASPs shall be prepared to meet OSHA requirements, Title 29 of the CFR 1910.120 and CCR Title 8, Section 5192, and all applicable federal, state and local regulations and agency ordinances related to the proposed management, transport, and disposal of contaminated media during implementation of work and field activities. The HASPs shall be signed and sealed by a Certified Industrial Hygienist, licensed by the American Board of Industrial Hygiene. In addition to general construction soil management plan provisions, the following parcel-specific HASP provisions shall also be implemented: <ul style="list-style-type: none"><li>• Training requirements for site workers who may be handling contaminated material</li><li>• Chemical exposure hazards in soil, groundwater, or soil vapor that are known to be present on a property</li><li>• Mitigation and monitoring measures that are protective of site worker and public health and safety</li></ul> Prior to construction, Metro shall coordinate proposed soil management measures and reporting activities with stakeholders and regulatory agencies with jurisdiction, to establish an appropriate monitoring and reporting program that meets all federal, state, and local laws for the project, and each of the contaminated sites.	Incorporate contractor responsibilities into applicable construction documents (plans and specifications)	Metro/BNSF	Metro	During Final Design	—	—
	Prepare parcel specific soil management plans (for known contaminated sites/LUC-adjudicated sites)	Metro/Contractor	DTSC	Prior to Construction	—	—
	Retain a Certified Industrial Hygienist to prepare parcel specific health and safety plans (for known contaminated sites/LUC-adjudicated sites)	Metro/BNSF	Metro	Prior to Construction	—	—
	Prepare a parcel specific health and safety plans (for known contaminated sites/LUC-adjudicated sites)	Metro/Contractor	DTSC	Prior to Construction	—	—
	Coordinate proposed soil management measures and reporting activities with appropriate agencies including but not limited to SCRRA, City of Vernon, RWQCB	Metro/BNSF	Metro	Prior to Construction	—	—
<b>MYHAZ-5 Halt Construction Work if Potentially Hazardous Materials are Encountered:</b> Contractors shall follow all applicable local, state, and federal regulations regarding discovery, notification, response, disposal, and remediation for hazardous materials and/or abandoned oil wells encountered during the construction process.	Incorporate contractor responsibilities into applicable construction documents (plans and specifications)	Metro/BNSF	Metro	Prior to Construction	—	—
	Halt work if potentially hazardous materials/abandoned wells are encountered	Contractor	Metro	During Construction	—	—

Table 2. Mitigation Monitoring and Reporting Program: Malabar Yard Railroad Improvements						
Mitigation Measures	Compliance Action/Deliverable	Responsible Party	Enforcement Agency	Monitoring/Compliance Schedule	Verification of Compliance	
					Initial	Date
<b>MYHAZ-6 Pre-Demolition Investigation:</b> Prior to the demolition of any structures, a survey shall be conducted for the presence of hazardous building materials, such as ACMs, LBPs, and other materials falling under the Universal Waste requirements. An asbestos survey report signed by a Certified Asbestos Consultant will be prepared prior to any demolition or renovation in accordance with Rule 1403 (d)(1)(A) of the SCAQMD. The results of this survey shall be submitted to Metro, and applicable stakeholders as deemed appropriate by Metro, and submitted with an application for a Rule 1403 permit. If any hazardous building materials are discovered, prior to demolition of any structures, a plan for proper removal shall be prepared in accordance with applicable OSHA and the Los Angeles County Department of Public Health requirements. The contractor performing the work shall be required to implement the removal plan and shall be required to have a C-21 license in the State of California and possess an A or B classification. If asbestos-related work is required, the contractor or their subcontractor shall be required to possess a California Contractor License (Asbestos Certification). Prior to any demolition activities, the contractor shall be required to secure the site and ensure the disconnection of utilities	Incorporate contractor responsibilities into applicable construction documents (plans and specifications)	Metro/BNSF	Metro	During Final Design	—	—
	Conduct pre-demolition survey (for buildings constructed prior to 1970 that require demolition)	Contractor	Metro	Prior to Building Demolition	—	—
	Prepare Removal Plan (only if hazardous building materials are discovered during the pre-demolition survey)	Contractor	OSHA/Los Angeles County Department of Public Health	Prior to Building Demolition	—	—
	Provide proof of appropriate licenses and certifications	Contractor	Metro	Prior to Building Demolition	—	—
	Secure the site and disconnect utilities	Contractor	Metro	Prior to Building Demolition	—	—
	Implement Removal Plan	Contractor	Metro	During Building Demolition	—	—
Cultural and Paleontological Resources						
<b>MY CUL-1 Archaeological Treatment Plan (ATP).</b> Prior to construction, Metro shall retain a qualified archaeologist, herein defined as a person who meets the Secretary of Interior’s Professional Qualification Standards in Archaeology and is experienced in analysis and evaluation of the types of material anticipated to be encountered, to develop an ATP that details the procedures to address accidental discoveries. The California SHPO and consulting Native American tribes shall be afforded 30 days to review and comment on the draft ATP, consistent with the timeline for consultation under Section 106 of the NHPA (36 CFR 800). Once relevant comments are addressed, the revised ATP shall be submitted to SHPO for 30-day review and concurrence.  The ATP shall be prepared consistent with the Secretary of Interior’s Standards and Guidelines for Archaeological Documentation and the California OHP Archaeological Resources Management Reports: Recommended Contents and Format (OHP 1990).  The ATP shall include, at a minimum, the following elements:	Prepare ATP	Metro	Metro	Prior to Construction	—	—

Table 2. Mitigation Monitoring and Reporting Program: Malabar Yard Railroad Improvements						
Mitigation Measures	Compliance Action/Deliverable	Responsible Party	Enforcement Agency	Monitoring/Compliance Schedule	Verification of Compliance	
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<ul style="list-style-type: none"><li>• <b>Research Design:</b> The ATP shall include a robust research design to be used in applying the NRHP eligibility criteria for evaluating the significance of accidentally discovered archaeological features and deposits, and in recovering scientific data from those features and deposits that are determined to be significant. The research design shall discuss the results of previous archaeological research in the Los Angeles Basin, present research questions relevant to the types of features and deposits that are expected to be encountered and outline the data requirements necessary to successfully address the research questions.</li><li>• <b>Archaeological and Native American Monitoring.</b> The ATP shall include the locations and protocols to be used for archaeological and Native American monitoring during construction based on final design. The ATP shall rely on OSHA requirements regarding the safety of monitoring locations and the potential for encountering contaminated soils or other hazards.</li><li>• <b>Provisions for the Accidental Discovery of Archaeological Features or Deposits.</b> The ATP shall include provisions for the accidental discovery of archaeological features or deposits during construction. These provisions shall include stop-work protocols, notification procedures, and methodology for assessing the nature and significance of the find. If the feature or deposit is determined to be significant, the data recovery and analysis procedures outlined for known resources shall be implemented.</li><li>• Provisions for the Accidental Discovery of Human Remains, Associated and Unassociated Funerary Objects, Sacred Objects, and Objects of Cultural Patrimony. The ATP shall contain provisions for the accidental discovery of human remains, associated and unassociated funerary objects, sacred objects, and objects of cultural patrimony. These provisions shall include stop-work protocols, notification procedures, and provisions for the treatment (including reburial in an appropriate location) of the human remains and associated objects in a respectful manner and in accordance with applicable regulations, as determined through consultation with the appropriate Native American tribes.</li><li>• <b>Cultural Resource Worker Environmental Awareness Program (WEAP) Training.</b> The ATP shall include provisions for the development of cultural resource WEAP training to be delivered by a qualified</li></ul>	Develop a site-specific sensitivity model	Metro		Prior to Construction		
	Retain archaeological and Native American monitors for all phases of work	Metro/Contractor		Prior to Construction and During Construction		



Table 2. Mitigation Monitoring and Reporting Program: Malabar Yard Railroad Improvements						
Mitigation Measures	Compliance Action/Deliverable	Responsible Party	Enforcement Agency	Monitoring/Compliance Schedule	Verification of Compliance	
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<p>archaeologist to all ground-disturbing construction personnel, including education on the consequences of unauthorized collection of artifacts, a review of discovery protocols, and explanation of mitigation requirements for work in archaeologically sensitive areas.</p> <ul style="list-style-type: none"><li>• <b>Standards for Reporting.</b> The ATP shall include standards for reporting the results of archaeological testing, evaluation, data recovery, and monitoring activities. All reports shall be consistent with the Secretary of Interior's Standards and Guidelines for Archaeological Documentation and the California OHP's Archaeological Resources Management Reports: Recommended Contents and Format.</li><li>• <b>Guidelines for Curation.</b> The ATP shall include guidelines for the ownership and curation of archaeological data and collections, in compliance with 36 CFR 79.</li></ul>	Prepare public outreach and educational plan	Metro		Prior to Construction		
	Conduct WEAP training with a qualified archaeologist to all ground-disturbing construction personnel	Metro/Contractor		Prior to Construction and during construction as new personnel join the project		
<b>MY PAL-1</b> <b>Paleontological Mitigation Plan (PMP):</b> It is possible that Quaternary older alluvium or Puente Formation, which are geologic units that have a high paleontological potential, will be impacted during construction if excavation activities extend to depths as shallow as 6 feet below the natural ground surface. Metro shall retain a qualified paleontologist to prepare a PMP using final excavation plans to determine where these geologic units would be impacted. Metro shall implement the PMP prior to the start of any ground-disturbing construction activities if it is determined that such activities would encounter Quaternary older alluvium or Puente Formation. The PMP shall include site-specific mitigation recommendations and specific procedures for construction monitoring and fossil discovery.  The PMP shall include a requirement for full time paleontological monitoring if excavations will occur within native Quaternary older alluvium and/or Puente Formation, with the exception of pile driving activities. While pile driving activities for foundation construction may impact paleontologically sensitive sediments due to the need for foundations to be within firm strata, this activity is not conducive to paleontological monitoring, as fossils would be destroyed by the construction process. Monitoring is not recommended for excavations that affect only artificial fill and Quaternary younger alluvium (Qa/Qal).  The PMP shall detail a discovery protocol in the event that potentially significant paleontological resources are encountered during construction. For example, the contractor shall halt activities in the immediate area (within a 25-foot radius of the discovery) and Metro's qualified paleontologist shall make an immediate evaluation of the significance and appropriate treatment of the encountered	Retain qualified paleontologist to prepare a PMP	Metro	Metro	Prior to Construction	—	—
	Prepare PMP	Metro	Metro	Prior to Construction	—	—
	Implement PMP including full-time paleontological monitoring, discovery protocols, salvage measures, and evaluation and treatment of discovered paleontological resources	Metro	Metro	During Construction	—	—

Table 2. Mitigation Monitoring and Reporting Program: Malabar Yard Railroad Improvements						
Mitigation Measures	Compliance Action/Deliverable	Responsible Party	Enforcement Agency	Monitoring/Compliance Schedule	Verification of Compliance	
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paleontological resources in accordance with the PMP. If necessary, appropriate salvage measures and mitigation measures shall be developed in consultation with the responsible agencies and in conformance with federal and state guidelines and best practices. Construction activities may continue in other areas of the Project site while evaluation and treatment of the discovered paleontological resources take place. Work may not resume in the discovery area until it has been authorized by Metro's qualified paleontologist.						
<b>MY PAL-2 Paleontological WEAP Training:</b> Metro's qualified paleontologist shall prepare paleontological resource-focused WEAP training that shall be delivered to all ground-disturbing construction personnel, including a review of protocols to follow in the event of a fossil discovery, as identified in the PMP.	Prepare a paleontological resource-focused WEAP Training.	Metro	Metro	Prior to Construction	—	—
	Provide WEAP training to all ground-disturbing construction personnel	Contractor	Metro	Prior to Construction and during construction as new personnel join the project	—	—
<b>MY PAL-3 Curation:</b> Metro shall arrange for the curation in perpetuity of significant fossils recovered during construction at an accredited repository, such as the Natural History Museum of Los Angeles County. These fossils shall be prepared, identified, and catalogued for curation (but not prepared for a level of exhibition) by Metro's qualified paleontologist. This includes removal of all or most of the enclosing sediment to reduce the specimen volume, increase surface area for the application of consolidants or preservatives, provide repairs and stabilization of fragile or damaged areas on a specimen, and allow taxonomic identification of the fossils. All field notes, photographs, stratigraphic sections, and other data associated with the recovery of the specimens shall be deposited with the institution receiving the specimens.	Prepare, identify, and catalogue significant fossils recovered for curation	Metro	Metro	During Construction	—	—
	Provide significant fossils recovered field notes, photographs, stratigraphic sections, and other data associated with the recovery of the specimens to an accredited repository for curation	Metro	Metro	Post Construction	—	—
<b>Offsetting Mitigation Measures (OMMs)</b>						
<b>OMM MY SS-1 Train Detection Cameras:</b> Metro shall provide reimbursement for the purchase and installation costs of new train detection cameras at four at-grade railroad crossings at 37 <sup>th</sup> Street, 38 <sup>th</sup> Street, Vernon Avenue, and Pacific Boulevard to optimize emergency response routing when a train is present. The cameras would monitor the at-grade railroad crossings to detect occupancy and alert emergency dispatchers or notify local emergency service providers of train movements that could cause a delay in emergency access or response and assist with vehicular routing decisions. Cameras could be mounted on either an existing or new traffic pole near the gates of the at-grade railroad crossing and can be connected to the City's Traffic Management Center (TMC) by existing physical fiber optic lines that are present in the City.  Metro will provide reimbursement for the purchase and installation costs of train detection cameras. The City will be responsible for purchasing and installing cameras, maintaining cameras, and providing staffing to monitor cameras and manage alerts.	Provide reimbursement to Vernon for purchase and installation costs of four train detection cameras	Metro	Metro	Prior to Operations	—	—

Table 2. Mitigation Monitoring and Reporting Program: Malabar Yard Railroad Improvements						
Mitigation Measures	Compliance Action/Deliverable	Responsible Party	Enforcement Agency	Monitoring/Compliance Schedule	Verification of Compliance	
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<b>OMM MY SS-2 Mobile Emergency Operations Center:</b> Metro shall provide reimbursement to the City of Vernon for the purchase of one Mobile Emergency Operations Center (EOC), which is a self-contained, mobile command unit designed to provide critical emergency management capabilities in the field. It serves as a backup or replacement central for the City's primary offsite EOC, Los Angeles County Fire Station 56, during crises or, disasters, or when the EOC is inaccessible or inoperable due to earthquake, flooding, fires, hazardous spills, windstorms, or acts of terror.  Metro will provide reimbursement for the purchase of one Mobile EOC and any basic required vehicle technology, anticipated to be between \$200,000 to \$300,000. The City will procure the vehicle and required technology and complete any required testing, training, deployment. The City will be responsible for long-term maintenance.	Provide reimbursement for the purchase of one Mobile EOC	Metro	Metro	Prior to Operations	—	—
<b>OMM MY SS-3 Communications and Radio Systems Upgrade:</b> Metro shall provide reimbursement to the City of Vernon for the purchase of upgraded communication and radio systems to improve coordination and response among different departments and agencies, such as the police department, public utilities department, public works department, and the LA County fire department, which serves the City of Vernon.  Metro will provide reimbursement for the purchase of upgraded communication and radio systems equipment and associated software. The City will procure equipment, configure equipment, and coordinate with all applicable departments including LA County Fire to determine equipment and software compatibility, configuration, training, and testing of the new equipment.	Provide reimbursement for the purchase of upgraded communication and radio systems equipment and associated software	Metro	Metro	Prior to Operations	—	—
<b>OMM MY NV-1 Quiet Zone Design and Physical Infrastructure:</b> Metro shall provide design for and installation of new railroad safety measures to support a new Quiet Zone at five existing at-grade railroad crossings. The railroad safety measures would be constructed at five existing at-grade railroad crossings that are located on the Harbor Subdivision parallel to Santa Fe Avenue and within close proximity to planned mixed-use residential areas identified in the Westside Zone Change and General Plan Amendment. This OMM would include implementation of safety measures at each of the five existing at-grade railroad crossings that would serve as a substitute for the sounding of a train horn. Safety measures that can substitute for the sounding of a train horn can include widened medians, exit gates, overhead cantilevered signals, and/or pedestrian treatments such as detectible warning strips and flashing signals.  Metro will prepare engineering design plans for the Quiet Zone safety measures and will be responsible for leading coordination with CPUC to process design reviews and facilitating the approval process (see OMM NV-2 below). The City would be responsible for submitting the Quiet Zone application to CPUC, maintaining Railroad Liability Insurance, and maintaining roadway-related Quiet Zone infrastructure (i.e. medians).	Prepare engineering design plans for the Quiet Zone safety measures	Metro/BNSF	Metro/City of Vernon	Prior to Operations		
	Submit Quiet Zone Application	City of Vernon	CPUC	Prior to Operations		

Table 2. Mitigation Monitoring and Reporting Program: Malabar Yard Railroad Improvements						
Mitigation Measures	Compliance Action/Deliverable	Responsible Party	Enforcement Agency	Monitoring/Compliance Schedule	Verification of Compliance	
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<p>Implementation of this OMM will also require BNSF to coordinate with Metro and the City regarding the proposed Quiet Zone infrastructure and assist with construction of the safety measures within their railroad ROW. BNSF will also be responsible for the maintenance of railroad grade crossing elements (i.e. crossing gates).</p> <p>CPUC and FRA are the regulatory authorities that are responsible for review of the Quiet Zone application, as well as conduct periodic safety reviews of the Quiet Zone.</p>						
<p><b>OMM MY NV-2 Quiet Zone Technical Support:</b> Associated with OMM MY NV-1, Metro, BNSF, and the City of Vernon shall be required to enter into an agreement to complete the regulatory process for a Quiet Zone designation along the Harbor Subdivision. Metro would support the City’s application for a Quiet Zone by conducting the following tasks:</p> <ul style="list-style-type: none"><li>a. Prepare for and facilitate diagnostic reviews of highway-rail grade crossings within the proposed Quiet Zone with CPUC Rail Crossings and Engineering Branch</li><li>b. Prepare for and facilitate diagnostic reviews of pedestrian crossings within the proposed Quiet Zone with CPUC Rail Crossings and Engineering Branch</li><li>c. Complete updates to US DOT Crossing Inventory Forms to document current physical and operating conditions at each crossing within the proposed Quiet Zone</li><li>d. Prepare Draft Notice of Intent to implement Quiet Zone (to be published and distributed by City)</li><li>e. Prepare Draft Notice of Quiet Zone Establishment (to be published and distributed by City)</li></ul> <p>Design and construction of the safety measures identified in the diagnostic reviews is discussed above as part of OMM MY NV-1.</p> <p>Metro, in coordination with the City of Vernon and BNSF, will be responsible for preparing the technical documents and application package for CPUC submittal and facilitating and attending all diagnostic reviews required to support the regulatory process for a Quiet Zone.</p>	<p>Prepare the technical documents and application package for CPUC submittal</p>	<p>Metro/BNSF/City of Vernon</p>	<p>Metro</p>	<p>Prior to Operations</p>		
<p><b>OMM MY TR-7 High Visibility Crosswalk, Mid-Block Location:</b> Metro shall prepare engineering design plans and provide reimbursement to the City of Vernon for construction of a high visibility crosswalk at Santa Fe Avenue near the Vernon City Elementary School and the Holy Angels Catholic Church of the Deaf (Figure 3-1). This OMM would enhance pedestrian safety by making crossing areas more noticeable to drivers, and would include crossing signs that incorporate bright colors, bold text/symbols, and retroreflective materials to improve visibility at night [for example FHWA pedestrian crossing signs R1-6, W11-2, W16-7P (FHWA 2009)]. Additional elements could include pedestrian-activated flashing lights and</p>	<p>Prepare engineering design plans and provide reimbursement for construction costs of high-visibility mid-block crosswalk</p>	<p>Metro/BNSF</p>	<p>Metro/City of Vernon</p>	<p>Prior to Operations</p>		

Table 2. Mitigation Monitoring and Reporting Program: Malabar Yard Railroad Improvements						
Mitigation Measures	Compliance Action/Deliverable	Responsible Party	Enforcement Agency	Monitoring/Compliance Schedule	Verification of Compliance	
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<p>street lighting to help alert drivers. The high visibility crosswalk would complement Malabar Yard Mitigation Measure TR-3, Restriping of the Santa Fe Avenue/Pacific Boulevard Intersection, by enhancing pedestrian safety at the intersection.</p> <p>Metro will prepare engineering design plans and provide reimbursement for construction costs. The City of Vernon will construct the high visibility crosswalk elements. The City of Vernon will coordinate with Metro on the design of the high visibility crosswalk elements and will be responsible for the maintenance of crosswalk elements.</p>						
<p><b>OMM MY TR-8 Intersection Crosswalk Improvements with Cool Street Paving:</b> Metro shall prepare engineering design plans and provide reimbursement to the City of Vernon for construction costs associated with the implementation of crosswalk improvements at the intersections of Santa Fe Avenue with 37th Street, 38th Street, Vernon Avenue, Pacific Boulevard, and Fruitland Avenue, and at the intersections of 46th Street with Pacific Boulevard and Seville Avenue. These intersections are closest to the Malabar Yard railroad improvements and where future mixed-use residential land uses are planned as part of the 2023 Vernon Westside Zone Change and General Plan Amendment. The improvements at the five existing crosswalk locations on Santa Fe Avenue would consist of repainting/restriping the existing crosswalks with bolder, brighter colors that would be more visible to drivers. Cool street paving includes reflective materials that reflects light, reducing urban heat island effect and enhancing nighttime visibility. Tactile warning strips and bold restriping would be implemented at the existing crosswalk on 46th Street/Pacific Blvd. A new crosswalk would be constructed at the existing four way stop at 46th Street/Seville Avenue, and would include additional safety elements such as tactile warning strips and bold restriping.</p> <p>Metro will prepare the engineering design plans and provide reimbursement for construction costs of crosswalk improvements. The City will coordinate with Metro on the design plans as well as be responsible for the construction and maintenance of crosswalk elements.</p>	Prepare engineering design plans and provide reimbursement for construction costs of crosswalk improvements	Metro/BNSF	Metro/City of Vernon	Prior to Operations		
<p><b>OMM MY TR-9 Bus Shelters:</b> Metro shall prepare design plans and provide reimbursement to the City of Vernon for construction costs associated with the installation of 25 bus shelters at the following locations as determined by Metro based on the location of where High-Quality Transit Areas are located.</p> <ol style="list-style-type: none"><li>1. Pacific Blvd / Railroad Crossing- south side</li><li>2. Pacific Blvd / 46th Street - east side</li><li>3. Pacific Blvd / 46th Street - west side</li><li>4. Pacific Blvd / Leonis Blvd - east side</li><li>5. Pacific Blvd / Leonis Blvd - west side</li></ol>	Prepare engineering design plans and provide reimbursement for construction costs of the bus shelters	Metro/BNSF	Metro/City of Vernon	Prior to Operations		

Table 2. Mitigation Monitoring and Reporting Program: Malabar Yard Railroad Improvements						
Mitigation Measures	Compliance Action/Deliverable	Responsible Party	Enforcement Agency	Monitoring/Compliance Schedule	Verification of Compliance	
					Initial	Date
<div>6. Leonis Blvd / Pacific Blvd – south side</div> <div>7. Santa Fe Ave / 30th Street – east side</div> <div>8. Santa Fe Ave / 30th Street – west side</div> <div>9. Santa Fe Ave / 27th Street – east side</div> <div>10. Santa Fe Ave / 27th Street – west side</div> <div>11. Vernon Ave / Saint Charles Street – south side</div> <div>12. Vernon Ave / Saint Charles Street – north side</div> <div>13. Vernon Ave / Alameda Street – north side</div> <div>14. Vernon Ave / Alameda Street – south side</div> <div>15. Soto Street / 37th Street – west side</div> <div>16. Soto Street / 46th Street – west side</div> <div>17. Soto Street / 46th Street – east side</div> <div>18. Soto Street / Leonis Blvd – west side</div> <div>19. Soto Street / Leonis Blvd – north side</div> <div>20. Soto Street / 54th Street – west side</div> <div>21. Soto Street / 54th Street – east side</div> <div>22. Slauson Ave / Boyle Ave (north side)</div> <div>23. Slauson Ave / Alcoa Ave (south side)</div> <div>24. Slauson Ave / Bicket Street (north side)</div> <div>25. Slauson Ave / Bicket Street (south side)</div> <div>The bus shelters would include a roof or canopy for weather protection, benches for seating, and transparent panels or walls to shield passengers from wind and rain while maintaining visibility. Additional features may include signage displaying route information, lighting for safety, and a waste bin or a map of nearby locations. The bus shelter design would be coordinated between Metro and the City of Vernon. As a result of feedback received from the City, a shade element would also be incorporated into the design to provide sun protection.</div> <div>Metro will prepare design plans and provide reimbursement for construction costs of the bus shelters. The City will coordinate with Metro on bus shelter designs and will be responsible for the construction and maintenance of the shelters.</div>						
<b>OMM MY TR-10 PTZ Smart Cameras, Software, and Screens for Monitoring:</b> Metro shall provide reimbursement to the City of Vernon for the purchase of Pan Tilt Zoom (PTZ) smart cameras at five intersections: Downey Road at Bandini Boulevard, 25 <sup>th</sup> Street at Santa Fe Avenue, Fruitland Avenue at	Provide reimbursement for the purchase of five PTZ cameras with software and screens	Metro/BNSF	Metro/City of Vernon	Prior to Operations		



Table 2. Mitigation Monitoring and Reporting Program: Malabar Yard Railroad Improvements						
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<p>Malabar Street, Vernon Avenue at Santa Fe Avenue, and Pacific Boulevard at Santa Fe Avenue. Unlike train detection cameras, which are static and are only used for the purpose of train detection, PTZ cameras have the ability to remotely pan (move left and right), tilt (move up and down), and zoom to provide flexible and dynamic traffic monitoring of an area. The cameras would be equipped with automated tracking, motion detection, and real-time alerts to improve security and traffic management. OMM MY TR-10 would also include the purchase of associated PTZ smart software and screens for monitoring.</p> <p>Metro will provide reimbursement for the purchase of cameras. The City will procure the cameras, complete the traffic signal modification plan, complete the installation of cameras and software integration, and coordinate with the vendor for commissioning. The Vendor will coordinate with the City for the installation and commissioning of cameras and software integration.</p>						
<p><b>OMM MY TR-11 AI-Based Traffic Control System:</b> Metro shall provide reimbursement to the City of Vernon for the purchase of 47 transportation controllers for an AI-based traffic control system, which uses machine learning and data analysis to optimize traffic flow, predict congestion, and respond to incidents in real time. The controllers and associated cloud-based software would provide an integrated platform that would enable signal controls to adapt to real time traffic conditions, improving traffic circulation and safety for the community, particularly at the 46<sup>th</sup> Street and Seville Avenue intersection, where new queueing is expected to occur. The system would also be capable of rerouting emergency vehicles along alternate routes, ensuring faster response times and minimizing delays for critical emergency services. Similar systems are used in the region, including by the City of Los Angeles.</p> <p>Metro will provide reimbursement for the purchase of controllers. The City will work with vendors to install and configure the controllers.</p>	Provide reimbursement for the purchase of 47 transportation controllers	Metro/BNSF	Metro/City of Vernon	Prior to Operations		

Table 2. Mitigation Monitoring and Reporting Program: Malabar Yard Railroad Improvements						
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<b>OMM MY TR-12 Metro Transit Oriented Communities Program Support:</b> Metro shall provide the City of Vernon with staffing for grant writing services for the Metro Transit Oriented Communities (TOC) Program, which is a program that provides equitable access to a high-quality transportation system allowing people to drive less and access transit more. Metro would provide the City with grant writing assistance, technical assistance for land use feasibility/planning studies, joint development projects, and development of first/last mile strategies from Metro transit stops to proposed development sites. The TOC Program also provides opportunities for Metro to enhance the transit customer experience at existing Metro stations in the City of Vernon (i.e., Blue Line Station, Transit Stops) and can potentially support development projects on LA Metro owned properties (or adjacent properties).  Metro will provide staffing to the City for grant writing services for TOC project applications in an amount not to exceed 2,000 hours.	Provide staffing for grant writing services for TOC project applications up to 2,000 hours	Metro/City of Vernon	Metro	Prior to Operations		

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