



Board Report

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REVISED
PLANNING AND PROGRAMMING COMMITTEE
JANUARY 14, 2026

SUBJECT: C LINE EXTENSION TO TORRANCE PROJECT FINAL ENVIRONMENTAL IMPACT REPORT CERTIFICATION

ACTION: APPROVE RECOMMENDATION

RECOMMENDATION

CONSIDER:

- A. APPROVING the Board selected Locally Preferred Alternative (LPA), a 4.5-mile fully grade-separated light rail extension of the C Line Extension to Torrance (now K Line) with two stations in Redondo Beach and Torrance as the Project (Project);
- B. CERTIFYING, in accordance with the California Environmental Quality Act (CEQA), the Final Environmental Impact Report (EIR);
- C. ADOPTING, in accordance with CEQA, the:
 - 1. Findings of Fact and Statement of Overriding Considerations, and
 - 2. Mitigation, Monitoring and Reporting Program (MMRP); and
- D. AUTHORIZING the Chief Executive Officer (CEO) to file a Notice of Determination (NOD) with the Los Angeles County Clerk and the State of California Clearinghouse.

ISSUE

On September 11, 2025, Metro issued the Notice of Availability (NOA) for the Final EIR and released the final environmental document for public circulation. The Final EIR contains all completed studies, which respond fully to all public comments on all alignments in the Draft EIR, including the Right of Way (ROW) and Hawthorne alignments, as requested by a Metro Board motion by Director Butts on May 23, 2024 (Attachment A). The C Line Extension to Torrance (CLET) is a 2008 LA County voter approved Measure R, and 2016 LA County voter approved Measure M, project that is included in the 2020 Long Range Transportation Plan (LRTP) and the Southern California Association of Governments (SCAG) 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). Metro is the CEQA Lead Agency for the [Project <https://www.metro.net/projects/green-line-extension/>](https://www.metro.net/projects/green-line-extension/) and the Board of Directors (Board) is responsible for certifying the Final EIR, affirming that the document has been completed in compliance with CEQA, that the Final EIR was

presented to and considered by the Metro Board prior to project approval, and that the Final EIR reflects Metro's independent judgment and analysis.

Staff recommend that the Board certify the Draft EIR, Final EIR, Appendices, and EIR errata, which together constitute as the complete [EIR <https://us.planengage.com/clineextension/page/welcome>](https://us.planengage.com/clineextension/page/welcome), and approve the Locally Preferred Alternative (LPA, adopted by the Board in May 2024) as the Project. See Attachment B, Executive Summary of Final EIR.

BACKGROUND

Today, the South Bay region experiences severe congestion along the I-405 and nearby arterial roadways, and this is expected to grow in the future (2042), as population and jobs are projected to grow by seven and 19 percent, respectively. Providing a rail connection to the South Bay has been a long-term regional goal to provide a fast and reliable mobility option, strengthen economic opportunities, and reduce environmental impacts associated with automobile use.

The Project would extend light rail service farther into the South Bay along the Harbor Subdivision railroad corridor, referred to as the Metro ROW as it is owned by Metro. As proposed, the Project would travel through the Cities of Lawndale, Redondo Beach, and Torrance, expanding local and regional access by adding two new rail stations in Redondo Beach and Torrance connecting to bus transit centers operated by the respective cities.

Project History

In 1993, Metro purchased the Harbor Subdivision rail corridor, a 26-mile freight railroad corridor that connects Downtown L.A. to San Pedro, with the intent of expanding passenger rail access across L.A. County. In 1995, Metro opened the Green Line (subsequently renamed C line) that traveled between Norwalk and Redondo Beach along segments of Interstate 105 and the Harbor Subdivision corridor (Metro ROW) until 2024 when Metro modified operations between the K and C lines. In 2009, Metro completed a planning study to extend transit service between Downtown Los Angeles to the Ports of San Pedro Bay and Long Beach, using the Metro ROW, while maintaining existing freight service operated by railroads. Metro has advanced planning studies since 2009, and an extension of the Green Line is included in the voter-approved Measure M Expenditure Plan. Staff received direction from the Metro Board in 2018 to begin environmental clearance under CEQA, culminating in the Final EIR proposed for certification presented in this Board Report.

Thus far, funding has been identified for this Project from several sources including voter-approved Measure R in 2008, Measure M in 2016, a state grant from the California State Transportation Agency (CalSTA) in 2018, and funds from Senate Bill (SB) 1, as well as 3% local match contributions - totaling \$1.4 billion. Current funding represents 52% of the capital cost estimate, discussed further in this report. At this stage in project development, having over 50% of the funding secured for the full alignment of the project is significant compared to recent transit corridor projects at this stage (see Table 1).

Table 1. Funding Secured for Metro Transit Corridor Project at Final EIR Certification

Transit Corridor Project	At Time of Certification of Final EIR/EIS Dollars in Year of Expenditure (YOE\$)					
	Month of Certification	Funding Secured	Capital Cost Estimate for Full Alignment	Capital Cost Estimate for Initial Operating Section (IOS)	% of Funding Secured for Full Alignment	% of Funding Secured for IOS
Eastside Phase 2 Light Rail Transit (LRT) 4.7 (IOS) to 9 miles	May 2024	\$3.4B	\$10.2B to Whittier (2022)	\$7.9B to Montebello (2022)	33%	43%
Southeast Gateway Line LRT (West Santa Ana Branch) 14.5 (IOS) to 19.3 miles	April 2024	\$3.13B	\$15.5B DTLA to Pioneer (2020)	\$7.2B Slauson to Pioneer (2023)	20%	43%
East San Fernando Valley LRT 6.7 (IOS) to 9.2 miles	December 2020	\$1.6B	\$1.9-2.2B to Sylmar (2018)	\$1.7-\$1.9B to Pacoima (2018)	73%-84%	84%-94%
Crenshaw/LAX LRT (K Line) 8.5 miles	September 2011	\$1.47B	\$1.715B to LAX (2010)	Undetermined at time of certification	86%	N/A
Westside Subway Extension (D Line Ext) Heavy Rail Transit 9 miles	April / May 2012	\$4.2B	\$6.29B to Westwood/VA (2011)	Section 1: \$2.6B Section 2: \$1.6B Section 3: \$2.1B (2011)	67%	100% for Sections 1&2, 0% for Section 3

Dollars are estimated in year of expenditure. Parentheses indicate base year of dollars for cost estimates.

Environmental Review Process

On January 29, 2021, Metro published a Notice of Preparation (NOP) to solicit public comments on the scope, content, and information that should be considered as a part of the EIR. Two years later, on January 26, 2023, Metro released a Draft EIR for public review over a 61-day review period that concluded on March 27, 2023. Metro collected over 2,000 public comments during the comment period, which included five public hearings (four in-person and one virtual). The Draft EIR evaluates three light rail alignments and three “Alternatives to the Proposed Project” as required by CEQA, that would lessen or avoid significant Project-related impacts. The alignments and alternatives included:

- Metro ROW Elevated/At-Grade Alignment,
- Trench Option,
- Hawthorne Blvd Option,
- 170th & 182nd Street Grade Separated Light Rail Alternative (Hybrid Alternative),
- High Frequency Bus Alternative, and
- No Project Alternative.

In addition to the Draft EIR, Metro published several other reports on ridership, user benefits, cost, schedule, real estate needs, changes to traffic and parking, and other technical issues on the Project website <<https://www.metro.net/clineext>>.

Summary of Community Engagement During EIR

Metro led extensive community engagement both in person and virtually during the environmental review process, sharing information with the community on the Project through videos, interactive websites, public meetings, events and briefings. We also listened to and learned about local

concerns through neighborhood walks, transit rider intercepts and door-to-door to businesses outreach. These activities allowed Metro to respond to questions and document feedback for transparency. Metro also worked with a market research firm to conduct a public opinion poll of residents of Lawndale, Redondo Beach and Torrance in Spring 2023. The poll found that a majority of residents were familiar with the project (60%) and support the project (67%). Across the three cities, only 8% oppose the project. Support for the project was fairly consistent across demographic groups with the highest levels of support (76% support) from young adults (ages 18-34) and from households with incomes of less than 49,000 (75% support).

Metro has kept the community informed throughout the environmental review process through multiple channels and thousands of notifications so that residents and stakeholders are updated on opportunities to review and participate at Project milestones. Between 2021 and 2025, Metro collected over 4,700 comments from community members. More than 2,100 participants joined Project events and the Project website received more than 20,000 views (see Appendix A of the [Final EIR <https://us.planengage.com/clineextension/page/welcome>](https://us.planengage.com/clineextension/page/welcome)).

Board Selection of LPA

In May 2024, based on the Draft EIR, technical analyses, public comments, and staff recommendation, the Metro Board selected the 170th/182nd Grade-Separated Light Rail Transit Alternative (also referred to as the “Hybrid Alternative”) as the LPA. The Hybrid Alternative was selected because it met Project objectives while responding to community concerns and minimizing construction disruptions and long-term impacts to the community. Specifically, the Hybrid Alternative:

- Is expected to deliver significant mobility benefits to 1.49 million new riders a year, with 3.6 million annual boardings - reflecting improved regional connectivity between the high jobs-growth South Bay and the greater Metro rail network, which in turn expands access to jobs, housing, schools, and daily needs.
- Provides two new rail stations with direct connections to existing regional bus transit centers constructed and operated by the cities of Redondo Beach and Torrance, thus strengthening connectivity between local and regional transportation networks.
- Minimizes property acquisitions by building within the Metro-owned ROW and leveraging this historical investment.
- Improves safety conditions in the ROW where space allows by providing new neighborhood paths where sidewalks are lacking today, upgrading existing freight crossings and reducing existing freight noise with a proposed quiet zone corridor.
- Improves pedestrian and cyclist safety along school routes and improves traffic safety and reduces delay in the surrounding areas by fully grade separating the light rail with elevated segments and two under-crossings.

In approving the staff-recommended LPA, the Board also passed a motion introduced by Director Butts directing that staff:

- Complete technical and environmental studies to respond fully to the public’s comments and questions that were received on the ROW and Hawthorne Boulevard alignments; and
- Refine cost estimates and develop a funding plan that identifies all possible federal, state, and local funding sources to implement the Project.

The Hybrid Option is included in the Final EIR as the LPA and is described in detail, along with CEQA analyses conducted on it and the other alignments.

DISCUSSION

CEQA

Metro is the Lead Agency under CEQA for the C Line Extension to Torrance Project. CEQA requires that Metro balance, as applicable, the economic, social, technological, and other benefits of the Project against its unavoidable impacts when considering environmental certification and project approval. CEQA Guidelines Section 15091(a) states that no public agency shall approve or carry out a project which identifies one or more significant environmental effects unless the public agency makes written findings for each of the identified significant effects, accompanied by a brief explanation of the rationale for each finding. If the Metro Board certifies the EIR and approves the Project, thereby completing the CEQA environmental clearance, the Project will be eligible to seek the potential discretionary reviews, approvals, and real estate negotiations that would be needed to implement the Project.

Prior to approving the Project, the Board must find that notwithstanding the disclosure of these significant and unavoidable impacts, there are specific reasons for approving this Project and that these reasons serve to override and outweigh the Project's significant and unavoidable effects. CEQA requires that support be provided in writing of the specific reasons for approving a project when significant impacts cannot be avoided or substantially lessened. These findings are included in the Project's Statement of Overriding Considerations (Attachment C-1). Section 21081.6 of the California Public Resources Code requires the Lead Agency (for each project that is subject to CEQA) to monitor performance of the mitigation measures included in the environmental document to ensure that mitigation does, in fact, take place after a project is approved. Therefore, a Mitigation Monitoring and Reporting Program (MMRP) has been prepared to ensure compliance with the adopted mitigation measures. The purpose of the MMRP is to ensure that the mitigation measures identified in the Final EIR that mitigate the potentially significant environmental effects of the Project are properly carried out. Metro is responsible for assuring full compliance with the provisions of the MMRP (Attachment D).

Final EIR

The Final EIR was made public on September 11, 2025 and includes analysis of all alignment options and alternatives evaluated in the Draft EIR. The document describes the Board-adopted LPA, and includes clarifications, corrections, and revisions to the Draft EIR based on design refinements and/or additional analyses. It also provides written responses to more than 2,000 public comments received during the Draft EIR review period, consistent with CEQA requirements. The document includes 21 Major Topic responses to provide comprehensive responses to the most commonly asked questions and frequently raised concerns.

Since the Draft EIR, the Final EIR was supplemented by additional technical work including specialized studies and updated engineering plans to respond to community concerns. These additional studies included:

- Field studies including a property boundary survey, drone photography and aerial survey of the Metro-owned ROW to confirm ownership and ROW widths, as the width of the Metro ROW

was raised by homeowners adjacent to the corridor.

- Refined advanced conceptual engineering (ACE) plans for the LPA, reflecting survey work (Appendix B of the Final EIR).
- Additional real estate research on properties that would be affected by the LPA in the 2025 Real Estate Acquisitions Report.
- Updates to power needs and adjustments to freight realignment south of 190th Street based on discussions with BNSF and adjacent property owners.
- Traffic counts of arterials to inform freight crossing design.
- Refined cost estimates for alignments.
- Updated Frequently Asked Questions (FAQs) to help the community better understand the environmental review processes, design and engineering considerations, and safety, among other topics.
- Summary of key issues and responses to questions about the Hawthorne Option (Attachment E).

These reports were published on September 11, 2025, and are available on the Project website and the Plan Engage web [platform <https://us.planengage.com/clineextension>](https://us.planengage.com/clineextension). Communications with the public and engagement activities with stakeholders were conducted throughout the development of the Final EIR, and are described in Attachment F.

Circulation of the Final EIR

The Notice of Availability (NOA) for the Final EIR was filed with the Los Angeles County Clerk and California State Clearinghouse. Metro notified cities, agencies, property owners, residents and the greater community through various means and media including print and social media, newspaper advertisements, and direct mailings. The Final EIR can be accessed at www.metro.net/clineext <<http://www.metro.net/clineext>> and at the following public libraries:

- Lawndale Library (14615 Burin Ave, Lawndale, CA 90260)
- Redondo Beach North Library (2000 Artesia Blvd, Redondo Beach, CA 90278)
- North Torrance Library (3604 Artesia Bl, Torrance, CA 90504)
- Katy Geissert Civic Center Library (3301 Torrance Blvd, Torrance, CA 90503)
- Metro Headquarters Library (One Gateway Plaza, Los Angeles, CA 90012) by appointment only.

To further Project awareness, Metro partnered with Community-Based Organizations (CBOs) that represent the South Bay area and broader region to leverage their expertise in connecting with communities in and around the Project study area. A full description of public engagement and noticing throughout the environmental process can be found in Appendix A to the Final EIR with recent efforts briefly summarized in Attachment F.

Overall Project Benefits

By extending light rail south to Torrance, the Project would integrate two new bus transit centers into the existing regional rail and bus network and provide seamless connections to the C Line, LAX, E Line, as well as broader access to the regional system. These connections would significantly improve transit mobility for South Bay residents and strengthen the regional multimodal transportation network. The Project would divert vehicle trips from congested freeways and arterial

streets, which translates into reductions of air pollutants and greenhouse gases. Specifically, environmental analyses show that the Project reduces approximately 43,000 vehicle miles traveled per day, resulting in net greenhouse gas emissions reductions of roughly 1,850 metric tons per year. These benefits are consistent with, and help advance, regional and statewide policy commitments to address climate change and improve air quality, including implementation of SB 375, California's Scoping Plan under AB 32 and SB 32, and SCAG's RTP/SCS.

Additionally, the Project would generate substantial economic benefits for the region, through both short-term construction employment and long-term regional economic growth due to improved access to jobs. During construction, the Project is expected to create 15,000 jobs in the Los Angeles region, including skilled trade and apprenticeship opportunities that support local workforce development and disadvantaged communities. Consistent with Metro's commitment to small business participation and disadvantaged business enterprises, the Project would also create contracting opportunities for local firms.

The Metro Cost Benefit Analysis (CBA), discussed in this report, shows how improved transportation access expands employment opportunities for workers. In turn, employers benefit from a larger labor pool and thus greater productivity. Over a 20-year period, the Project is estimated to generate \$16.3 billion in Gross Domestic Product (GDP) for the region. Additionally, this infrastructure investment would help to catalyze local development of station areas, thereby supporting new housing, commercial space, and transit-oriented development, stimulating economic activity and expanding the local tax base.

Cost Estimates

Per Board direction in May 2024, Metro has refined the cost estimates, in keeping guidance per the Federal Transit Administration (FTA). The refined cost estimates address:

- Updates to baseline construction costs for minor design refinements discussed in the Final EIR.
- Actual inflation rates between 2022 and 2025 to account for the greater than anticipated cost increases for construction materials, labor and professional services.
- An updated preliminary construction schedule to address additional time to complete the EIR process (see Figure 1).
- Updated escalation (3.5% average annual) for mid-point of construction.
- Updated contingency to reflect higher base construction costs (~40% based on early stage of design at 15% advanced conceptual engineering).

Figure 1. Updated Preliminary Construction Schedules



With the updated schedule, the LPA is anticipated to open in March 2036. The Hawthorne Option is estimated to open in December 2036, assuming two years to complete additional environmental approval under the National Environmental Policy Act (NEPA) in coordination with Caltrans and the Federal Highway Administration (FHWA). This process would likely take more than two years to complete due to additional reviews and agreements required to be in place as experienced on other projects where Metro and Caltrans are collaborating. As such, Metro has prepared a more conservative schedule for the Hawthorne Option with up to four years to complete NEPA and Caltrans approvals, which would open by the end of 2038 to better reflect risks to the project schedule with this additional round of approvals, as shown in Figure 1.

Table 2 summarizes the refined cost estimates and differences between the Draft EIR estimates in 2022 and Final EIR cost refinements in 2025.

Table 2. Refined Construction Cost Estimates (2025)

Table 1. Refined Construction Cost Estimates (2025)

Construction Cost Estimates \$ in millions	LPA Hybrid Alt	Hawthorne Option
2022 Baseline Costs	\$1,213	\$1,497
Design Refinements in Final EIR	\$119	\$107
Subtotal of Updated Baseline Costs	\$1,332	\$1,604
Percent Increase in Baseline Construction Costs (between 2022 to 2025)	9.8%	7.1%
Actual Inflation of Baseline Costs (2022-2025)	\$240	\$289
Escalation (3.5% average annual)	\$523	\$814
Contingency (~40% of baseline costs)	\$608	\$733
2025 Total Estimate (Final EIR)	\$2,703	\$3,440

The updated cost estimate for the LPA is \$2.7 billion in 2025\$. Between 2022 to 2025, the LPA construction cost estimate increased by \$468 million (9.8%). Of that, approximately \$119 million is attributed to baseline construction costs based on minor design refinements, which are primarily in

the area south of 190th Street and would also apply to the Hawthorne Option. The remaining increase in cost is due to recent inflation (2022 to 2025), future escalation for project delivery, and contingency to address known and unknown risks based on an early stage of design.

The Hawthorne Option has increased by \$478 million since 2022. The updated cost estimate is now \$3.44 billion in 2025\$. This cost estimate assumes a two-year process to complete NEPA and related Caltrans and FHWA approvals. However, Metro estimates that the environmental review and approval process would take longer, adding additional cost to the Hawthorne Option, further discussed in the comparison of options section below.

Project Funding

As shown in Table 3, approximately 52% of the funding necessary to build the Project has been secured to date for the LPA, including Measure R and M funds as well as state grants - constituting \$1.4 billion toward the estimated LPA cost of \$2.7 billion. The secured funding is sufficient for covering estimated Project costs for early works activities, including final design, right of way, and freight and utility relocation, discussed further below.

Table 3. Funding Sources for LPA

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Funding Sources	LPA (Hybrid Alternative)
Secured Funding	\$1,414.8
Measure R	\$272.0
Measure M*	\$821.4
3% Local Match Requirement**	\$81.1
TIRCP Grant	\$231.3
SB1 – Local Partnership Program	\$9.0
Not Secured	\$1,288.2
Other Local Funding	\$1,038.2
Other State Funding	\$250.0
Other Federal Funding	\$0.0
TOTAL	\$2,703.0

*includes inflation adjustment as allowed under the Measure M Ordinance.

**The current cost estimate is based on 15% design completed for the EIR.

Should the Final EIR be certified by the Board, Metro would advance design work on the approved Project and continue to use existing local funding while seeking additional funding. Such additional funding would be sought from existing transit-eligible state grant programs (e.g., State Transportation Improvement Program, Local Partnership Program, Solutions for Congested Corridors) and use local funds, including local sales tax. Local sources that will be considered or proposed include a possible transfer of Measure M Highway funds to the Project, and surplus Express Lanes revenue.

Although this Project is not a candidate for federal funding (see Table 3), the proposed funding strategy is consistent with practices advanced for previous projects as previously shown in Table 1. Metro has successfully competed for additional funding after environmental approval for many transit corridor projects. Should the Metro Board approve this Project, Metro would follow its past practice and leverage the existing funding through a sequenced construction approach (discussed in Attachment G) and pursue additional funds to close the gap.

Project Name & Operational Plan

The Project was originally envisioned as an extension of the C (Green) Line (which operated until 2025 from Norwalk Station to Redondo Beach Station) and referred to as the C Line (Green) Extension to Torrance Project in the Draft EIR. Following the completion of the Draft EIR public comment period, and after the Metro Board selected the LPA, in June 2025, Metro implemented operational changes redirecting the C Line to serve the new LAX Metro Transit Center (MTC), providing a connection to the Los Angeles International Airport. In addition, the recent operational K Line would operate service from the E Line, now continuing south to the Redondo Beach (Marine) Station. As such, the CLET Project would operate as a southern extension of the K Line with direct access to LAX, Inglewood, and Central Los Angeles and rail connections to the Metro C and E Lines. Furthermore, a separate study is underway to potentially extend the K Line further north in the future from its current terminus at Crenshaw/Expo to the Metro D and B Lines, thereby creating a north-south rail line from Torrance to Hollywood, connecting dozens of communities and activity centers in between. For consistency, the Final EIR refers to the Project as the C Line Extension to Torrance as described in the Draft EIR. If certified by the Metro Board, the Project name would be changed to the K Line Extension to Torrance.

Comparison of Options

While the Final EIR analyzes all alternatives and discloses environmental impacts of each, the following discussion compares the alternatives based on technical studies performed to date including the Final EIR, cost estimates, ridership studies, community preferences and concerns, and deliverability and long-term operational sustainability, including the recent Cost Benefit Analysis.

Locally Preferred Alternative

The LPA provides significant regional economic benefits and provides a higher benefit-to-cost ratio (BCR) than the Hawthorne Option based on its strong mobility benefits, lower construction cost, and earlier opening date. The LPA would generate approximately 11,500 daily trips and offers greater travel time savings per trip and a higher reduction in vehicle miles traveled (VMT) than the Hawthorne Option. The proposed stations at the Redondo Beach Transit Center and Torrance Transit Center offer seamless transfers between bus and rail, and provide other mobility options for vehicle parking, bicycle parking, and passenger drop-off areas for added convenience and reduced trip travel times.

While the LPA has drawn concerns from adjacent property owners and community members, including apprehensions about safety (personal safety, derailment, hazardous materials transport, active pipelines, etc.), loss of green space, and increased noise from the proposed new light rail service, Metro has committed to addressing and mitigating these concerns in several ways. Specifically, the LPA proposes multiple new safety features for corridor communities, including improvements to the existing freight infrastructure that would result in safer and quieter operations

than those observed today. The LPA would upgrade existing freight tracks and crossings and would install security barriers and an intrusion detection system to further protect pedestrians from the active freight corridor. Freight trains travel slowly in the corridor today (around 20 miles per hour), which has a low risk of derailment. The Project proposes no modifications to BNSF's current operations, nor changes to existing regulations or practices in the transport of hazardous materials. The LPA would mitigate operational noise and vibration to less than significant for both light rail and freight through grade separations, sound walls, and the quiet zone ready corridor improvements.

Along the corridor, the width of the Metro ROW varies, as does the distance between the light rail tracks and adjacent residential property lines. In Lawndale, for example, the distance from the nearest light rail track centerline to the adjoining property line ranges from approximately 27 feet where the Metro ROW is 100 feet wide (north of 170th Street) to approximately 13 feet where the ROW narrows to 75 feet (south of 170th Street). These conditions are comparable to other Metro light rail projects constructed within historic railroad corridors traversing residential neighborhoods, including the Metro A Line in South Pasadena and Azusa and the Metro E Line in West Los Angeles, where track centerlines are, in some locations, as close as seven feet from adjacent residential properties. Metro safely constructed and operates light rail service in these neighborhoods, many of which have sound walls similar to those proposed as part of the Project to minimize noise.

As noted by Lawndale and Redondo Beach residents, green space is limited in the Project area. To address this concern, the LPA would construct two new neighborhood walking paths (one in Lawndale and one in Redondo Beach) to provide safe, dedicated pedestrian routes in areas that currently lack sidewalks. Metro would work to protect existing trees, where possible, and plant replacement trees at a ratio of 2:1 to enhance shade and greenery in the neighborhoods. The LPA is designed to use Metro-owned land for construction and operations to minimize commercial acquisitions and avoid residential displacements. By using the Metro ROW and grade separating the light rail, the Project avoids changes to streets and parking. These improvements would enhance the safety of school children and other pedestrians, reduce conflicts between freight operations, and improve the quality of the public realm in adjacent communities. Lastly, the LPA does not require additional environmental approvals under NEPA and does not require an encroachment permit from Caltrans, which reduces overall risk to schedule and costs, unlike the Hawthorne Option.

Hawthorne Option

The Hawthorne Option is estimated to achieve higher ridership than the LPA (approximately 1.7 million vs 1.49 million annual riders, respectively), but would not connect to the Redondo Beach Transit Center, thereby missing an opportunity to leverage an existing facility that would promote transferability between rail and bus. Instead, this alignment includes a station in the middle of Hawthorne Blvd, near the South Bay Galleria. While the adjacent mall and planned development is expected to be a trip generator, the station location would require greater walking distances and fewer amenities for transfers, resulting in a lower travel savings per trip for the Hawthorne Option (19.7 minutes) compared to the LPA (22 minutes). It also requires all riders to cross a major arterial that carries approximately 70,000 vehicles a day to access the rail station.

The Hawthorne Option construction cost estimate (\$3.44B) is \$737 million more than that of the LPA (\$2.7B) and is expected to have a longer timeline due to additional environmental approvals, permitting requirements, extensive utility relocations, and property acquisitions. The Hawthorne

Option would require permits and environmental review by both Caltrans and the FHWA due to its encroachment into Interstate 405 (I-405) where the alignment crosses freeway ramps and locates columns and support structures adjacent to the I-405 sound walls within Caltrans right of way. The Hawthorne Option also requires Caltrans review and approval for the segment that runs in the center of Hawthorne Blvd (State Road 107), which is under Caltrans jurisdiction with the exception of the segment in Lawndale, which was relinquished.

Due to its encroachment into the interstate highway system, additional environmental clearance through NEPA would add a minimum of two years to the timeline, and likely longer (up to four years), which would further increase costs and delay service. For example, a two-year delay would increase costs by \$16.9 million per month for the Hawthorne Option, based on current inflation estimates for construction. In a 2023 comment letter to Metro on the Draft EIR, Caltrans emphasized the “extensive collaboration with Caltrans staff for various permits and design approvals” needed for the Hawthorne Option. Long-term, the Hawthorne Option would require a joint-use agreement with Caltrans and FHWA for maintenance activities within the I-405 segment.

The approximately 3-mile segment is elevated in order to cross over several major streets and highway on- and off-ramps and ensure safety for pedestrians, cyclists, vehicles, and trains. Metro performed an assessment of traffic safety and operations at intersections along the alignments per the Metro Grade Crossing Safety Policy for Light Rail Transit and determined that this segment of the Hawthorne Option needed to be grade separated. Construction of the Hawthorne Option would require temporary closures to the I-405 on- and off-ramps, as well as travel lanes along Hawthorne Blvd, which would reduce roadway capacity during the estimated five to seven years of construction. The Hawthorne Option would also require relocation of major utilities, including an underground storm drain located in the roadway median, and raising overhead high-voltage transmission lines to provide sufficient clearance from the overhead catenary system for the elevated light rail. The cost and construction complexity of these utility relocations would be difficult to mitigate fully, given that construction must occur within public streets requiring lane closures. Metro would work with local jurisdictions on traffic management plans during construction to minimize effects on the roadway and adjacent homes and businesses, where feasible.

In terms of permanent impacts, several commercial parcels would be affected permanently, including auto dealerships, gas stations, retail stores, and self-storage businesses, due to anticipated commercial property acquisitions, as well as anticipated traffic and parking constraints along Hawthorne Boulevard. By contrast, the LPA achieves significant mobility benefits while avoiding these heightened adverse effects that are difficult to address due to street width and utility constraints along Hawthorne Boulevard with little space for additional sidewalk width improvements. The Hawthorne Option would forego community improvements in the Metro ROW, such as quiet-zone-ready corridor improvements to eliminate existing freight horn noise, safety improvements from upgraded freight crossing infrastructure and trackwork, and new neighborhood paths where sidewalks are lacking today.

Metro Cost Benefit Analysis

In July 2025, the Board adopted a CBA methodology framework for evaluating project alternatives, including assessing the regional economic impacts of investment and identifying benefits relative to the costs of investment. The CBA includes two components: Weighted Benefits Analysis and Benefit-

Cost Ratio, discussed in Attachment H.

DETERMINATION OF SAFETY IMPACT

Certification of the Final EIR and project approval will not impact the safety of Metro's customers or employees.

FINANCIAL IMPACT

The Board's certification of the Final EIR would represent Metro's commitment to the eventual buildout of this Project. Metro has secured more than 50% of the estimated funding needed for the current 2025 cost estimate and would need to secure future state funding and allocate additional local funds to the Project. While the construction schedule and delivery methods would be determined based on funding and additional technical design and investigations, project approval under CEQA would allow staff to continue advancing the design, conduct site investigations, seek discretionary grants on a more competitive basis, and continue third party coordination and communications with stakeholders and communities.

Impact to Budget

Funding for this action comes from Measure R 35% Transit Capital. The Fiscal Year 2026 budget includes approximately \$11 million in Cost Center 4350 (Mobility Corridors), Project 460304 "Green Line Extension Redondo Beach/South Bay" for professional services and support and \$35.2 million in Cost Center 8510 (Program Management), Project 860304 "K Line Extension Torrance." Since this is a multi-year contract, the cost center Managers and Chiefs will be responsible for budgeting in future years.

EQUITY PLATFORM

The Project will connect the South Bay with the rest of the Metro Rail network, increasing access to employment, education, housing, and regional centers, serving many Equity Focus Communities (EFCs) along the C and K Lines, including those in communities such as Hawthorne, Gardena, West Carson, and Inglewood where close to 50% of the population is low-income. The 2022 Metro Customer Satisfaction Survey shows that 73% of existing C Line and over 75% of K Line riders come from very low-income households and over 74% do not have access to an automobile for trips. Four out of five C Line riders identify as black, indigenous, and/or people of color. Given the South Bay is home to many jobs and schools, expanding access to historically underserved communities helps expand economic mobility.

Based on Metro's 2022 Equity Focus Community data, only a small portion of Lawndale is considered an EFC. To better understand the communities within walking distance to proposed stations, Metro analyzed household income, car ownership, and demographics and found that 20% to 39.9% are low-income, 6% to 9% do not have access to vehicles, and 50% to 79% of the population is non-white for census tracts within a half-mile of the Redondo Beach Transit Center Station. The Torrance Transit Center would serve census tracts where 10% to 19% of households are low-income, 20% to 49% are non-white, and 6% to 9% do not have access to a vehicle. Both proposed rail stations for the LPA would directly connect to local bus transit centers in Redondo

Beach and Torrance, providing easy bus-to-rail transfers and providing a convenient and reliable transit option for communities with higher mobility needs. Travel time savings, and proximity to jobs, schools, homes and activity centers were studied as part of the CBA, along with equity-related factors such as proximity of proposed stations to communities with higher socioeconomic and health burdens.

During the environmental review process, Metro circulated materials and notices in English and Spanish, the predominant languages in the area, and held pop-up events at community events to increase awareness of the Project and engage groups who do not typically participate in community meetings. As part of the release of the Final EIR, Metro partnered with seven CBOs to raise awareness and share information with community members prior to the Metro Board taking an action on the Project.

VEHICLE MILES TRAVELED OUTCOME

VMT and VMT per capita in Los Angeles County are lower than national averages, the lowest in the SCAG region, and on the lower end of VMT per capita statewide, with these declining VMT trends due in part to Metro's significant investment in rail and bus transit.* Metro's Board-adopted VMT reduction targets align with California's statewide climate goals, including achieving carbon neutrality by 2045. To ensure continued progress, all Board items are assessed for their potential impact on VMT.

As part of these ongoing efforts, this item is expected to contribute to further reductions in VMT.

This Project supports Metro's systemwide strategy to reduce VMT through planning activities that will improve and further encourage transit ridership, ridesharing, and active transportation. Metro's Board-adopted VMT reduction targets were designed to build on the success of existing investments, and this item aligns with those objectives.

Metro conducted a preliminary analysis to show that the net effect of this Project is to decrease VMT. The Draft EIR identifies that the Project would help reduce auto use by approximately 43,094 VMT per day. This would help the region meet climate change goals by reducing greenhouse gas emissions and regional energy use.

*Based on population estimates from the United States Census and VMT estimates from Caltrans' Highway Performance Monitoring System (HPMS) data between 2001-2019.

IMPLEMENTATION OF STRATEGIC PLAN GOALS

The Project supports the following strategic plan goals identified in Vision 2028:

Goal 1: Provide high-quality mobility options that enable people to spend less time traveling,

Goal 3: Enhance communities and lives through mobility and access to opportunity, and Goal 5:

Provide responsive, accountable, and trustworthy governance within the Metro organization.

ALTERNATIVES CONSIDERED

The Board could defer or not approve the Project, not certify the Final EIR, and/or not adopt the Findings and Statement of Overriding Considerations or the MMRP. These actions are not recommended. Deferring action and delaying the Project would increase overall project costs and extend the project schedule. Each year of delay is estimated to increase overall costs by over \$152 million based on escalation. Deferral also would jeopardize the TIRCP grant of \$232 million, which requires Metro to demonstrate a good faith effort to advance the Project to maintain funding.

Failure to approve the Project would be inconsistent with the approved Metro 2020 Long Range Transportation Plan, SCAG's 2020-2045 RTP/SCS, and the 2024-2050 RTP/SCS, to meet regional and local commitments for mobility, equity, air quality, and climate. Metro would fail to meet our commitment to residents of LA County who voted to support the Project and direct sales tax dollars to mobility improvements through voter-approved Measure R and M. Metro would lose the \$232 million TIRCP grant. The South Bay would be further isolated from the greater region without a strong mobility connection to the growing rail system and would forgo over \$16.3 billion of regional economic benefits generated by the Project.

NEXT STEPS

Upon Board approval, Metro will file a notice of determination (NOD) for the Project with the Los Angeles County Clerk's Office and the California State Clearinghouse within five working days of the Metro Board's action.

Staff will develop a communications plan for the next steps to guide public meetings, stakeholder coordination, field work, and real estate negotiations. Staff will continue to engage the communities and key stakeholders as the Project develops and return to the Metro Board to consider a contract modification for preliminary engineering and a contract to support staff with engineering and pre-construction activities. Near-term efforts will include coordination with local cities and agencies to assist with First/Last Mile (FLM) Planning, development of cooperative agreements with cities, agencies, and other third parties, advancing design, conducting ground investigations, performing value engineering, updating cost estimates, beginning real estate coordination with affected owners, preparing the construction delivery method, and pursuing additional funding. For future stages of work, the Project would be referred to as the K Line Southern Extension to Torrance.

ATTACHMENTS

Attachment A - Board Motion 30.1, May 23, 2024

Attachment B - Final EIR Executive Summary

Attachment C -1 - Findings of Fact and Statement of Overriding Considerations - ROW

Attachment C - 2 - Findings of Fact and Statement of Overriding Considerations -Hawthorne Option

Attachment D - MMRP

Attachment E - Hawthorne Option Key Issues & Responses

Attachment F - Summary of Recent Engagement Since LPA

Attachment G - Summary of Preliminary Delivery Approach

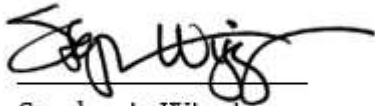
Attachment H - Cost Benefit Analysis

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Stephanie Wiggins
Chief Executive Officer



Board Report

File #: 2024-0394, **File Type:** Motion / Motion Response

Agenda Number: 30.1.

REGULAR BOARD MEETING MAY 23, 2024

Motion by:

DIRECTOR BUTTS

Related to Item 30: Proposed Project and Locally Preferred Alternative for the C Line Extension to Torrance

Staff has recommended to use the Right-of-Way grade separated “Hybrid” alternative (Hybrid Alternative) as the Locally Preferred Alternative (LPA). This means that Metro will fully evaluate the Hybrid Alternative pursuant to the California Environmental Quality Act (CEQA), while continuing to study alternatives.

Stakeholder cities, including Redondo Beach and Lawndale, have expressed many questions and concerns and requested that Metro keep studying the Hawthorne Boulevard Alternative. We understand that each alignment will deliver benefits and impacts to certain communities. To address concerns raised during community and stakeholder engagement completed thus far, the Hybrid Alternative will keep the right-of-way, but now is proposed to include grade separations at 170th and 182nd street and create a “quiet zone” to diminish freight and light rail noise and include special landscaping to create a park-like environment and improve safety. Nevertheless, stakeholder cities contend that the aerial Hawthorne Boulevard Alternative will better address many concerns raised by Lawndale and Redondo Beach residents who live adjacent to the right-of-way, and also provides synergistic opportunities for economic and housing growth in the South Bay Social District. At the 15% level of design, the preliminary estimated costs for the alignments have identified significant funding gaps of approximately \$825 million dollars and the Hawthorne Blvd Alternative has a funding gap closer to \$1.48 billion.

For either alternative to proceed, a variety of potential funding sources, including local, state, and federal sources may be required as the project design progresses. Metro will need to pursue a variety of sources of funds, including new federal grants that may become available and the project should be prepared to undergo further environmental analysis pursuant to the National Environmental Policy Act (NEPA) at some point in time, which could be prepared at a later date once the CEQA process is completed. NEPA would likely require greater detailed analysis of various alternatives.

In an effort to keep the planning process moving forward and support Metro’s staff recommendation to select the Hybrid Alternative as the LPA, preserve opportunities to pursue a variety of funding

opportunities, and address community concerns, Metro must fully respond to comments.

SUBJECT: PROPOSED PROJECT AND LOCALLY PREFERRED ALTERNATIVE FOR THE C LINE EXTENSION TO TORRANCE MOTION

RECOMMENDATION

APPROVE Motion by Butts that the Board of Directors:

- A. Approve the staff recommendation on LPA and continue the EIR process in compliance with CEQA;
- B. Complete studies to respond fully to public comments received on the ROW and Hawthorne Blvd Alignments in the Final EIR; and
- C. Continue to develop refined cost estimates for the LPA on the ROW alignment and develop a refined funding plan that includes the identification of all federal, state, and local funding sources to implement the project.

ES EXECUTIVE SUMMARY

ES.1 INTRODUCTION

The Executive Summary provides an overview of this Final Environmental Impact Report (EIR) for the C Line (Green) Extension to Torrance, which has been prepared in compliance with the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.) and the State CEQA Guidelines (14 Cal. Code. Regs., § 15000 et seq.). This Final EIR responds to comments received on the Draft EIR during the public comment period and incorporates revisions and clarifications where appropriate.

The project would extend the C Line (Green) from the existing Redondo Beach (Marine) Station to the Mary K. Giordano Regional Transit Center (Torrance TC) for approximately 4.5 miles and provide two new rail stations. The project is officially referred to as the C Line Extension to Torrance Project, though due to recent service changes, the project would now function as an extension of the K Line. Specifically, on June 6, 2025 (subsequent to the completion of the Draft EIR), Metro implemented service changes that redirected the C Line to terminate at the LAX/Metro Transit Center, with the K Line assuming operations along the C Line's former west segment, continuing south from the Aviation/Century Station to the Redondo Beach (Marine) Station. As a result, the segment proposed for extension would be part of the K Line's operational alignment, although the project's official name remains unchanged. Importantly, this change does not alter the adequacy of how the proposed alignment options and alternatives were studied in the Draft EIR, as the project was and still is proposed to include extension of light rail transit service from the existing Redondo Beach (Marine) Metro K Line (formerly C Line) Station to the Torrance TC.

After completion of the Final EIR, the Metro Board may certify the Final EIR, adopt a Mitigation Monitoring and Reporting Program (MMRP) for the project, issue findings of fact on the project's environmental impacts, adopt a statement of overriding considerations, and approve the project.

ES.1-1 Background

The project has evolved over the years based on several planning studies and the scoping process, which are discussed in greater detail in the Alternatives Considered and Eliminated Report (Metro, 2023). Metro completed an Alternatives Analysis (AA) Study in 2009, which studied transit alternatives along the Metro-owned Harbor Subdivision freight railroad right-of-way (Metro ROW) between downtown Los Angeles (LA), Los Angeles International Airport (LAX), and the Ports of Los Angeles and Long Beach. In 2010, Metro initiated a Draft EIS/EIR, but it was put on pause in 2012 due to funding concerns. Following the passage of Measure M in 2016, which provides additional funding for the project, in 2017, Metro reinitiated the project studies with the Supplemental Alternatives Analysis (SAA) that focused on further refining the previously identified alternatives based on feedback from stakeholders. On September 27, 2018, the Metro Board of Directors (Metro Board) voted to approve two alternatives to be carried forward into environmental analysis: the Metro ROW and the Hawthorne Boulevard alignment (both primarily at-grade alignments).

ES.1-2 Environmental Review Process

On January 29, 2021, Metro published a Notice of Preparation (NOP) to solicit public and agency comments on the scope, content, and information that should be considered as part of the Draft EIR for the proposed light rail that would extend approximately 4.5 miles from the end of the existing Metro C Line in Redondo Beach southeast to Torrance. Metro held an agency-specific scoping meeting and two public scoping meetings on February 24 and 27 during a 60-day comment period, which ended on March

29, 2021. All scoping meetings were held virtually due to Los Angeles (LA) County Safer at Home orders during the COVID-19 pandemic.

Following the public scoping review period and NOP release, Metro began developing the Draft EIR. A variety of potential alternatives that satisfy the project's purpose and need were assessed and refined during the screening and project refinement stages of the Draft EIR process. The Draft EIR identified and evaluated the Elevated/At-Grade Alignment as the Proposed Project, as well as two options: the Trench Option and Hawthorne Option. In accordance with CEQA guidelines Section 15126.6(a), the Draft EIR also included three Project Alternatives: No Project Alternative, High Frequency Bus Alternative, and 170th/182nd Grade-Separated Light Rail Transit Alternative (also referred to as the Hybrid Alternative).

Upon release of the Notice of Availability (NOA) on January 26, 2023, a 61-day comment period was initiated for public review and comment on the Draft EIR. During the public comment period, Metro conducted five public hearings, held during the weekday, weekend, and virtually. The public was able to provide comments regarding the content and conclusions of the Draft EIR. Approximately 400 stakeholders attended the public hearings. Additionally, information about the project was distributed through the following methods: 32,000 flyers delivered door-to-door; 47,231 postcards mailed; legal advertisements and display notices published in four newspapers; ads displayed on South Bay Metro bus lines; nine email blasts distributed; a blog post published in Metro's *The Source*; four surveys conducted in transit bus-stop intercept locations; and 250 businesses engaged in door-to-door outreach. Metro received approximately 2,200 comment submissions in the form of emails, voicemails, oral comments at public hearings, comment cards, letters, surveys, and petitions during the comment period (see Appendix C, Public Comments on the Draft EIR).

Following the completion of the Draft EIR public comment period, Metro and Director Holly J. Mitchell's office (LA County Supervisor of the second district) hosted additional community engagement. This included a community walk in the City of Lawndale along the proposed light rail alignments on December 16, 2023, and a community meeting on January 18, 2024 at Springhaven Apartments in Willowbrook near the Rosa Parks/Willowbrook Station, served by the Metro C and A Lines. Community members shared input on the project at these events, which was summarized and shared with the Metro Board prior to the selection of a Locally Preferred Alternative (LPA). See Appendix A for a summary of public engagement.

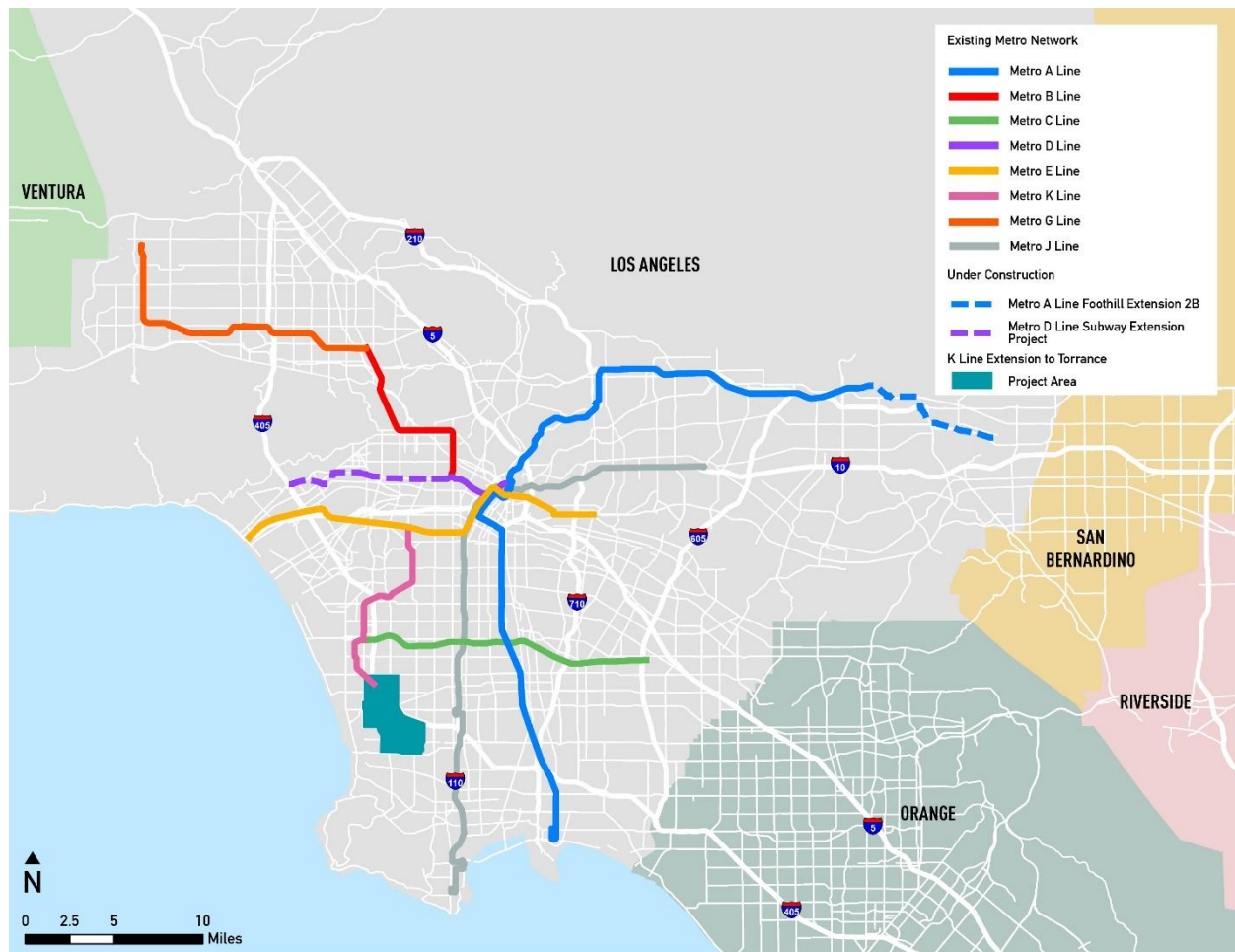
ES.1-3 Selection of LPA

Based on the Draft EIR and supporting technical studies, comments on the Draft EIR, stakeholder input and additional community engagement in partnership with Director Mitchell, Metro staff recommended the 170th/182nd Grade-Separated Light Rail Transit Alternative (Hybrid Alternative) as the LPA since it best provides local and regional benefits, meets project needs and objectives, and addresses community concerns. Metro presented the staff recommendation to the Metro Planning & Programming Committee in April 2024 and the full Metro Board in May 2024. Both meetings allowed for public comment. At the May 23, 2024 Board meeting, the Metro Board selected the Hybrid Alternative as the LPA to be evaluated in the Final EIR.

ES.2 PROJECT DESCRIPTION

Figure ES-1 shows the project location within LA County. The project historically has been envisioned as an extension of the existing Metro C Line (Green) and therefore the Draft EIR published in January 2023,

Figure ES-1. Project Location and Regional Vicinity



ES.2-1 Project Objectives

- > Improve mobility within the South Bay and encourage mode shift by:

- 

- Creating direct connections between the regional transit network and local transit hubs for convenient transfers.
 - Providing an alternative mode of transportation for commuters traveling along congested arterials and Interstate 405 (I-405).
 - Providing First-Last Mile facilities to connect neighborhoods to station areas.
- > Reduce air pollution and greenhouse gas emissions by making transit a more viable transportation choice.
 - > Avoid and minimize environmental impacts on environmental resources to the maximum extent feasible.
 - > Provide a cost-effective project.
 - > Provide more equitable access to regional destinations by improving connections to the Metro regional rail system.

ES.2-1.1 Project Alignments, Options & Alternatives Studied in the Draft EIR

The project was analyzed in the Draft EIR with the following design options:

- > Elevated/At-Grade Alignment (referred to as the Proposed Project in the Draft EIR) – Follows the Metro ROW for the length of the project from the existing Redondo Beach (Marine) Station to the Torrance TC, with an elevated segment, followed by an at-grade segment. An elevated station is located along the Metro ROW adjacent to the Redondo Beach Transit Center (Redondo Beach TC).
- > Trench Option – Follows the Metro ROW for the length of the project, with a below-grade trench segment between Inglewood Avenue and 170th Street, followed by at-grade segments with a short trench to cross under 182nd Street. A one-level station is located along the Metro ROW adjacent to the Redondo Beach TC.
- > Hawthorne Option – Leaves the Metro ROW to run in an elevated guideway along I-405 and turns onto Hawthorne Boulevard near 162nd Street to travel in the center median of Hawthorne Boulevard before rejoining the Metro ROW south of 190th Street. An elevated station would be located in the median of Hawthorne Boulevard, adjacent to the South Bay Galleria.

South of 190th Street, there were no design options, and all alignments followed the Metro/BNSF ROW in the same configuration, primarily at-grade with a terminus station at the Torrance TC.

The Draft EIR evaluated three alternatives to the Project under CEQA in accordance with CEQA guidelines Section 15126.6(a) to avoid or minimize impacts:

- > No Project Alternative
- > High-Frequency Bus Alternative
- > 170th/182nd Grade-Separated Light Rail Transit Alternative (Hybrid Alternative and LPA).

ES.2-2 Locally Preferred Alternative

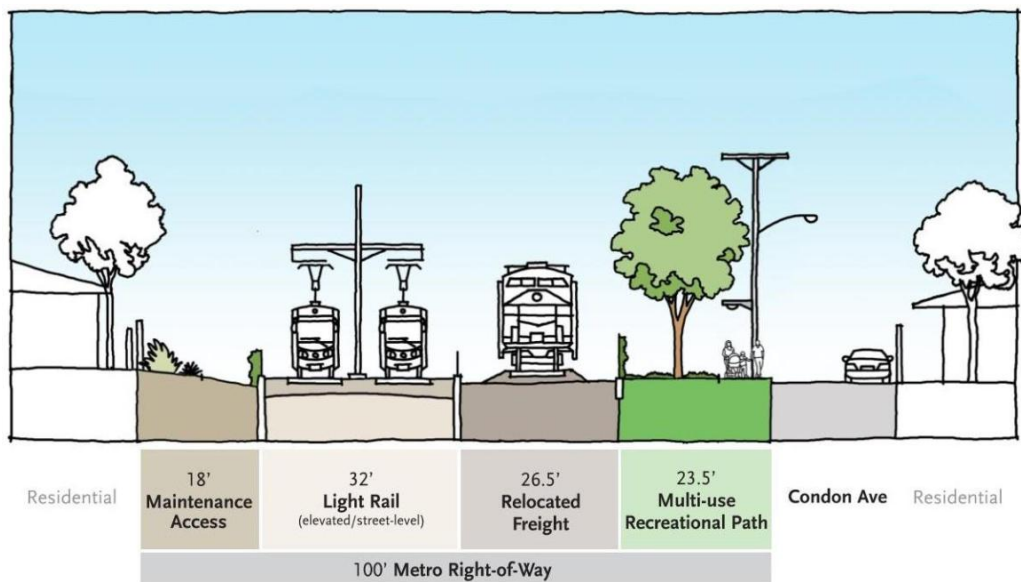
The LPA would extend the Metro light rail approximately 4.5 miles to the south along the existing Metro ROW for the length of the alignment. Two new light rail transit stations are proposed: the Redondo Beach TC Station and the Torrance TC Station. Figure ES-7 shows an overview of the LPA. BNSF operates freight service along the Metro ROW in the project area. As part of the LPA, Metro proposes

constructing two new light rail tracks and relocating the existing freight tracks in certain areas within the Metro ROW. The LPA also includes multi-use recreational paths within the Metro ROW, where there is sufficient room, in the cities of Lawndale and Redondo Beach as discussed further below. South of 190th Street, BNSF and Metro share ownership of the freight corridor and BNSF has several spur tracks to serve adjacent businesses. Metro owns approximately 15 feet in width and would acquire or lease additional ROW from BNSF to accommodate two new light rail tracks between 190th Street and the Torrance TC Station, while ensuring BNSF can maintain freight operations and deliveries via spur lines.

ES.2-3 Locally Preferred Alternative Alignment and Stations

The LPA would begin at the existing elevated Redondo Beach (Marine) Station and continue south within the Metro ROW. The elevated alignment would continue about 400 feet south of the station before briefly descending to at-grade to avoid conflicts with overhead power lines before ascending to cross over Inglewood Avenue and Manhattan Beach Boulevard. South of Manhattan Beach Boulevard, the light rail would shift from the west side of the Metro ROW to the east side and cross 159th to 162nd Streets on an elevated structure before descending to street level near 165th Street, shown in Figure ES-2. Near 168th Street, the light rail would transition into an open-air trench to cross under 170th Street (Figure ES-3), then ascend to travel at-grade near 172nd Street and continue south into Redondo Beach. Between 170th Street and Artesia Boulevard, the Metro ROW narrows from 100 feet to 75 feet.

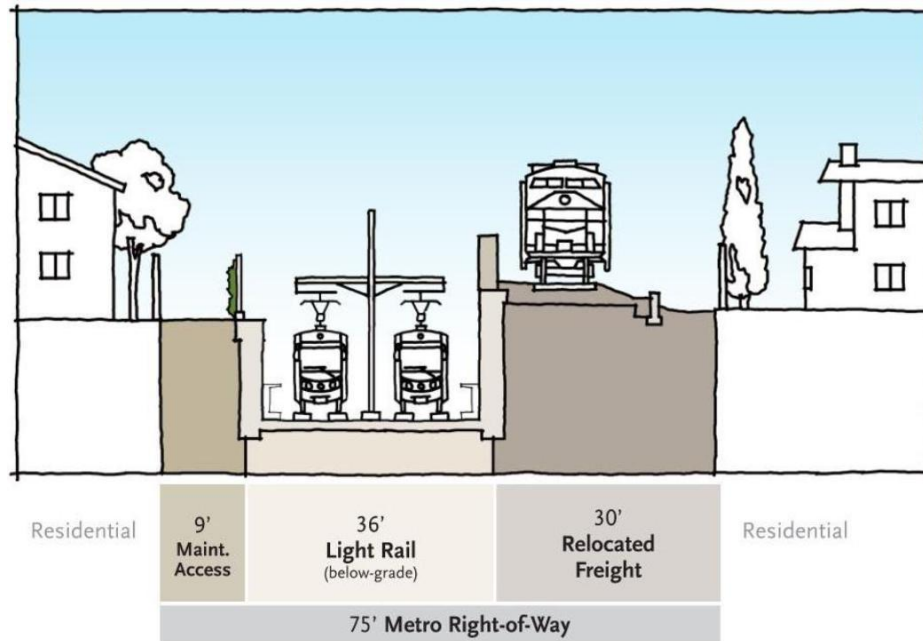
Figure ES-2. Locally Preferred Alternative – Looking South between 165th Street and 168th Street



Source: Cityworks Design, 2025

Dimensions are preliminary and subject to refinement in future phases of design.
Corresponds with Cross-Section H in Appendix B.

Figure ES-3. Locally Preferred Alternative – Looking South of 170th Street

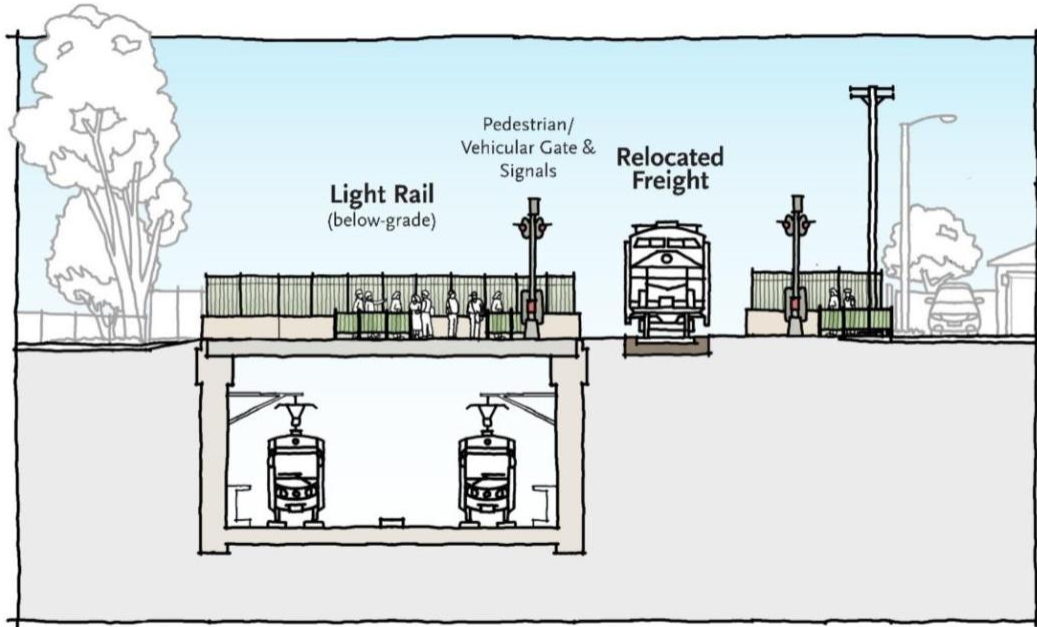


Source: Cityworks Design, 2025

Dimensions are preliminary and subject to refinement in future phases of design.
Corresponds with Cross-Section H.2 in Appendix B.

The alignment would cross over Artesia Blvd and Grant Avenue on new light rail bridges parallel to the existing freight bridges. In this segment, the Metro ROW is 100 feet wide; the freight tracks would remain in place, and the light rail would travel parallel to freight. South of Grant Avenue, the alignment would approach the Redondo Beach TC Station, then descend into a short trench to cross under 182nd Street, as shown in Figure ES-4.

Figure ES-4. Locally Preferred Alternative – Looking South at 182nd Street



Source: Cityworks Design, 2025

Corresponds with Cross-Section M in Appendix B.

South of 182nd Street, the light rail would ascend to at-grade to cross over Hawthorne Boulevard and 190th Street on new bridges parallel to existing freight bridges. South of 190th Street, the alignment would cross under Prairie Avenue, then rise to an elevated structure to allow freight movement below, before descending again to travel at-grade and cross under Del Amo Boulevard. The alignment would continue at-grade before terminating at a new station adjacent to the Torrance TC.

The LPA's light rail tracks would be grade-separated from all roadways that currently cross the Metro ROW. The freight tracks would remain at-grade throughout the length of the corridor where they currently travel at-grade, and would shift in some locations within the Metro ROW to accommodate the light rail tracks. All eight existing at-grade freight crossings from Inglewood Avenue to 182nd Street would be upgraded with safety infrastructure to be quiet-zone ready, which would allow local jurisdictions to implement a quiet zone policy for the corridor in the future. This would eliminate the need for freight trains to use their horn as they approach street crossings and reduce noise along the corridor.

The LPA would provide multi-use recreational paths for walking, cycling, etc. to enhance mobility and access within the neighborhoods and to stations, where feasible. In Lawndale, a multi-use path is proposed between 159th Street and Manhattan Beach Boulevard east of the Metro ROW and Manhattan Beach Boulevard and 170th Street west of the Metro ROW. In Redondo Beach, a multi-use path is proposed between Grant Avenue and 182nd Street west of the Metro ROW.

The following stations would be constructed under the LPA:

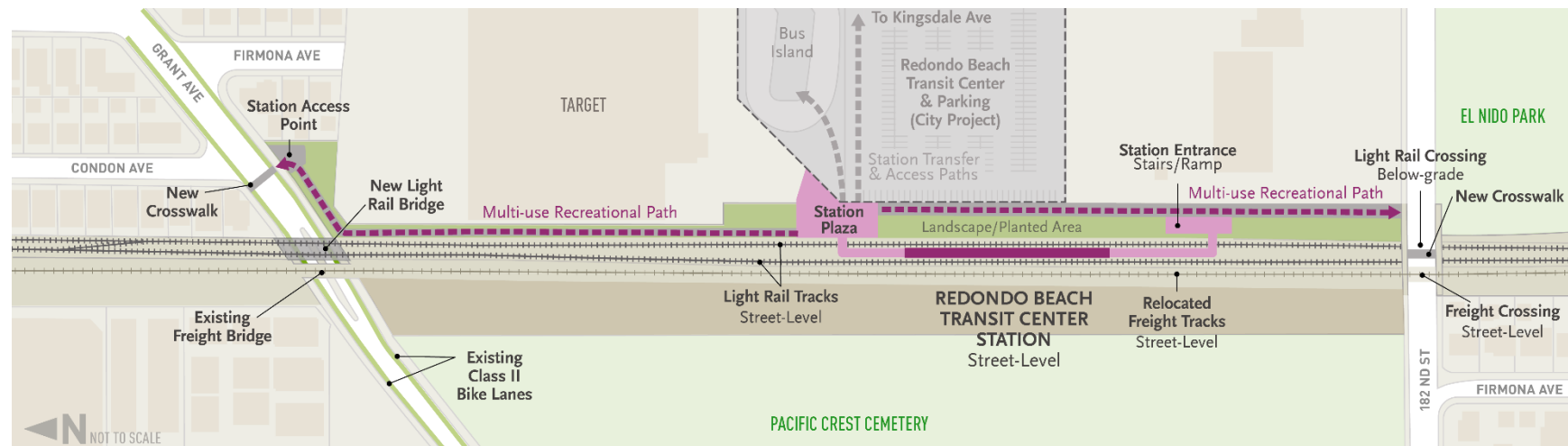
- > Redondo Beach TC Station: The one-level Redondo Beach TC Station, shown in Figure ES-5, would be located south of Grant Avenue, west of the City of Redondo Beach's transit center with the platform

located approximately 10 feet below the existing ground level. Light rail riders would connect to a station plaza via pedestrian pathways, ramps, and stairs to access the adjacent city's transit center. Access to the station would be enhanced with a multi-use path connecting the station between Grant Avenue and 182nd Street.

- > Torrance TC Station: The at-grade Torrance TC Station, shown in Figure ES-6, would be located northwest of Crenshaw Boulevard and west of the City of Torrance's bus transit center. The light rail station would be accessible by pedestrian pathways and crosswalks from the Torrance TC bus plaza and parking areas. This would be the southern terminus station.

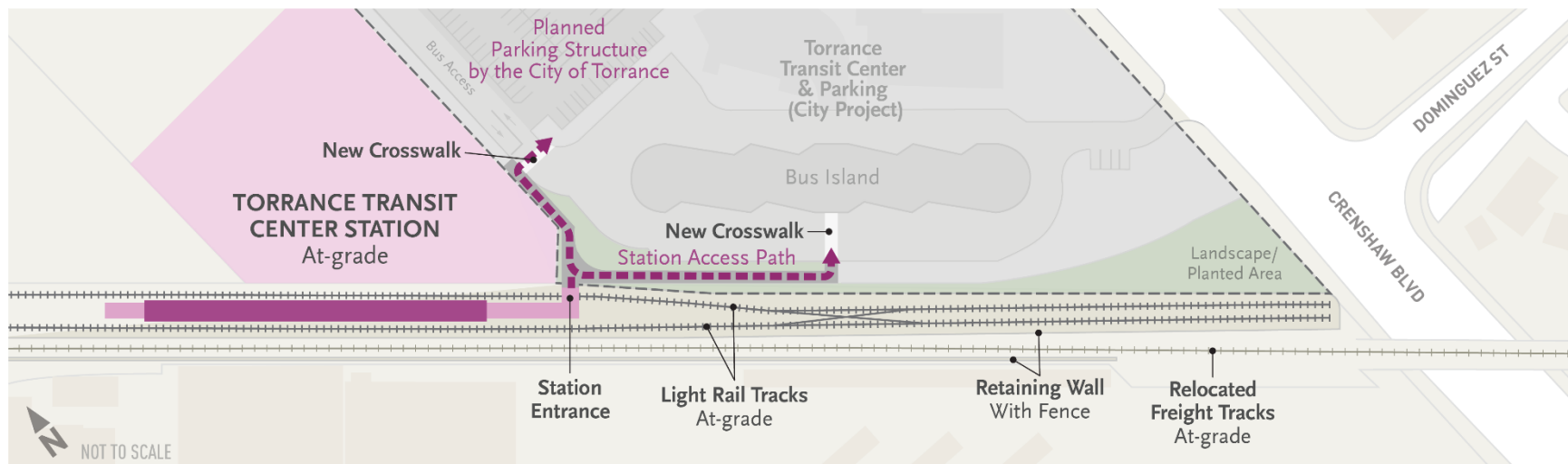
Detailed drawings of the LPA are provided in Appendix B, Select Advanced Conceptual Engineering Drawings - Locally Preferred Alternative, of this Final EIR. An overview of the LPA is shown in Figure ES-7.

Figure ES-5. Locally Preferred Alternative – Redondo Beach TC Station Layout



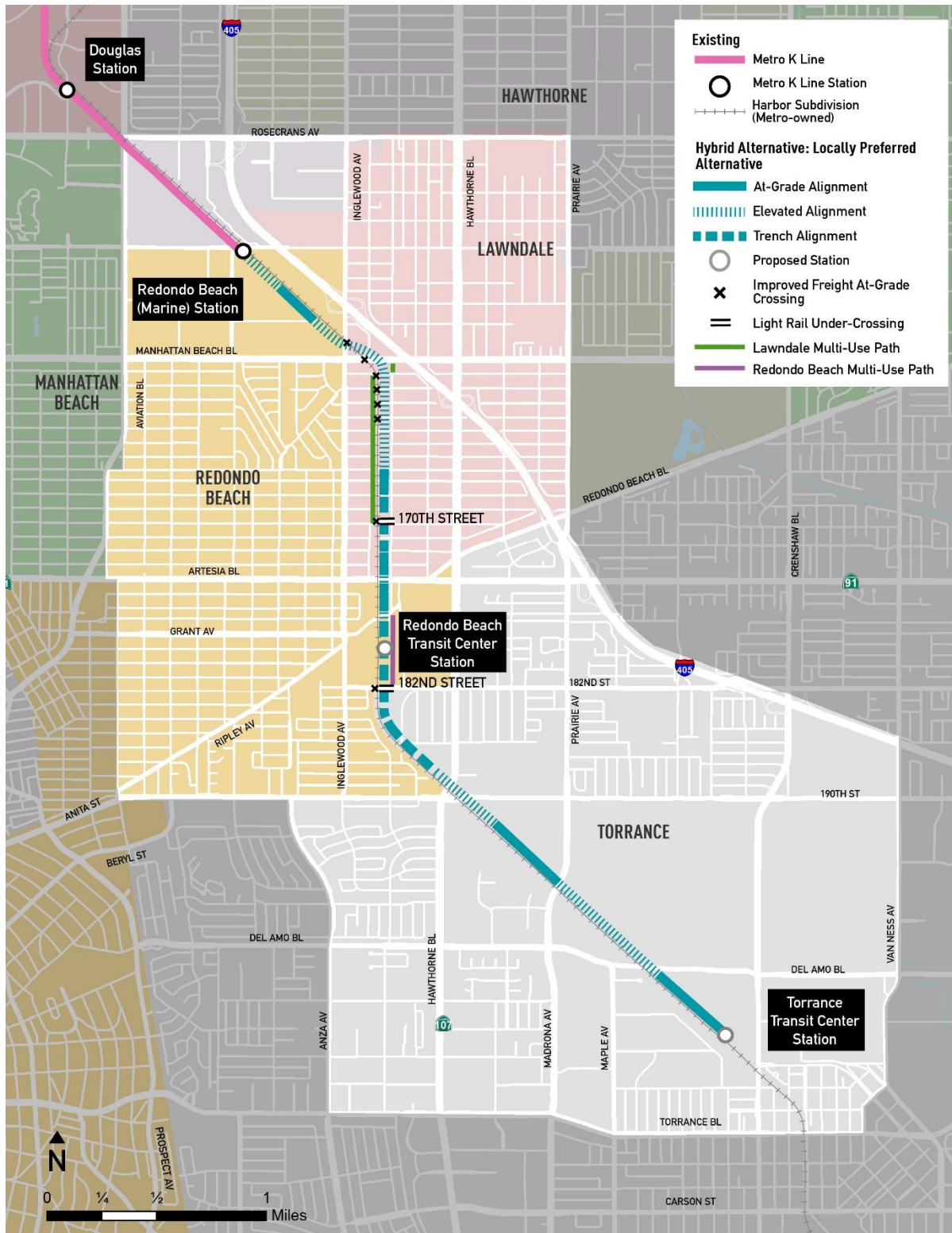
Source: Cityworks Design, 2025
Not to scale

Figure ES-6. Locally Preferred Alternative – Torrance TC Station Layout



Source: Cityworks Design, 2025
Not to scale

Figure ES-7. Locally Preferred Alternative – Overview



Source: STV, 2025

ES.2-4 System Components and Ancillary Facilities

The light rail system components would adhere to the Metro Rail Design Criteria and would use a similar design as used on existing Metro light rail lines. The LPA would require an overhead contact system (OCS), traction power substations (TPSS), and communications and signaling buildings. The OCS poles would be located every 90 to 170 feet apart, and in some locations, the poles would be located on both sides of the track. The TPSSs would be spaced approximately one mile apart along the alignment and require 4,800 square feet of land. Six TPSSs would be needed for the LPA. Communications and signaling buildings would contain train control and communications equipment, which would require approximately 500 square feet and 100 square feet, respectively.

An additional five light rail vehicles would need to be added to Metro's fleet to operate the LPA. The light rail vehicles would be serviced, maintained, and stored at the existing Division 16 Southwestern Yard in the City of Los Angeles or the El Segundo Yard Division 22 in the City of Hawthorne.

ES.2-5 Construction, Operations, and Permit Requirements for the LPA

ES.2-5.1 Construction

The major construction activities include clearing and demolition of existing structures; utility relocations; embankment work; freight track at-grade street crossings; bridges and elevated structures; trenches; retaining walls; stations; railroad and light rail track; and systems construction.

Construction of the LPA is anticipated to last approximately six years, which is longer than the estimated timeframe in the Draft EIR for Elevated/At-Grade Alignment in order to construct two trenches at 170th Street and 182nd Street and shorter than the Trench Option, which has more extensive trenches. Construction activities would primarily occur during daytime hours on weekdays, although some night construction may be required at times to avoid congested freeways and surface streets or due to the nature of certain construction processes, such as the construction of freight tracks to avoid disruption to BNSF operations or the construction of bridges over major arterials. The construction equipment that would be used for the LPA is typical of that found engaged in contemporary highway, building, bridge, and utility work, plus some specialized railroad track and OCS construction equipment. All equipment would conform to current applicable safety and environmental regulations. Off-site construction staging locations would be for temporary use during construction for the laydown of tools, materials, equipment, and vehicles.

ES.2-5.2 Construction Staging and Acquisitions

Construction would be primarily staged within the Metro ROW. Metro has designed the project to avoid displacement of residents. North of 190th Street, the LPA would have limited permanent property acquisitions for non-residential properties to locate the TPSSs. South of 190th Street, the LPA would require partial permanent property acquisitions for non-residential properties along the Metro ROW to build the light rail tracks and accommodate multiple relocated or new freight tracks, storage tracks, spurs, and access roads. For any properties that may have existing contamination, Metro would conduct a Phase II site investigation and implement remediation as needed. Additional details are provided in Section 3.9, Hazards and Hazardous Materials, of the Draft EIR and in Chapter 4, Corrections and Additions, of this Final EIR. The LPA would also include potential off-site locations for temporary use during construction for the laydown of tools, materials, equipment, and vehicles, as well as temporary construction easements. Temporary easements, as well as permanent real estate needs, are identified

in Appendix B, Select Advanced Conceptual Engineering Drawings - Locally Preferred Alternative, of this Final EIR.

ES.2-5.3 Operations

The operating hours and schedules would be comparable to the other operating patterns of Metro's current rail lines. The proposed hours of operation are 4:00 a.m. to 1:00 a.m. On weekdays, trains would operate during early morning hours from 4:00 a.m. to 6:00 a.m. and late-night hours from 7:00 p.m. to 1:00 a.m. every 15 minutes. On weekdays, trains would operate every five minutes during peak travel hours, which are typically during the commuting periods. Weekend system headways would be reduced compared to weekdays due to reduced commuter demand.

ES.2-5.4 Project Features

As a part of the LPA, several project features would be implemented during construction or included in the project design plans to ensure compliance with applicable laws, guidelines, and agency guidelines. These project features include design elements, best management practices, and other measures that are either required by law, permit conditions, or approvals from federal, state, regional or local agencies or that reflect industry best practices in transit construction and operations. Unlike CEQA mitigation measures, which are adopted to reduce or avoid significant environmental impacts identified in the EIR, project features are incorporated into the project as standard components of its design and implementation. The project features are described further in each respective section within Chapter 3, as well as in Appendix 2-C, Project Features in the Draft EIR, and Chapter 4, Corrections and Additions, of this Final EIR.

ES.2-5.5 Required Permits and Approvals

Construction and implementation of the LPA would require permits and approvals from responsible agencies such as the City of Lawndale, City of Redondo Beach, and the City of Torrance, and other departments and owners with jurisdiction over protected resources. Metro will comply with all applicable federal, state, and local environmental regulations and will responsibly mitigate significant environmental impacts resulting from the LPA in accordance with Metro policies and applicable laws. The anticipated permits and approvals are listed in Table ES-1.

Table ES-1. Permits and Approvals

Agency/Jurisdiction		Permit/Approval Required
State	California Department of Transportation	Approvals for modifications to Caltrans lease agreement (Artesia Boulevard and Hawthorne Boulevard bridges)
	State Department of Toxic Substances Control	Hazardous materials cleanup
	State Water Resources Control Board	Construction General Permit and SWPPP
		NPDES Dewatering Permit
		LA County MS4 NPDES Package
	California Public Utilities Commission	Grade separations, crossings, state safety oversight
	California Department of Fish and Wildlife	Consultation on protected species
Regional	Metro Board	Certification of the Final EIR, adoption of CEQA Findings, a Statement of Overriding Considerations, and Mitigation Monitoring and Reporting Program, and approval of the project
	Regional Water Quality Control Board	Construction General Permit and SWPPP
	Southern California Edison	Permits for utility relocation
	LA County Department of Public Works	Permits for utility relocation
	LA County Fire Department	Discretionary actions
	BNSF Railroad	Approval of track relocations
Local	City of Lawndale City of Redondo Beach City of Torrance	Permits (traffic, street use, lighting, landscape, building demolition) ¹
	Redondo Beach Fire Department Torrance Fire Department	Discretionary actions

Caltrans = California Department of Transportation

¹Necessary permits from the cities of Lawndale, Redondo Beach, and Torrance include only those related to work within the cities' rights-of-way. Metro would not require local permits for activities within the Metro ROW.

ES.3 DESIGN REFINEMENTS

Following the action of the Metro Board and receipt and review of public comments on the Draft EIR, the conceptual engineering of the project has continued to progress. The following design refinements were made after circulation of the Draft EIR and include minor adjustments to the alignments, support structure design, construction staging areas, and optional locations for light rail support facilities. These refinements were made to enhance compliance with design or environmental requirements and to respond to comments received on the Draft EIR.

The design refinements are discussed further in Chapter 3, Design Refinements, which includes an evaluation of the refinements and determines that the refinements would *not* result in any new significant environmental impact or change the intensity of the impacts disclosed in the Draft EIR.

The design refinements apply to all rail alignments studied in the Draft EIR, unless otherwise noted, as shown in Table ES-2.

Table ES-2. Design Refinements since the Draft EIR Publication

ID	Location	City/ Jurisdiction	Reason for Refinement	Description of Refinement	Reference
1	Private Property: South of the Redondo Beach (Marine) Station, north of Santa Fe Avenue, west of Metro ROW	Redondo Beach	Based on further analysis of power needs and site access, an additional optional location for a Traction Power Substation (TPSS) was identified at the north end of the project. The new option would provide greater flexibility for maintenance operations and address potential challenges related to crane access at TPSS No. 1A.	The new TPSS option would be located on a parcel identified in the Draft EIR for permanent easement. The larger footprint required for the TPSS at this location could necessitate a larger partial acquisition or, if needed to accommodate all the elements of the project that impact the parcel, full acquisition of the property.	Appendix B, Select Advanced Conceptual Engineering Drawings - Locally Preferred Alternative, Page RW-302
2	Public Property: Manhattan Beach Boulevard crossing ¹	Lawndale	In response to comments from the Metropolitan Water District (MWD) on the Draft EIR regarding a potential utility conflict with a cast-in-drilled-hole (CIDH) pile proposed in the center of Manhattan Beach Boulevard—specifically, its location above a MWD water pipeline—an alternate support location for the elevated light rail structure is proposed at this location.	The refined design for the elevated light rail structure would eliminate the CIDH pile within Manhattan Beach Boulevard and shift the proposed straddle bents—located within the Metro ROW—to the north and south of the boulevard. This change would avoid any potential conflict with the underground MWD pipeline, allowing it to remain in place during both project construction and operation.	Appendix B, Select Advanced Conceptual Engineering Drawings - Locally Preferred Alternative, Page TC-302 and RW- 304
3	Private Properties: Between 190th Street and south of Del Amo Boulevard	Torrance	Based on coordination with BNSF regarding the proposed freight track realignment, the design was refined to include a maintenance access path to serve the relocated freight tracks.	South of 190th Street, the railroad corridor would be widened by approximately five feet beyond what was included in the Draft EIR, to the southwest of the Metro ROW, to accommodate a maintenance access path for the freight tracks. This refinement would increase the area of partial acquisitions from industrial properties.	Appendix B, Select Advanced Conceptual Engineering Drawings - Locally Preferred Alternative, Page RW-313 through RW-318, T-314 through T-318

ID	Location	City/ Jurisdiction	Reason for Refinement	Description of Refinement	Reference
4	Private Properties: North of Prairie Avenue, west of Metro ROW	Torrance	More detailed modeling of power demand for light rail operations indicated that minimum traction power voltage requirements may not be met with TPSS No. 5A, located near the Prairie Avenue overcrossing. To ensure adequate system performance, the design was refined to identify an alternate location (TPSS No. 5B) farther south, adjacent to the Del Amo Boulevard bridge.	TPSS No. 5B would be located to the north side of the Del Amo Boulevard bridge, on a parcel previously identified for acquisition as part of the project.	Appendix B, Select Advanced Conceptual Engineering Drawings - Locally Preferred Alternative, Page RW-318
5	Private Properties: Parcels (APN: 7352- 015-005, 7352-015- 006, and 7352-015-004) between Prairie Avenue and Del Amo Boulevard	Torrance	In response to comments from both Torrance Refining Company (TORC) and Torrance Logistics Company (TLC), the project design was refined to minimize the partial acquisition of the TORC property. This refinement addresses safety, security, and property concerns related to the TORC facility operations and compliance with applicable regulations.	Between north of Prairie Avenue and Del Amo Boulevard, the project footprint (including freight, light rail, and access roads) has shifted westward to avoid the TORC parcel. As a result, a larger partial acquisition would be required from the adjacent vacant parcel west of the rail corridor. This shift would also require additional modifications to the existing Prairie Avenue and Del Amo Boulevard bridges. At Prairie Avenue, a new box tunnel would be constructed to allow a realigned freight track and access road to pass beneath the roadway. At Del Amo Boulevard, the area beneath the bridge would be widened on the west to accommodate light rail and realigned freight and to provide sufficient clearance.	Appendix B, Select Advanced Conceptual Engineering Drawings - Locally Preferred Alternative, Page RW-315 through RW-318

ID	Location	City/ Jurisdiction	Reason for Refinement	Description of Refinement	Reference
6	City Property: City of Torrance Transit Center (APN: 7352-002-912)	Torrance	In response to comments from the City of Torrance, an alternative construction staging location has been identified, which would avoid potential conflicts with the City of Torrance’s proposed parking garage.	An alternate construction staging site has been identified on a parcel (APN: 7352-002-911) adjacent to the Torrance Transit Center on Crenshaw Boulevard. This adjustment would allow construction staging to proceed without interfering with the City of Torrance’s planned parking garage development.	Chapter 2, Description of the Locally Preferred Alternative, Page 2-36
7	City Property: Torrance Transit Center Station Path	Torrance	In response to comments from the City of Torrance, the design was refined to address pedestrian safety and security concerns related to a segment of the proposed path connecting Crenshaw Boulevard to the Torrance Transit Center Station area. Specifically, the City raised concerns that the path could encourage pedestrians to cross Crenshaw Boulevard outside of signalized intersections.	The proposed path would provide pedestrian access from the light rail platform to the proposed bus plaza within the Torrance Transit Center. The segment of the proposed path that would have extended from the bus plaza to Crenshaw Boulevard has been removed from the design.	Appendix B, Select Advanced Conceptual Engineering Drawings - Locally Preferred Alternative, Page T-321

Source: STV, 2025

¹This refinement only applies to the Elevated/At-Grade Alignment and LPA.

APN = Assessor’s Parcel Number; BNSF= BNSF Railway; CIDH= cast-in-drilled-hole; MWD = Metropolitan Water District; ROW = right-of-way; TLC = Torrance Logistics Company; TORC = Torrance Refining Company; TPSS = Traction power substation

ES.4 CORRECTIONS AND ADDITIONS

This Final EIR includes the corrections and additions to the Draft EIR, specifically addressing subject matter presented in the Draft EIR that has been corrected or added. Pursuant to Public Resources Code Section 21092.1 and CEQA Guidelines Section 15088.5, these changes do not constitute “significant new information” that would require recirculation of the Draft EIR. These revisions do not disclose a new significant and unavoidable environmental impact, a substantial increase in the severity of an impact, or identify a new feasible mitigation measure or alternative considerably different from those provided in the Draft EIR, which would considerably lessen a significant impact, but that Metro has declined to implement. Rather, the EIR’s corrections and additions clarify, amplify, or make insignificant modifications to the Draft EIR.

ES.5 RESPONSE TO COMMENTS ON THE DRAFT EIR

The Final EIR includes responses to all comments made on the Draft EIR during the comment period described in Section ES.2. Written responses to comments are included in Chapter 5 of this Final EIR, and copies of emails, letters, comment cards, voicemails, and transcribed spoken comments are included in Appendix C of this Final EIR. The responses to comments are organized by commenters: agencies, organizations, groups and businesses, public hearings, and individuals. Several topics were mentioned frequently by commenters. To address these efficiently and consistently, and to ensure accuracy, major topic responses (MR) were developed for the following topics and are included in Section 5.2 of this Final EIR:

- > MR-1: Selection of Alternatives
- > MR-2: Operational Noise Analysis Methodology and Impact Thresholds
- > MR-3: Operational Noise Project Features and Mitigation Measures
- > MR-4: Potential Negative Health Effects Related to Noise, Vibration, and Air Quality
- > MR-5: Vibration Impact Types and Impact Thresholds
- > MR-6: Vibration Analysis During Final Design
- > MR-7: Utility Relocation and Hazardous Materials Safety
- > MR-8: Light Rail and Freight Train Safety
- > MR-9: Light Rail Security
- > MR-10: Changes to Community Character
- > MR-11: Traffic Delay and Level-of-Service
- > MR-12: Emergency Access
- > MR-13: Soil Stability and Sinkholes
- > MR-14: Property Values and Impacts to Businesses
- > MR-15: Metro Ridership Forecasting Methodology
- > MR-16: Response to Lawndale and Redondo Beach Community Letter
- > MR-17: Response to Torrance Community Letter
- > MR-18: Homelessness
- > MR-19: Project Benefits
- > MR-20: Proximity Impacts of Relocated Freight Tracks
- > MR-21: Cost Estimates and Schedule

ES.6 ALTERNATIVES CONSIDERED IN THE DRAFT EIR

CEQA requires that a range of reasonable project alternatives are considered that could meet most of the basic project objectives and substantially reduce or eliminate significant impacts associated with the project. CEQA Guidelines Section 15126.6(a) states, in part:

“An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation.”

- > No Project Alternative – The No Project Alternative is required by CEQA Guidelines Section 15126.6(e) and assumes that Metro would not implement the project. The No Project Alternative is evaluated in the context of the existing transportation facilities in the Project Area and other capital transportation improvements and/or transit and highway operational enhancements that are reasonably foreseeable.
- > High Frequency Bus Alternative – The HFB Alternative would implement a rapid bus service instead of a light rail extension.
- > 170th/182nd Grade-Separated Light Rail Transit Alternative – As discussed previously, this alternative was selected as the LPA by the Metro Board.

ES.7 ENVIRONMENTAL IMPACT ANALYSIS

The Draft EIR identifies potential environmental impacts due to the construction and operation of the Options and Alternatives and analyzes any significant impacts and implementation of feasible mitigation measures. Project features are incorporated as part of the project and consist of design features, best management practices, or other measures required by law and/or permit approvals that avoid or minimize potential effects. Mitigation measures are additional actions, not otherwise part of the project, that are designed to avoid, minimize, or compensate for significant impacts.

Table ES-3 below provides a high-level overview of the topic areas where environmental impacts have been identified for the LPA in the Draft EIR and this Final EIR.

Table ES-3. Summary of Environmental Impacts for the Locally Preferred Alternative

Level of Impact	Environmental Topic Areas
No Impact/Less than Significant Impact	Transportation During Construction & Operation Aesthetics During Operation Air Quality During Construction & Operation Land Use and Planning During Construction & Operation Greenhouse Gas Emissions During Construction & Operation Hazards and Hazardous Materials During Construction & Operation Geology, Soils, and Paleontological Resources During Operation Hydrology and Water Quality During Construction & Operation Utilities and Service Systems During Construction & Operation Energy During Construction & Operation Cultural Resources During Operation Tribal Cultural Resources During Operation Public Services During Construction & Operation
Less than Significant Impact with Mitigation	Aesthetics During Construction Noise and Vibration During Operation Biological Resources During Construction & Operations Geology, Soils, and Paleontological Resources During Construction Cultural Resources During Construction Tribal Cultural Resources During Construction
Significant and Unavoidable Impact	Noise and Vibration During Construction

ES.8 SIGNIFICANT AND UNAVOIDABLE IMPACTS

CEQA Guidelines under Section 15216(b) require EIRs to include a discussion of any significant environmental impacts that cannot be avoided if the project is implemented. The Draft EIR identifies environmental resources with significant and unavoidable impacts and presents feasible mitigation measures to reduce impacts to a less than significant level. If a specific impact cannot be reduced to a less than significant level, it is considered a significant and unavoidable impact. As concluded in the Draft and Final EIR and shown in Table ES-3, the following impacts would be significant and unavoidable, even after implementation of mitigation measures:

- > Air Quality (construction – Trench Option only)
- > Noise (construction – all alignments; operation – Elevated/At-Grade Alignment only)
- > Vibration (construction – all alignments)

ES.8-1 Environmentally Superior Alternative

CEQA Guidelines Section 15126.6 requires that an “environmentally superior” alternative be identified. The environmentally superior alternative is the alternative that would be expected to generate the fewest adverse impacts. If the environmentally superior alternative is the No Project alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.

As discussed in the Draft EIR Table ES-4, the No Project Alternative would avoid many of the construction impacts identified for the light rail project, but it would have significant and unavoidable impacts during operation related to transportation, land use and planning, air quality, greenhouse gas emissions, and energy as it would conflict with plans and programs that assumed the project would be

built. The HFB Alternative would reduce all construction and operational impacts identified for a light rail project. Therefore, the HFB Alternative is the environmentally superior alternative as it would avoid or reduce all impacts to a less than significant level. However, the HFB Alternative would not realize the same level of benefits from vehicle miles traveled reduction, air quality improvements, greenhouse gas emissions reduction, and energy savings as the light rail alignments.

ES.9 SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Table ES-4 summarizes the impacts of all alignments and project alternatives considered in the EIR process. Table ES-5 through Table ES-19 identify the environmental impacts, mitigation measures, and level of significance after mitigation, if applicable. Detailed analyses of these topics are provided in Chapter 3, Environmental Impacts, of the Draft EIR, with corrections, additions, and clarifications to the Draft EIR analysis provided in Chapter 4, Corrections and Additions, of this Final EIR.

Table ES-4. Summary of Alternatives' Environmental Impacts

		Elevated/At-Grade Alignment	Trench Option	Hawthorne Option	No Project Alternative	HFB Alternative	LPA
Transportation	Construction	LTS	LTS	LTS	LTS	LTS	LTS
	Operation	LTS	LTS	LTS	SUI	LTS	LTS
Land Use and Planning	Construction	LTS	LTS	LTSM	LTS	LTS	LTS
	Operation	LTS	LTS	LTS	SUI	LTS	LTS
Aesthetics	Construction	LTSM	LTSM	LTSM	LTS	LTS	LTSM
	Operation	LTS	LTS	LTS	LTS	LTS	LTS
Air Quality	Construction	LTS	SUI	LTS	LTS	LTS	LTS
	Operation	LTS	LTS	LTS	SUI	LTS	LTS
Greenhouse Gas Emissions	Construction	LTS	LTS	LTS	LTS	LTS	LTS
	Operation	LTS	LTS	LTS	SUI	LTS	LTS
Noise	Construction	SUI	SUI	SUI	LTS	LTS	SUI
	Operation	SUI	SUI/LTSM ¹	LTS	LTS	LTS	SUI/LTSM ¹
Vibration	Construction	SUI	SUI	SUI	LTS	LTS	SUI
	Operation	LTSM	LTSM	LTSM	LTS	LTS	LTSM
Biological Resources	Construction	LTSM	LTSM	LTSM	LTS	LTS	LTSM
	Operation	LTSM	LTSM	LTSM	LTS	LTS	LTSM
Geology, Soils, and Paleontological Resources	Construction	LTSM	LTSM	LTSM	LTS	LTS	LTSM
	Operation	LTS	LTS	LTS	LTS	LTS	LTS
Hazards and Hazardous Materials	Construction	LTS	LTS	LTS	LTS	LTS	LTS
	Operation	LTS	LTS	LTS	LTS	LTS	LTS

		Elevated/At-Grade Alignment	Trench Option	Hawthorne Option	No Project Alternative	HFB Alternative	LPA
Hydrology and Water Quality	Construction	LTS	LTS	LTS	LTS	LTS	LTS
	Operation	LTS	LTS	LTS	LTS	LTS	LTS
Utilities and Service Systems	Construction	LTS	LTS	LTS	LTS	LTS	LTS
	Operation	LTS	LTS	LTS	LTS	LTS	LTS
Energy	Construction	LTS	LTS	LTS	LTS	LTS	LTS
	Operation	LTS	LTS	LTS	SUI	LTS	LTS
Cultural Resources	Construction	LTSM	LTSM	LTSM	LTS	LTS	LTSM
	Operation	LTS	LTS	LTS	LTS	LTS	LTS
Tribal Cultural Resources	Construction	LTSM	LTSM	LTSM	LTS	LTS	LTSM
	Operation	LTS	LTS	LTS	LTS	LTS	LTS
Public Services	Construction	LTS	LTS	LTS	LTS	LTS	LTS
	Operation	LTS	LTS	LTS	LTS	LTS	LTS

¹ With the establishment of quiet zones by the Cities of Lawndale, Redondo Beach, and Torrance (MM-NOI-4), the Trench Option and LPA would have a less than significant impact with mitigation for operational noise.

HFB = High Frequency Bus; LPA = Locally Preferred Alternative; LTS = Less than significant; LTSM = Less than significant with mitigation; SUI = Significant and unavoidable impact

Table ES-5. Summary of Transportation Impacts Evaluation

Environmental Impact	Alignment	Impact Before Mitigation	Proposed Mitigation Measures	Impact After Mitigation
Transportation				
A. Will the Project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	LPA	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Elevated/At-Grade Alignment	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Trench Option	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Hawthorne Option	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
B. Will the Project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	LPA	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Elevated/At-Grade Alignment	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Trench Option	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Hawthorne Option	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
C. Will the Project substantially increase hazards due to a geometric design feature or incompatible uses?	LPA	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Elevated/At-Grade Alignment	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Trench Option	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Hawthorne Option	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant

Environmental Impact	Alignment	Impact Before Mitigation	Proposed Mitigation Measures	Impact After Mitigation
Transportation				
D. Will the Project result in inadequate emergency access?	LPA	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Elevated/At-Grade Alignment	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Trench Option	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Hawthorne Option	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant

Table ES-6. Summary of Land Use Impacts Evaluation

Environmental Impact	Alignment	Impact Before Mitigation	Proposed Mitigation Measures	Impact After Mitigation
Land Use				
A. Would the Project physically divide an established community?	LPA	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Elevated/At-Grade Alignment	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Trench Option	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Hawthorne Option	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
B. Would the Project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	LPA	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Elevated/At-Grade Alignment	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Trench Option	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Hawthorne Option	Construction: Significant Operations: Less than Significant	Construction: MM-LU-1: Temporary Crossings	Construction: Less than Significant Operations: Less than Significant

Table ES-7. Summary of Visual and Aesthetics Impacts Evaluation

Environmental Impact	Alignment	Impact Before Mitigation	Proposed Mitigation Measures	Impact After Mitigation
Visual & Aesthetics				
A. Would the Project have a substantial effect on a scenic vista?	LPA	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Elevated/At-Grade Alignment	Construction: No Impact Operations: No Impact	None	Construction: No Impact Operations: No Impact
	Trench Option	Construction: No Impact Operations: No Impact	None	Construction: No Impact Operations: No Impact
	Hawthorne Option	Construction: No Impact Operations: No Impact	None	Construction: No Impact Operations: No Impact
B. Would the Project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	LPA	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Elevated/At-Grade Alignment	Construction: No Impact Operations: No Impact	None	Construction: No Impact Operations: No Impact
	Trench Option	Construction: No Impact Operations: No Impact	None	Construction: No Impact Operations: No Impact
	Hawthorne Option	Construction: No Impact Operations: No Impact	None	Construction: No Impact Operations: No Impact

Environmental Impact	Alignment	Impact Before Mitigation	Proposed Mitigation Measures	Impact After Mitigation
Visual & Aesthetics				
C. In non-urbanized areas, would the Project substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point such as a sidewalk). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	LPA	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Elevated/At-Grade Alignment	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Trench Option	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Hawthorne Option	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
D. Would the Project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	LPA	Construction: Significant Operations: Less than Significant	Construction: MM-AES-1: Construction Lighting	Construction: Less than Significant Operations: Less than Significant
	Elevated/At-Grade Alignment	Construction: Significant Operations: Less than Significant	Construction: MM-AES-1: Construction Lighting	Construction: Less than Significant Operations: Less than Significant
	Trench Option	Construction: Significant Operations: Less than Significant	Construction: MM-AES-1: Construction Lighting	Construction: Less than Significant Operations: Less than Significant
	Hawthorne Option	Construction: Significant Operations: Less than Significant	Construction: MM-AES-1: Construction Lighting	Construction: Less than Significant Operations: Less than Significant

Table ES-8. Summary of Air Quality Impacts Evaluation

Environmental Impact	Alignment	Impact Before Mitigation	Proposed Mitigation Measures	Impact After Mitigation
Air Quality				
A. Would the Project conflict with or obstruct implementation of the applicable air quality plan?	LPA	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Elevated/At-Grade Alignment	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Trench Option	Construction: Significant Operations: Less than Significant	Construction: MM-AQ-1: Cleaner Haul Trucks	Construction: Significant and Unavoidable Operations: Less than Significant
	Hawthorne Option	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
B. Would the Project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	LPA	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Elevated/At-Grade Alignment	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Trench Option	Construction: Significant Operations: Less than Significant	Construction: MM-AQ-1: Cleaner Haul Trucks	Construction: Significant and Unavoidable Operations: Less than Significant
	Hawthorne Option	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
C. Would the Project expose sensitive receptors to substantial pollutant concentrations?	LPA	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Elevated/At-Grade Alignment	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Trench Option	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Hawthorne Option	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant

Environmental Impact	Alignment	Impact Before Mitigation	Proposed Mitigation Measures	Impact After Mitigation
Air Quality				
D. Would the Project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	LPA	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Elevated/At-Grade Alignment	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Trench Option	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Hawthorne Option	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant

Table ES-9. Summary of Greenhouse Gas Emissions Impacts Evaluation

Environmental Impact	Alignment	Impact Before Mitigation	Proposed Mitigation Measures	Impact After Mitigation
Greenhouse Gas Emissions				
A. Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	LPA	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Elevated/At-Grade Alignment	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Trench Option	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Hawthorne Option	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
B. Would the Project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	LPA	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Elevated/At-Grade Alignment	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Trench Option	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Hawthorne Option	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant

Table ES-10. Summary of Noise and Vibration Impacts Evaluation

Environmental Impact	Alignment	Impact Before Mitigation	Proposed Mitigation Measures	Impact After Mitigation
Noise and Vibration				
A. Would the Project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established by the FTA, in the local general plan or noise ordinance, or applicable standards of other agencies?	LPA	Construction: Significant Operations: Significant	Construction: MM-NOI-1: Noise Control Plan Operations: MM-NOI-2: Soundwalls MM-NOI-3: Low Impact Frogs MM-NOI-4: Quiet Zone Establishment	Construction: Significant and Unavoidable Operations: Less than Significant ¹
	Elevated/At-Grade Alignment	Construction: Significant Operations: Significant	Construction: MM-NOI-1: Noise Control Plan Operation: MM-NOI-2: Soundwalls MM-NOI-3: Low Impact Frogs MM-NOI-4: Quiet Zone Establishment	Construction: Significant and Unavoidable Operations: Significant and Unavoidable
	Trench Option	Construction: Significant Operations: Significant	Construction: MM-NOI-1: Noise Control Plan Operations: MM-NOI-2: Soundwalls MM-NOI-3: Low Impact Frogs MM-NOI-4: Quiet Zone Establishment	Construction: Significant and Unavoidable Operations: Less than Significant ¹

Environmental Impact	Alignment	Impact Before Mitigation	Proposed Mitigation Measures	Impact After Mitigation
Noise and Vibration				
	Hawthorne Option	Construction: Significant Operations: Significant	Construction: MM-NOI-1: Noise Control Plan Operations: MM-NOI-2: Soundwalls MM-NOI-3: Low Impact Frogs MM-NOI-5: Wheel Squeal Noise Monitoring	Construction: Significant and Unavoidable Operations: Less than Significant
B. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the project area to excessive noise levels?	LPA	Construction: No Impact Operations: No Impact	None	Construction: No Impact Operations: No Impact
	Elevated/At-Grade Alignment	Construction: No Impact Operations: No Impact	None	Construction: No Impact Operations: No Impact
	Trench Option	Construction: No Impact Operations: No Impact	None	Construction: No Impact Operations: No Impact
	Hawthorne Option	Construction: No Impact Operations: No Impact	None	Construction: No Impact Operations: No Impact

Environmental Impact	Alignment	Impact Before Mitigation	Proposed Mitigation Measures	Impact After Mitigation
Noise and Vibration				
C. Would the Project result in generation of excessive ground-borne vibration?	LPA	Construction: Significant Operations: Significant	Construction: MM-VIB-1: Vibration Control Plan MM-VIB-2: Construction Equipment Location Operations: MM-VIB-4: Low-Impact Frogs MM-VIB-5: Resilient Fasteners MM-VIB-6: Ballast Mats	Construction: Significant and Unavoidable Operations: Less than Significant
	Elevated/At-Grade Alignment	Construction: Significant Operations: Significant	Construction: MM-VIB-1: Vibration Control Plan MM-VIB-2: Construction Equipment Location MM-VIB-3: Pre- and Post-Construction Surveys Operations: MM-VIB-4: Low-Impact Frogs MM-VIB-5: Resilient Fasteners MM-VIB-6: Ballast Mats	Construction: Significant and Unavoidable Operations: Less than Significant

Environmental Impact	Alignment	Impact Before Mitigation	Proposed Mitigation Measures	Impact After Mitigation
Noise and Vibration				
	Trench Option	Construction: Significant Operations: Significant	Construction: MM-VIB-1: Vibration Control Plan MM-VIB-2: Construction Equipment Location Operations: MM-VIB-4: Low-Impact Frogs MM-VIB-5: Resilient Fasteners MM-VIB-6: Ballast Mats	Construction: Significant and Unavoidable Operations: Less than Significant
	Hawthorne Option	Construction: Significant Operations: Less than Significant	Construction: MM-VIB-1: Vibration Control Plan MM-VIB-2: Construction Equipment Location	Construction: Significant and Unavoidable Operations: Less than Significant

¹With the establishment of quiet zones by the Cities of Lawndale, Redondo Beach, and Torrance (MM-NOI-4), the Trench Option and LPA would have a less than significant impact with mitigation for operational noise.

Table ES-11. Summary of Biological Resources Impacts Evaluation

Environmental Impact	Alignment	Impact Before Mitigation	Proposed Mitigation Measures	Impact After Mitigation
Biological Resources				
A. Would the Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	LPA	Construction: Significant Operations: Significant	Construction: MM-BIO-1: General Protection Measures to Avoid and Minimize Impacts on Sensitive Biological Resources MM-BIO-2: Nesting Bird Season Restrictions and Pre-Construction Surveys MM-BIO-3: Roosting Bat Restrictions and Survey Requirements MM-BIO-4: Pre-construction Rare Plant Survey Operations: MM-BIO-1: General Protection Measures to Avoid and Minimize Impacts on Sensitive Biological Resources MM-BIO-5: Off-site Mitigation for Southern Tarplant Habitat	Construction: Less than Significant Operations: Less than Significant

Environmental Impact	Alignment	Impact Before Mitigation	Proposed Mitigation Measures	Impact After Mitigation
Biological Resources				
A. Would the Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	Elevated/At-Grade Alignment	Construction: Significant Operations: Significant	Construction: MM-BIO-1: General Protection Measures to Avoid and Minimize Impacts on Sensitive Biological Resources MM-BIO-2: Nesting Bird Season Restrictions and Pre-Construction Surveys MM-BIO-3: Roosting Bat Restrictions and Survey Requirements MM-BIO-4: Pre-construction Rare Plant Survey Operations: MM-BIO-1: General Protection Measures to Avoid and Minimize Impacts on Sensitive Biological Resources MM-BIO-5: Off-site Mitigation for Southern Tarplant Habitat	Construction: Less than Significant Operations: Less than Significant

Environmental Impact	Alignment	Impact Before Mitigation	Proposed Mitigation Measures	Impact After Mitigation
Biological Resources				
A. Would the Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	Trench Option	Construction: Significant Operations: Significant	Construction: MM-BIO-1: General Protection Measures to Avoid and Minimize Impacts on Sensitive Biological Resources MM-BIO-2: Nesting Bird Season Restrictions and Pre-Construction Surveys MM-BIO-3: Roosting Bat Restrictions and Survey Requirements MM-BIO-4: Pre-construction Rare Plant Survey Operations: MM-BIO-1: General Protection Measures to Avoid and Minimize Impacts on Sensitive Biological Resources MM-BIO-5: Off-site Mitigation for Southern Tarplant Habitat	Construction: Less than Significant Operations: Less than Significant
	Hawthorne Option	Construction: Significant Operations: Significant	Construction: MM-BIO-1: General Protection Measures to Avoid and Minimize Impacts on Sensitive Biological Resources	Construction: Less than Significant Operations: Less than Significant

Environmental Impact	Alignment	Impact Before Mitigation	Proposed Mitigation Measures	Impact After Mitigation
Biological Resources				
			MM-BIO-2: Nesting Bird Season Restrictions and Pre-Construction Surveys MM-BIO-3: Roosting Bat Restrictions and Survey Requirements MM-BIO-4: Pre-construction Rare Plant Survey Operations: MM-BIO-1: General Protection Measures to Avoid and Minimize Impacts on Sensitive Biological Resources MM-BIO-5: Off-site Mitigation for Southern Tarplant Habitat	
B. Would the Project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	LPA	Construction: No Impact Operations: No Impact	None	Construction: No Impact Operations: No Impact
	Elevated/At-Grade Alignment	Construction: No Impact Operations: No Impact	None	Construction: No Impact Operations: No Impact
	Trench Option	Construction: No Impact Operations: No Impact	None	Construction: No Impact Operations: No Impact
	Hawthorne Option	Construction: No Impact Operations: No Impact	None	Construction: No Impact Operations: No Impact

Environmental Impact	Alignment	Impact Before Mitigation	Proposed Mitigation Measures	Impact After Mitigation
Biological Resources				
C. Would the Proposed Project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	LPA	Construction: No Impact Operations: No Impact	None	Construction: No Impact Operations: No Impact
	Elevated/At-Grade Alignment	Construction: No Impact Operations: No Impact	None	Construction: No Impact Operations: No Impact
	Trench Option	Construction: No Impact Operations: No Impact	None	Construction: No Impact Operations: No Impact
	Hawthorne Option	Construction: No Impact Operations: No Impact	None	Construction: No Impact Operations: No Impact
D. Would the Project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	LPA	Construction: No Impact Operations: No Impact	None	Construction: No Impact Operations: No Impact
	Elevated/At-Grade Alignment	Construction: No Impact Operations: No Impact	None	Construction: No Impact Operations: No Impact
	Trench Option	Construction: No Impact Operations: No Impact	None	Construction: No Impact Operations: No Impact
	Hawthorne Option	Construction: No Impact Operations: No Impact	None	Construction: No Impact Operations: No Impact

Environmental Impact	Alignment	Impact Before Mitigation	Proposed Mitigation Measures	Impact After Mitigation
Biological Resources				
E. Would the Project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	LPA	Construction: Significant Operations: Significant	Construction: MM-BIO-1: General Protection Measures to Avoid and Minimize Impacts on Sensitive Biological Resources MM-BIO-5: Off-site Mitigation for Southern Tarplant Habitat Operations: MM-BIO-1: General Protection Measures to Avoid and Minimize Impacts on Sensitive Biological Resources MM-BIO-5: Off-site Mitigation for Southern Tarplant Habitat	Construction: Less than Significant Operations: Less than Significant
	Elevated/At-Grade Alignment	Construction: Significant Operations: Significant	Construction: MM-BIO-1: General Protection Measures to Avoid and Minimize Impacts on Sensitive Biological Resources MM-BIO-5: Off-site Mitigation for Southern Tarplant Habitat	Construction: Less than Significant Operations: Less than Significant

Environmental Impact	Alignment	Impact Before Mitigation	Proposed Mitigation Measures	Impact After Mitigation
Biological Resources				
			Operations: MM-BIO-1: General Protection Measures to Avoid and Minimize Impacts on Sensitive Biological Resources MM-BIO-5: Off-site Mitigation for Southern Tarplant Habitat	
	Trench Option	Construction: Significant Operations: Significant	Construction: MM-BIO-1: General Protection Measures to Avoid and Minimize Impacts on Sensitive Biological Resources MM-BIO-5: Off-site Mitigation for Southern Tarplant Habitat Operations: MM-BIO-1: General Protection Measures to Avoid and Minimize Impacts on Sensitive Biological Resources MM-BIO-5: Off-site Mitigation for Southern Tarplant Habitat	Construction: Less than Significant Operations: Less than Significant

Environmental Impact	Alignment	Impact Before Mitigation	Proposed Mitigation Measures	Impact After Mitigation
Biological Resources				
	Hawthorne Option	Construction: Significant Operations: Significant	Construction: MM-BIO-1: General Protection Measures to Avoid and Minimize Impacts on Sensitive Biological Resources MM-BIO-5: Off-site Mitigation for Southern Tarplant Habitat Operations: MM-BIO-1: General Protection Measures to Avoid and Minimize Impacts on Sensitive Biological Resources MM-BIO-5: Off-site Mitigation for Southern Tarplant Habitat	Construction: Less than Significant Operations: Less than Significant
F. Would the Project conflict with the provisions of an adopted HCP, Natural Community Conservation Plan (NCCP), or other approved local, regional, or state HCP?	LPA	Construction: No Impact Operations: No Impact	None	Construction: No Impact Operations: No Impact
	Elevated/At-Grade Alignment	Construction: No Impact Operations: No Impact	None	Construction: No Impact Operations: No Impact
	Trench Option	Construction: No Impact Operations: No Impact	None	Construction: No Impact Operations: No Impact
	Hawthorne Option	Construction: No Impact Operations: No Impact	None	Construction: No Impact Operations: No Impact

Table ES-12. Summary of Geology, Soils, and Paleontological Resources Impacts Evaluation

Environmental Impact	Alignment	Impact Before Mitigation	Proposed Mitigation Measures	Impact After Mitigation
Geology, Soils, and Paleontological Resources				
A. Would the Project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo (AP) Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? ii. Strong seismic ground shaking iii. Seismic-related ground failure, including liquefaction iv. Landslides	LPA	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Elevated/At-Grade Alignment	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Trench Option	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Hawthorne Option	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
B. Would the Project result in substantial soil erosion or the loss of topsoil?	LPA	Construction: Less than Significant Operations: No Impact	None	Construction: Less than Significant Operations: No Impact
	Elevated/At-Grade Alignment	Construction: Less than Significant Operations: No Impact	None	Construction: Less than Significant Operations: No Impact

Environmental Impact	Alignment	Impact Before Mitigation	Proposed Mitigation Measures	Impact After Mitigation
Geology, Soils, and Paleontological Resources				
	Trench Option	Construction: Less than Significant Operations: No Impact	None	Construction: Less than Significant Operations: No Impact
	Hawthorne Option	Construction: Less than Significant Operations: No Impact	None	Construction: Less than Significant Operations: No Impact
C. Would the Project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	LPA	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Elevated/At-Grade Alignment	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Trench Option	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Hawthorne Option	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
D. Would the Project be located on expansive soil, as defined in Section 1803.5.3 of the California Building Code, creating substantial direct or indirect risks to life or property?	LPA	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Elevated/At-Grade Alignment	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Trench Option	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Hawthorne Option	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant

Environmental Impact	Alignment	Impact Before Mitigation	Proposed Mitigation Measures	Impact After Mitigation
Geology, Soils, and Paleontological Resources				
E. Would the Project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	LPA	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Elevated/At-Grade Alignment	Construction: No Impact Operations: No Impact	None	Construction: No Impact Operations: No Impact
	Trench Option	Construction: No Impact Operations: No Impact	None	Construction: No Impact Operations: No Impact
	Hawthorne Option	Construction: No Impact Operations: No Impact	None	Construction: No Impact Operations: No Impact
F. Would the Project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	LPA	Construction: Significant Operations: No Impact	Construction: MM-GEO-1: Engage a Qualified Paleontological Resources Specialist	Construction: Less than Significant Operations: No Impact
	Elevated/At-Grade Alignment	Construction: Significant Operations: No Impact	Construction: MM-GEO-1: Engage a Qualified Paleontological Resources Specialist	Construction: Less than Significant Operations: No Impact
	Trench Option	Construction: Significant Operations: No Impact	Construction: MM-GEO-1: Engage a Qualified Paleontological Resources Specialist	Construction: Less than Significant Operations: No Impact
	Hawthorne Option	Construction: Significant Operations: No Impact	Construction: MM-GEO-1: Engage a Qualified Paleontological Resources Specialist	Construction: Less than Significant Operations: No Impact

Table ES-13. Summary of Hazards and Hazardous Materials Impacts Evaluation

Environmental Impact	Alignment	Impact Before Mitigation	Proposed Mitigation Measures	Impact After Mitigation
Hazards and Hazardous Materials				
A. Would the Project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	LPA	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Elevated/At-Grade Alignment	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Trench Option	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Hawthorne Option	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
B. Would the Project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	LPA	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Elevated/At-Grade Alignment	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Trench Option	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Hawthorne Option	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
C. Would the Project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	LPA	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Elevated/At-Grade Alignment	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Trench Option	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Hawthorne Option	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant

Environmental Impact	Alignment	Impact Before Mitigation	Proposed Mitigation Measures	Impact After Mitigation
Hazards and Hazardous Materials				
D. Would the Project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	LPA	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Elevated/At-Grade Alignment	Construction: Less than Significant Operations: No Impact	None	Construction: Less than Significant Operations: No Impact
	Trench Option	Construction: Less than Significant Operations: No Impact	None	Construction: Less than Significant Operations: No Impact
	Hawthorne Option	Construction: Less than Significant Operations: No Impact	None	Construction: Less than Significant Operations: No Impact
E. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project result in a safety hazard or excessive noise for people residing or working in the Project Area?	LPA	Construction: No Impact Operations: No Impact	None	Construction: No Impact Operations: No Impact
	Elevated/At-Grade Alignment	Construction: No Impact Operations: No Impact	None	Construction: No Impact Operations: No Impact
	Trench Option	Construction: No Impact Operations: No Impact	None	Construction: No Impact Operations: No Impact
	Hawthorne Option	Construction: No Impact Operations: No Impact	None	Construction: No Impact Operations: No Impact
F. For a project located within the vicinity of a private airstrip, as a result, create a safety hazard for people residing or working in the project area.	LPA	Construction: No Impact Operations: No Impact	None	Construction: No Impact Operations: No Impact
	Elevated/At-Grade Alignment	Construction: No Impact Operations: No Impact	None	Construction: No Impact Operations: No Impact
	Trench Option	Construction: No Impact Operations: No Impact	None	Construction: No Impact Operations: No Impact
	Hawthorne Option	Construction: No Impact Operations: No Impact	None	Construction: No Impact Operations: No Impact

Environmental Impact	Alignment	Impact Before Mitigation	Proposed Mitigation Measures	Impact After Mitigation
Hazards and Hazardous Materials				
G. Would the Project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	LPA	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Elevated/At-Grade Alignment	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Trench Option	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Hawthorne Option	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
H. Would the Project expose people or structures to a significant risk of loss, injury or death involving wildfires, including where wildland fires are adjacent to urbanized areas or where residences are intermixed with wildlands?	LPA	Construction: No Impact Operations: No Impact	None	Construction: No Impact Operations: No Impact
	Elevated/At-Grade Alignment	Construction: No Impact Operations: No Impact	None	Construction: No Impact Operations: No Impact
	Trench Option	Construction: No Impact Operations: No Impact	None	Construction: No Impact Operations: No Impact
	Hawthorne Option	Construction: No Impact Operations: No Impact	None	Construction: No Impact Operations: No Impact

Table ES-14. Summary of Hydrology and Water Quality Impacts Evaluation

Environmental Impact	Alignment	Impact Before Mitigation	Proposed Mitigation Measures	Impact After Mitigation
Hydrology and Water Quality				
A. Would the Project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	LPA	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Elevated/At-Grade Alignment	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Trench Option	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Hawthorne Option	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
B. Would the Project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	LPA	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Elevated/At-Grade Alignment	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Trench Option	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Hawthorne Option	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
C. Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces?	LPA	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Elevated/At-Grade Alignment	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Trench Option	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Hawthorne Option	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant

Environmental Impact	Alignment	Impact Before Mitigation	Proposed Mitigation Measures	Impact After Mitigation
Hydrology and Water Quality				
D. Would the Project, in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	LPA	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Elevated/At-Grade Alignment	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Trench Option	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Hawthorne Option	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
E. Would the Project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	LPA	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Elevated/At-Grade Alignment	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Trench Option	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Hawthorne Option	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant

Table ES-15. Summary of Utilities and Service Systems Impacts Evaluation

Environmental Impact	Alignment	Impact Before Mitigation	Proposed Mitigation Measures	Impact After Mitigation
Utilities and Service Systems				
A. Would the Project require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	LPA	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Elevated/At-Grade Alignment	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Trench Option	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Hawthorne Option	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
B. Would the Project have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years?	LPA	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Elevated/At-Grade Alignment	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Trench Option	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Hawthorne Option	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant

Environmental Impact	Alignment	Impact Before Mitigation	Proposed Mitigation Measures	Impact After Mitigation
Utilities and Service Systems				
C. Would the Project result in a determination by the wastewater treatment provider which serves or may serve the Project that it has adequate capacity to serve the Project's Projected demand in addition to the provider's existing commitments?	LPA	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Elevated/At-Grade Alignment	Construction: Less than Significant Operations: No Impact	None	Construction: Less than Significant Operations: No Impact
	Trench Option	Construction: Less than Significant Operations: No Impact	None	Construction: Less than Significant Operations: No Impact
	Hawthorne Option	Construction: Less than Significant Operations: No Impact	None	Construction: Less than Significant Operations: No Impact
D. Would the Project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	LPA	Construction: Less than Significant Operations: No Impact	None	Construction: Less than Significant Operations: No Impact
	Elevated/At-Grade Alignment	Construction: Less than Significant Operations: No Impact	None	Construction: Less than Significant Operations: No Impact
	Trench Option	Construction: Less than Significant Operations: No Impact	None	Construction: Less than Significant Operations: No Impact
	Hawthorne Option	Construction: Less than Significant Operations: No Impact	None	Construction: Less than Significant Operations: No Impact
E. Would the Project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	LPA	Construction: No Impact Operations: No Impact	None	Construction: No Impact Operations: No Impact
	Elevated/At-Grade Alignment	Construction: No Impact Operations: No Impact	None	Construction: No Impact Operations: No Impact
	Trench Option	Construction: No Impact Operations: No Impact	None	Construction: No Impact Operations: No Impact
	Hawthorne Option	Construction: No Impact Operations: No Impact	None	Construction: No Impact Operations: No Impact

Table ES-16. Summary of Energy Impacts Evaluation

Environmental Impact	Alignment	Impact Before Mitigation	Proposed Mitigation Measures	Impact After Mitigation
Energy				
A. Would the Project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?	LPA	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Elevated/At-Grade Alignment	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Trench Option	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Hawthorne Option	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
B. Would the Project conflict with or obstruct a State or local plan for renewable energy or energy efficiency?	LPA	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Elevated/At-Grade Alignment	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Trench Option	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Hawthorne Option	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant

Table ES-17. Summary of Cultural Resources Impacts Evaluation

Environmental Impact	Alignment	Impact Before Mitigation	Proposed Mitigation Measures	Impact After Mitigation
Cultural Resources				
A. Would the Proposed Project cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?	LPA	Construction: No Impact Operations: No Impact	None	Construction: No Impact Operations: No Impact
	Elevated/At-Grade Alignment	Construction: No Impact Operations: No Impact	None	Construction: No Impact Operations: No Impact
	Trench Option	Construction: No Impact Operations: No Impact	None	Construction: No Impact Operations: No Impact
	Hawthorne Option	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
B. Would the Project cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	LPA	Construction: Significant Operations: No Impact	Construction: MM-CUL-1: Cultural Resources Identification Training MM-CUL-2: Cultural Resources Monitoring and Mitigation Plan	Construction: Less than Significant Operations: No Impact
	Elevated/At-Grade Alignment	Construction: Significant Operations: No Impact	Construction: MM-CUL-1: Cultural Resources Identification Training MM-CUL-2: Cultural Resources Monitoring and Mitigation Plan	Construction: Less than Significant Operations: No Impact
	Trench Option	Construction: Significant Operations: No Impact	Construction: MM-CUL-1: Cultural Resources Identification Training	Construction: Less than Significant Operations: No Impact

Environmental Impact	Alignment	Impact Before Mitigation	Proposed Mitigation Measures	Impact After Mitigation
Cultural Resources				
			MM-CUL-2: Cultural Resources Monitoring and Mitigation Plan	
	Hawthorne Option	Construction: Significant Operations: No Impact	Construction: MM-CUL-1: Cultural Resources Identification Training MM-CUL-2: Cultural Resources Monitoring and Mitigation Plan	Construction: Less than Significant Operations: No Impact
C. Would the Project disturb any human remains, including those interred outside of formal cemeteries?	LPA	Construction: Significant Operations: No Impact	Construction: MM-CUL-3: Unanticipated Discovery of Human Remains	Construction: Less than Significant Operations: No Impact
	Elevated/At-Grade Alignment	Construction: Significant Operations: No Impact	Construction: MM-CUL-3: Unanticipated Discovery of Human Remains	Construction: Less than Significant Operations: No Impact
	Trench Option	Construction: Significant Operations: No Impact	Construction: MM-CUL-3: Unanticipated Discovery of Human Remains	Construction: Less than Significant Operations: No Impact
	Hawthorne Option	Construction: Less than Significant Operations: No Impact	None	Construction: Less than Significant Operations: No Impact

Table ES-18. Summary of Tribal Cultural Resources Impacts Evaluation

Environmental Impact	Alignment	Impact Before Mitigation	Proposed Mitigation Measures	Impact After Mitigation
Tribal Cultural Resources				
A. Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?	LPA	Construction: Significant Operations: Less than Significant	Construction: MM-TCR-1: Native American Monitoring MM-TCR-2: Unanticipated Discovery of Tribal Cultural Resource Objects (Non-Funerary/Non-Ceremonial) MM-TCR-3: Unanticipated Discovery of Human Remains and Associated Funerary or Ceremonial Objects	Construction: Less than Significant Operations: Less than Significant
	Elevated/At-Grade Alignment	Construction: Significant Operations: Less than Significant	Construction: MM-TCR-1: Native American Monitoring MM-TCR-2: Unanticipated Discovery of Tribal Cultural Resource Objects (Non-Funerary/Non-Ceremonial) MM-TCR-3: Unanticipated Discovery of Human Remains and Associated Funerary or Ceremonial Objects	Construction: Less than Significant Operations: Less than Significant

Environmental Impact	Alignment	Impact Before Mitigation	Proposed Mitigation Measures	Impact After Mitigation
Tribal Cultural Resources				
A. Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?	Trench Option	Construction: Significant Operations: Less than Significant	Construction: MM-TCR-1: Native American Monitoring MM-TCR-2: Unanticipated Discovery of Tribal Cultural Resource Objects (Non-Funerary/Non-Ceremonial) MM-TCR-3: Unanticipated Discovery of Human Remains and Associated Funerary or Ceremonial Objects	Construction: Less than Significant Operations: Less than Significant
	Hawthorne Option	Construction: Significant Operations: Less than Significant	Construction: MM-TCR-1: Native American Monitoring MM-TCR-2: Unanticipated Discovery of Tribal Cultural Resource Objects (Non-Funerary/Non-Ceremonial) MM-TCR-3: Unanticipated Discovery of Human Remains and Associated Funerary or Ceremonial Objects	Construction: Less than Significant Operations: Less than Significant

Environmental Impact	Alignment	Impact Before Mitigation	Proposed Mitigation Measures	Impact After Mitigation
Tribal Cultural Resources				
B. Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	LPA	Construction: Significant Operations: Less than Significant	Construction: MM-TCR-1: Native American Monitoring MM-TCR-2: Unanticipated Discovery of Tribal Cultural Resource Objects (Non-Funerary/Non-Ceremonial) MM-TCR-3: Unanticipated Discovery of Human Remains and Associated Funerary or Ceremonial Objects	Construction: Less than Significant Operations: Less than Significant
	Elevated/At-Grade Alignment	Construction: Significant Operations: Less than Significant	Construction: MM-TCR-1: Native American Monitoring MM-TCR-2: Unanticipated Discovery of Tribal Cultural Resource Objects (Non-Funerary/Non-Ceremonial) MM-TCR-3: Unanticipated Discovery of Human Remains and Associated Funerary or Ceremonial Objects	Construction: Less than Significant Operations: Less than Significant

Environmental Impact	Alignment	Impact Before Mitigation	Proposed Mitigation Measures	Impact After Mitigation
Tribal Cultural Resources				
B. Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	Trench Option	Construction: Significant Operations: Less than Significant	Construction: MM-TCR-1: Native American Monitoring MM-TCR-2: Unanticipated Discovery of Tribal Cultural Resource Objects (Non-Funerary/Non-Ceremonial) MM-TCR-3: Unanticipated Discovery of Human Remains and Associated Funerary or Ceremonial Objects	Construction: Less than Significant Operations: Less than Significant
	Hawthorne Option	Construction: Significant Operations: Less than Significant	Construction: MM-TCR-1: Native American Monitoring MM-TCR-2: Unanticipated Discovery of Tribal Cultural Resource Objects (Non-Funerary/Non-Ceremonial) MM-TCR-3: Unanticipated Discovery of Human Remains and Associated Funerary or Ceremonial Objects	Construction: Less than Significant Operations: Less than Significant

Table ES-19. Summary of Public Services Impacts Evaluation

Environmental Impact	Alignment	Impact Before Mitigation	Proposed Mitigation Measures	Impact After Mitigation
Public Services				
A. Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for: i. fire protection; ii. police protection; iii. schools; iv. parks; v. libraries?	Trench Option	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Elevated/At-Grade Alignment	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Trench Option	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Hawthorne Option	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant

Environmental Impact	Alignment	Impact Before Mitigation	Proposed Mitigation Measures	Impact After Mitigation
Public Services				
B. Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	LPA	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Elevated/At-Grade Alignment	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Trench Option	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Hawthorne Option	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
C. Does the Project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	LPA	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Elevated/At-Grade Alignment	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Trench Option	Construction: Less than Significant Operations: Less than Significant	None	Construction: Less than Significant Operations: Less than Significant
	Hawthorne Option	Construction: Less than Significant Operations: No Impact	None	Construction: Less than Significant Operations: No Impact

Findings of Fact and Statement of Overriding Considerations

January 2026

C LINE (GREEN) EXTENSION TO TORRANCE



Metro

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1. INTRODUCTION

1.1 OVERVIEW

This document presents the Findings of Fact required by the California Environmental Quality Act (CEQA) (Public Resources Code [PRC], 21000 et seq.) and the State CEQA Guidelines (14 Cal. Code. Regs., 15000 et seq.) for each of the significant environmental effects identified in the Final Environmental Impact Report (EIR) (SCH NO. 2021010269) prepared for the Los Angeles County Metropolitan Transportation Authority (Metro) C Line (Green) Extension to Torrance Project (Project). This document also includes the Statement of Overriding Considerations, which describes the reasons why the economic, social, technical, and other benefits of the project outweigh its significant and unavoidable impacts.

In this document, “the project” refers to the locally preferred alternative (LPA)—initially analyzed in the Draft EIR as the 170th/182nd Grade-Separated Light Rail Transit Alternative, also known as the Hybrid Alternative. The project, including refinements in the Final EIR, is discussed in more detail in Section 2, and all alternatives analyzed in the Draft and Final EIRs are discussed in Section 9.

The Draft EIR analyzed the project as part of C Line operations with the northern terminus at the Los Angeles International Airport (LAX)/Metro Transit Center (the C-1 Operating Plan). In June 2023, following the release of the Draft EIR, the Metro Board of Directors (Metro Board) adopted a new K Line operating plan (the C-2 Operating Plan), under which the project would operate as a southern extension of the K Line from the existing Redondo Beach (Marine) Station to the Mary K. Giordano Regional Transit Center (Torrance TC).

For consistency with previously released documents, however, the project is still referred to as the C Line Extension to Torrance in the Final EIR and related materials. These Findings are based on the updated operational context reflected in the C-2 Operating Plan. While the revised operating plan results in updated ridership forecasts and associated travel benefits, these improvements do not alter the physical scope or operations characteristics of the project or result in any new or more severe environmental impacts.

1.2 DOCUMENT ORGANIZATION

The document is organized into the following sections:

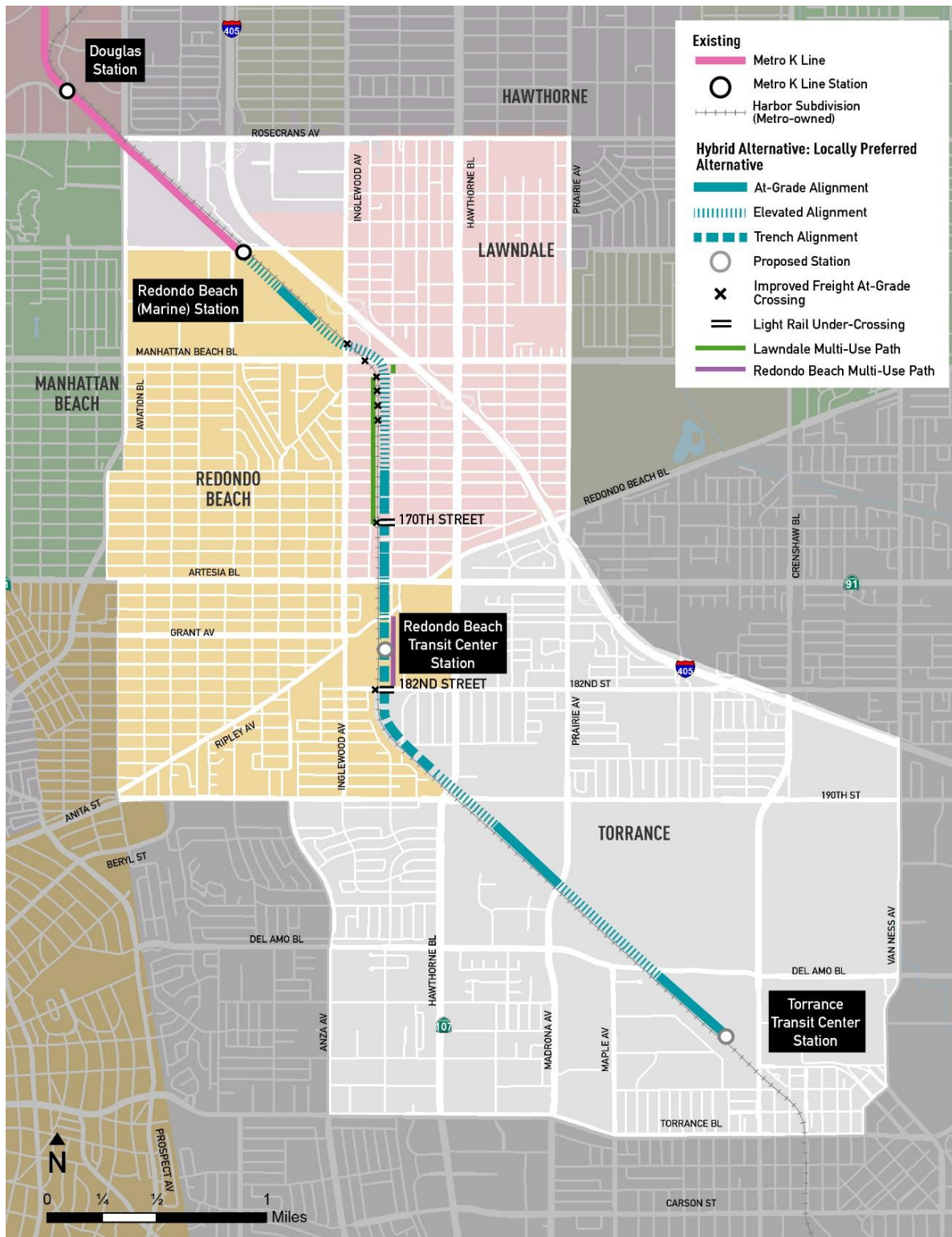
- > Section 1 Introduction
- > Section 2 Project Description
- > Section 3 CEQA Statutory Framework and Procedural Requirements
- > Section 4 Findings for Environmental Impacts Found to be Significant and Unavoidable
- > Section 5 Findings for Environmental Impacts Found to Be Less than Significant with Mitigation
- > Section 6 Findings for Environmental Impacts Found to be Less Than Significant
- > Section 7 Findings for Environmental Resources Found Not to be Impacted
- > Section 8 Findings for Cumulative Impacts
- > Section 9 Findings for Alternatives
- > Section 10 Findings for Mitigation Measures
- > Section 11 Statement of Overriding Considerations

2. PROJECT DESCRIPTION

2.1. PROJECT LOCATION AND SETTING

Figure 2-1 shows the LPA's location within the Project Area, which follows the Metro-owned railroad right-of-way (ROW) along a 4.5-mile north-south corridor from the existing Redondo Beach (Marine) Station, travelling southeast to the Torrance Transit TC. The LPA would travel through the Cities of Lawndale, Redondo Beach, and Torrance. The Project Area includes single-family and multi-family residential areas, industrial and institutional uses, as well as commercial and recreational areas. The Project Area also includes major activity centers, such as the South Bay Galleria, and high-capacity bus transit centers, such as the Redondo Beach TC and the Torrance TC.

Figure 2-1. Locally Preferred Alternative



Source: STV, 2025

2.2. PROJECT OBJECTIVES

The underlying purpose of the project is to provide high-capacity transit service in the South Bay. Metro has identified the following project objectives, which are included in Chapter 2 of both the Draft EIR and Final EIR:

- > Improve mobility within the South Bay and encourage mode shift by:
 - Introducing high-frequency transit service options from the current C Line terminus south to Torrance.
 - Creating direct connections between the regional transit network and local transit hubs for convenient transfers.
 - Providing an alternative mode of transportation for commuters traveling along congested arterials and I-405.
 - Providing first-last mile facilities to connect neighborhoods to station areas.
- > Reduce air pollution and greenhouse gas (GHG) emissions by making transit a more viable transportation choice.
- > Avoid and minimize environmental impacts on environmental resources to the maximum extent feasible.
- > Provide a cost-effective project.
- > Provide more equitable access to regional destinations by improving connections to the Metro regional rail system.

2.3. DESCRIPTION OF THE LOCALLY PREFERRED ALTERNATIVE

As previously noted, following release of the Draft EIR, Metro adopted the C-2 Operating Plan for the Metro C and K Lines. Under this plan, the LPA would operate as a southern extension of the K Line. This change does not otherwise alter the Project Description or physical or operational characteristics analyzed in the EIR. The LPA remains a 4.5-mile extension of Metro light-rail service along the existing Metro ROW, extending from the existing Redondo Beach (Marine) Station to the Torrance TC, with two new intermediate stations, as shown in Figure 2-1.

BNSF operates freight service along the Metro ROW in the project area. As part of the LPA, Metro proposes constructing two new light rail tracks and relocating the existing freight tracks in certain areas within the Metro and BNSF ROW. The LPA also includes multi-use recreational paths within the Metro ROW, where there is sufficient room, in the Cities of Lawndale and Redondo Beach. South of 190th Street, BNSF and Metro share ownership of the freight corridor and BNSF has several spur tracks to serve adjacent businesses. Metro owns approximately 15 feet in width and would acquire or lease additional ROW from BNSF to accommodate two new light rail tracks between 190th Street and the Torrance TC Station, while ensuring BNSF can maintain freight operations and deliveries via spur lines.

The LPA's light rail tracks would be grade-separated from all roadways that currently cross the Metro ROW. All at-grade freight crossings from Inglewood Avenue to 182nd Street would be upgraded with safety infrastructure to be quiet-zone ready, which would allow local jurisdictions to implement a quiet zone policy for the corridor in the future.

The following stations would be constructed under the LPA:

- > Redondo Beach TC Station: The Redondo Beach TC Station would be located south of Grant Avenue, west of the City of Redondo Beach's transit center.
- > Torrance TC Station: The Torrance TC Station would be located just west of Crenshaw Boulevard, west of the City of Torrance's transit center.

The light rail system components would adhere to the Metro Rail Design Criteria (MRDC) and would use a similar design as used on existing Metro light rail lines. The LPA would require an overhead contact system (OCS), six traction power substations (TPSS), and communications and signaling buildings.

The operating hours and schedules would be comparable to the other operating patterns of Metro's current rail lines. The proposed hours of operation are 4:00 a.m. to 1:00 a.m. On weekdays, trains would operate during early morning hours from 4:00 a.m. to 6:00 a.m. and late-night hours from 7:00 p.m. to 1:00 a.m. every 15 minutes. On weekdays, trains would operate every 5 minutes during peak travel hours, which are typically during commuting periods. Metro's implementation of the C-2 Operating Plan for the C and K Lines would not affect these operating conditions.

3. CEQA STATUTORY FRAMEWORK AND PROCEDURAL REQUIREMENTS

The following section summarizes the statutory framework governing the findings that a lead agency must make before approving a project under CEQA. These requirements establish the legal basis for Metro's findings and determinations in this document.

PRC Section 21081 and CEQA Guidelines Section 15091 require that:

- a. No public agency shall approve or carry out a project for which an EIR has been certified which identifies one or more significant effects on the environment that would occur if the project is approved or carried out unless the public agency makes one or more written findings for each of those significant effects, accompanied by a brief explanation of the rationale for each finding. The possible findings are:
 1. Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the Final EIR (**CEQA Finding 1**) (CEQA Guidelines Section 15091, subdivision (a)(1)).
 2. Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency (**CEQA Finding 2**) (CEQA Guidelines Section 15091, subdivision (a)(2)).
 3. Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the Final EIR (**CEQA Finding 3**) (CEQA Guidelines Section 15091, subdivision (a)(3)).
- b. The findings required by subdivision (a) shall be supported by substantial evidence in the record.

The finding in subdivision (a)(2) shall not be made if the agency making the finding has concurrent jurisdiction with another agency to deal with identified feasible mitigation measures or alternatives. The finding in subdivision (a)(3) shall describe the specific reasons for rejecting identified mitigation measures and project alternatives.
- c. When making the findings required in subdivision (a)(1), the agency shall also adopt a program for reporting on or monitoring the changes which it has either required in the project or made a condition of approval to avoid or substantially lessen significant environmental effects. These measures must be fully enforceable through permit conditions, agreements, or other measures.
- d. The public agency shall specify the location and custodian of the documents or other material which constitute the record of the proceedings upon which its decision is based.
- e. A statement made pursuant to Section 15093 does not substitute for the findings required by this section.

CEQA Guidelines Section 15382 defines a significant impact on the environment as "a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance." The Final EIR identified all potentially significant environmental effects resulting from the project.

CEQA Guidelines Section 15093(a) states that, “If the specific economic, legal, social, technological, or other benefits” of a proposed project “outweigh the unavoidable adverse environmental effects, the adverse environmental effects may be considered ‘acceptable.’” CEQA Guidelines Section 15093(b) requires for those significant impacts that cannot be avoided or substantially lessened, the lead agency must state in writing the specific reasons to support its action based on the Final EIR and/or other information in the record. The statement of overriding considerations shall be supported by substantial evidence in the record. The findings provided in this document are based on substantial evidence in the entire record. The references set forth in these findings to certain pages or sections of the environmental documents for the project are for ease of reference and are not intended to provide an exhaustive list of the evidence relied upon for these findings. These findings do not attempt to describe the full analysis of each environmental impact contained in the Draft EIR, Final EIR, and additional documents in the record for the project. These findings hereby incorporate by reference and adopt the discussion and analysis in the Draft EIR, Final EIR, their appendices, and additional documents in the record for the project. In making these findings, the determinations and conclusions of the Final EIR relating to environmental impacts are hereby ratified, adopted, and incorporated in these findings. In the event these findings inadvertently omit or inaccurately reflect facts stated in the Final EIR due to a clerical error, such statements are nevertheless hereby adopted and incorporated in the findings below by reference, and the language set forth in the Final EIR shall control.

PRC Section 21081.6 also requires public agencies to adopt a mitigation monitoring and reporting program (MMRP) for assessing and ensuring the implementation of proposed mitigation measures. Pursuant to PRC Section 21081.6, public agencies are required to provide that the measures to mitigate or avoid significant effects on the environment are fully enforceable through permit conditions, agreements, or other measures. The MMRP is published on the Metro project website at www.metro.net/clineext.

3.1. RECORD OF PROCEEDINGS

For purposes of CEQA and the findings set herein, the record of proceedings for Metro’s decision on the project consists of: (a) matters of common knowledge to Metro, including, but not limited to, Federal, State, and local laws and regulations; and (b) the following documents which are in the custody of Metro, One Gateway Plaza, Records Management, MS-99-PL-5, Los Angeles, CA 90012:

- > Notice of Preparation (NOP) and other public notices issued by Metro in conjunction with the project
- > The Draft EIR dated January 2023 including all associated appendices and documents that were incorporated by reference
- > All testimony, documentary evidence, and all correspondence submitted in response to the project during the scoping meetings or by agencies or members of the public during the public comment period on the Draft EIR, and responses to those comments (Chapter 5, Responses to Comments, of the Final EIR)
- > The Final EIR dated September 2025 including all associated appendices and documents that were incorporated by reference
- > The MMRP
- > All findings and resolutions adopted by Metro in connection with the project, and all documents cited or referred to therein

- > All final technical reports and addenda, studies, memoranda, maps, correspondence, and all planning documents prepared by Metro or the consultants relating to the project
- > All documents submitted to Metro by agencies or members of the public in connection with the development of the project
- > All actions of Metro with respect to the project
- > Any other materials required by PRC Section 21167.6(e) to be in the record of proceedings.

3.2. ABSENCE OF SIGNIFICANT NEW INFORMATION REQUIRING RECIRCULATION

The Metro Board finds that recirculation of the EIR is not required under PRC 21092.1 and CEQA Guidelines section 15088.5. Under CEQA Guidelines section 15088.5, a lead agency must recirculate an EIR prior to certification only when significant new information is added to the document after public review. Significant information includes information showing that the project will result in new or substantially more severe significant environmental impacts, or that new feasible mitigation measures or alternatives considerably different than those identified in the EIR are available to clearly lessen significant impacts and the agency declines to adopt them.

Metro has reviewed and considered all information developed since publication of the Draft and Final EIRs, including technical memoranda, updated ridership forecasts, revised VMT calculations, implementation of the C and K Line C-2 Operating Plan, and other supplemental analyses prepared during the administrative review projects. None of this information alters the fundamental characteristics of the LPA, changes the conclusions regarding the nature or severity of environmental impacts, or identifies new feasible mitigation measures or alternatives substantially different than those presented in the EIR that Metro declines to adopt. Rather, this information clarifies, amplifies, and provides minor updates to the analyses presented in the Draft and Final EIRs.

Accordingly, the Metro Board finds that no “significant new information,” as defined in CEQA Guidelines section 15088.5, has been added to the EIR or the record of proceedings, and recirculation of the EIR is therefore not required.

4. FINDINGS FOR ENVIRONMENTAL IMPACTS FOUND TO BE SIGNIFICANT AND UNAVOIDABLE

This section discusses the impacts found to remain significant, even with implementation of all feasible mitigation measures. These findings are based on the analyses in Chapters 3 and 4 of the Draft EIR and in Chapters 3 and 4 of the Final EIR, as well as relevant technical reports and responses to comments.

4.1. NOISE AND VIBRATION

During construction, the project would have significant and unavoidable temporary noise and vibration impacts with respect to the following significance thresholds:

- > Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? (Impact 3.6-4.1)
- > Would the project result in generation of excessive ground-borne vibration levels? (Impact 3.6-4.3)

Impacts

Impact 3.6-4.1: Ambient Noise During Construction

The LPA would require at-grade, elevated, and trench guideway construction. Construction activity at station areas would be dependent on the profile of the station (at-grade or below-grade). Construction noise levels at staging areas would be similar to noise levels generated by at-grade construction and would primarily involve the movement of equipment to and from the project site. At-grade construction, which would represent a typical construction day, would be the loudest phases with a 1-hour equivalent continuous sound level (L_{eq}) of 91.2 A-weighted decibels (dBA) at 50 feet for typical construction. Trench work would generate a similar 1-hour L_{eq} of 90.9 dBA, and elevated guideway work would generate a 1-hour L_{eq} of approximately 90.9 dBA. Noise levels during construction would exceed the 1-hour L_{eq} Federal Transit Administration (FTA) standards of 90 dBA during the day and 80 dBA at night for residential uses for all types of construction. Mitigation Measure MM-NOI-1 (Noise Control Plan) would be implemented, which would require the contractor to prepare a detailed, site-specific Noise Control Plan prior to initiating any localized construction activities and to implement the plan during the construction activities. The contractor would be required to conduct continuous noise monitoring and implement corrective actions to bring noise levels to below the FTA noise thresholds when the thresholds are exceeded. Impact equipment is to be minimized or replaced with quieter alternatives, and nighttime work must comply with local ordinances or obtain necessary variances demonstrating mitigation. However, in some instances the FTA construction impact criteria may still be exceeded, and the significant impact during construction would remain.

Impact 3.6-4.3: Ground-Borne Vibration During Construction

Ground-borne vibration caused by the LPA's construction could cause annoyance-related impacts to vibration-sensitive receptors, which include residences, hotels, and other locations where people sleep. Annoyance due to vibration would be limited only to the periods when the vibration-generating equipment is operating in close proximity to residences, which may be limited to only a few hours at a time, after which the equipment would move on to another area of construction. Nevertheless, vibration generated by construction activities would exceed the annoyance threshold and would be potentially significant. Mitigation Measure MM-VIB-1 (Vibration Control Plan) would require the contractor to prepare a Vibration Control Plan, conduct monitoring to demonstrate compliance with the

vibration limits, and use alternative construction methods to reduce vibration impacts, as feasible. Mitigation Measure MM-VIB-2 (Construction Equipment Location) would require that operation of vibratory rollers within 26 feet of a building structure would be in static mode only, that the use of vibratory pile drivers not occur within 22 feet of a building, and use of alternative pile driving techniques, when feasible. With implementation of the foregoing mitigation measures, the LPA would have a less than significant impact during construction related to *damage*. However, it would not be feasible to limit the use of all types of equipment, as some pieces of equipment cannot be modified or replaced, and a significant and unavoidable impact related to vibration *annoyance* during construction would remain.

References in the Draft and Final EIR

- > Section 3.6, Noise and Vibration, Subsections 3.6-4.1.1, 3.6-4.1.2, and 3.6-4.3.1 of the Draft EIR
- > Chapter 4, Evaluation of Alternatives, Subsection 4.5-3.6 of the Draft EIR
- > Chapter 4, Corrections and Additions, of the Final EIR
- > Chapter 5, Responses to Comments, Subsection 5.2-5, Main Topic Response MR-5: Vibration Impact Types and Impact Thresholds, of the Final EIR

Mitigation Measures

MM-NOI-1: Noise Control Plan

- > Metro's contractor shall develop a Noise Control Plan demonstrating how the FTA 1-hour L_{eq} noise criteria would be achieved during construction. The Noise Control Plan shall be prepared by a board-certified acoustical engineer. The FTA 1-hour L_{eq} construction noise standards are as follows: Residential daytime standard of 90 dBA L_{eq} and nighttime standard of 80 dBA L_{eq} , and Commercial and Industrial daytime standard of 100 dBA L_{eq} and nighttime standard of 100 dBA L_{eq} . The Noise Control Plan shall be designed to follow Metro requirements, and shall include measurements of existing noise, a list of the major pieces of construction equipment that would be used, predictions of the noise levels at the closest noise-sensitive receivers (residences, hotels, schools, churches, temples, and similar facilities), and noise mitigation measures to be implemented to achieve compliance with applicable noise thresholds. The Noise Control Plans must be approved by Metro prior to initiating noise-generating construction activities. The contractor shall conduct continuous noise monitoring to demonstrate compliance with the FTA 1-hour L_{eq} noise limits. If the FTA 1-hour L_{eq} criteria are exceeded, the contractor shall implement alternative construction measures to reduce construction noise as much as feasible. The contractor shall establish a public information and complaint system. The contractor shall respond to and provide corrective action for complaints filed within a time period of 24 hours. In addition, Metro shall comply with local noise ordinances when applicable, including by obtaining a variance(s) from the applicable local jurisdiction when nighttime work is required. Noise-reducing methods that may be implemented by the contractor include:
 - > Construction activities shall be limited to daytime hours, except when nighttime work is necessary due to utility coordination, safety considerations, traffic minimization, or other conditions requiring a nighttime variance. In such cases, the contractor shall obtain a variance from the applicable jurisdiction and demonstrate that noise control measures will maintain noise levels below FTA and local standards.

- > Where construction occurs near noise-sensitive land uses, specialty equipment with enclosed engines, acoustically attenuating shields, and/or high-performance mufflers may be used.
- > Limit unnecessary idling of equipment.
- > Install temporary/movable noise barriers or noise-control curtains, where feasible and as required by the Noise Control Plan.
- > Reroute construction-related truck traffic away from local residential streets and/or sensitive receivers.
- > Limit impact pile driving where feasible and effective.
- > Use electric instead of diesel-powered equipment and hydraulic instead of pneumatic tools where feasible.
- > Minimize the use of impact devices such as jackhammers and hoe rams, using concrete crushers and pavement saws instead.
- > Limit certain construction activities to daytime hours, when feasible

MM-NOI-2: Soundwalls

Where feasible, soundwalls shall be placed at the edge of the near light rail track with appropriate setback distance from the tracks or at the edge of elevated structures to reduce noise related to light rail vehicles as required to meet FTA criteria. Height, length, and need for absorptive noise-reducing materials will be finalized during final design as necessary to reduce noise from light rail trains to below the FTA moderate impact criteria, as feasible. Materials, color, landscaping, and/or other aesthetic treatments would also be integrated into the design of the soundwall to minimize dominance and scale.¹

MM-NOI-3: Low Impact Frogs

Low impact frogs (crossing point of two rails) shall be installed to reduce crossover impact noise where necessary to reduce noise from light rail trains to below the FTA moderate impact criteria. Locations shall be verified during final design as necessary to reduce noise from light rail trains to below the FTA moderate impact criteria.

MM-VIB-1: Vibration Control Plan

Prior to construction, the contractor would prepare a Vibration Control Plan demonstrating how the FTA building damage risk criteria and the FTA vibration annoyance criteria would be achieved. The Vibration Control Plan must be approved by Metro prior to initiating vibration-generating construction activities

¹ The applicability of the term “feasible” applies only to the Elevated/At-Grade Alignment (the “Proposed Project” in the Draft EIR). Specifically, as explained on page 36-100 of the Draft EIR, with respect to the Elevated/At-Grade Alignment, soundwalls would not be feasible at the 170th Street and 182nd Street at-grade crossing because vehicle travel must be maintained. The “where feasible” and “as feasible” text in MM-NOI-2 was included in MM-NOI-2 to address this specific physical constraint for the Elevated/At-Grade Alignment. This qualifying language does not apply to the LPA, the Trench Option, or the Hawthorne Option, which do not have at-grade crossings or other physical constraints that would prevent construction of the soundwalls as necessary to reduce operational noise impacts of the light rail to below the FTA significance thresholds with mitigation.

and include the requirement that the contractor, in coordination with Metro and the City of Torrance Public Works Department, shall notify nearby receptors, including businesses near Del Amo Bridge, of pile-driving activities at least 72 hours in advance. The Vibration Control Plan would include a list of the major pieces of construction equipment that would be used, and the predictions of the vibration levels are the closest sensitive receivers. The contractor would conduct vibration monitoring to demonstrate compliance with the vibration limits. Where the construction cannot be performed to meet the vibration criteria, the contractor would investigate alternative means and methods of construction measures to reduce vibration levels as much as feasible.

MM-VIB-2: Construction Equipment Location

To address potential building damage, the following measures would be implemented.

- > Where a vibratory roller would be operated within 26 feet of a building structure, the vibratory roller shall be operated in static mode only.
- > Where pile driving is needed, the use of vibratory pile driving would be limited to being no closer than 22 feet of the nearest sensitive structure. In areas adjacent to sensitive structures where the distance cannot be limited to 22 feet or greater, pile driving will use alternative technology such as CIDH.
- > Limit the location of impact pile driving to the extent feasible.

Findings

Impact 3.6-4.1: Ambient Noise During Construction

Mitigation Measure MM-NOI-1 would be implemented, which will reduce construction noise levels. However, in some instances the FTA construction impact criteria may still be exceeded. There are no additional feasible mitigation measures that could be implemented to further reduce construction noise levels. Metro has considered sound proofing homes as a potential measure to mitigate construction noise. This approach is not considered feasible or appropriate. Although CEQA allows adoption of mitigation measures of uncertain efficacy, the measure must still be capable of achieving some portion of its intended result. An acoustic retrofitting program, however, would depend entirely on the voluntary cooperation of property owners and tenants—parties outside Metro’s jurisdiction and control. As a result, the effectiveness of the measure would remain speculative. Even if Metro could identify and analyze specific retrofit techniques (such as window replacement or façade sealing), their actual implementation would hinge on the willingness of numerous private third parties, leaving Metro with no assurance that any meaningful reduction in interior noise levels would be achieved. For this reason alone, acoustic retrofitting is not considered a feasible mitigation measure. In addition, acoustic retrofitting would not effectively address exterior noise levels at the source. As retrofitting requires windows to be closed to be effective, a retrofit program could impair interior ventilation. Implementing a retrofitting program would require extensive coordination with property owners and tenants, contractors, and city building departments that may need to issue permits, adding substantial time to the project’s implementation, as the retrofits would need to be installed prior to construction. Furthermore, retrofit measures may introduce secondary impacts, including noise and dust, and would be physically invasive. The costs and effort to undertake retrofitting at a broad scale would be burdensome relative to the temporary nature of the impact. Thus, Metro adopts CEQA Findings 1 and 3, as identified in Section 3 above and in Section 15091, subdivisions (a)(1) and (a)(3) of the CEQA Guidelines.

Impact 3.6-4.3: Ground-Borne Vibration During Construction

Implementation of Mitigation Measures MM-VIB-1 and MM-VIB-2 would reduce the potential for vibration annoyance impacts during construction. Even with implementation of the foregoing mitigation measures, the LPA would have a significant and unavoidable impact related to vibration *annoyance* during construction. Thus, Metro adopts CEQA Findings 1 and 3, as identified in Section 3 above and in Section 15091, subdivisions (a)(1) and (a)(3) of the CEQA Guidelines. For ground-borne-vibration-related *damage* impacts, Metro adopts CEQA Finding 2, as identified in Section 3 above and in Section 15091, subdivision (a)(b) of the CEQA Guidelines.

5. FINDINGS FOR ENVIRONMENTAL IMPACTS FOUND TO BE LESS THAN SIGNIFICANT WITH MITIGATION

This section discusses the impacts found to be significant, which can be reduced to less than significant levels through implementation of mitigation measures. Notable project features and mitigation measures pertinent to the summaries of potential impacts discussed herein are included in this document. Project features include components of the project design, such as best management practices (BMP) and other design commitments. They are part of the project itself, and are not mitigation measures. They are listed here, because they provide evidence supporting the impact conclusions prior to consideration of mitigation. Mitigation measures, by contrast, are imposed to reduce or avoid significant impacts. All project features and mitigation measures established by the Draft EIR and Final EIR are provided in and made enforceable by the MMRP.

5.1. AESTHETICS

The project would have a less than significant impact with mitigation related to aesthetics with respect to the following significance thresholds:

- > Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area, or create new shade or shadows that would substantially affect outdoor recreation facilities or other public areas? (Impact 3.3-4.4)

Impact

Impact 3.3-4.4: Create New Source of Substantial Light/Glare During Construction

Construction activities would occur mainly during daytime hours, and construction-related illumination would be temporary and limited to safety and security purposes. Construction activities are not anticipated to result in a substantial source of light or glare. However, if nighttime construction is required, residential uses around the Metro ROW could be affected if light spills over to the residences or if lighting is not shielded to limit glare at these residences. Therefore, there would be a significant impact related to light or glare during construction. Mitigation Measure MM-AES-1 (Construction Lighting) would be implemented to ensure that construction lighting would be shielded and directed downward and away from adjacent residential and commercial areas. With implementation of MM-AES-1, the impact would be less than significant.

References in the Draft and Final EIR

- > Section 3.3, Aesthetics, Subsection 3.3-4.4.1 of the Draft EIR
- > Chapter 4, Corrections and Additions, of the Final EIR

Mitigation Measures

MM-AES-1: Construction Lighting

During nighttime construction activities lighting, including “down lighting,” shall be directed toward the interior of the construction staging area and shall be shielded so that it would not spill over into adjacent light-sensitive areas.

Finding

Impact 3.3-4.4: Create New Source of Substantial Light/Glare During Construction

Implementation of MM-AES-1 would reduce the potential for introducing a new light glare or shadows generated by project construction to a less than significant level. Thus, Metro adopts CEQA Finding 1, as identified in Section 3 above and in Section 15091, subdivision (a)(1) of the CEQA Guidelines.

5.2. NOISE AND VIBRATION

Operation of the project would have a less than significant permanent impact with mitigation related to noise and vibration with respect to the following significance thresholds:

- > Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? (Impact 3.6-4.1)
- > Would the project result in generation of excessive ground-borne vibration Levels? (Impact 3.6-4.3)

Impact

Impact 3.6-4.1: Ambient Noise During Operation

Sensitive uses would be exposed to a combination of noise sources, including light rail train pass-by noise, TPSS noise, and special trackwork noise. In addition, freight trains would generate noise from warning horns at the at-grade freight crossings. The combined light rail and freight noise would result in significant impacts to sensitive receivers.

Under the LPA, relocation of the freight tracks combined with light rail operations would result in potentially significant noise impacts to 178 Category 2 clusters and three Category 3 clusters. Metro would implement Project Feature PF-NV-1 (Quiet Zone Equipment Installation), which provides that design and construction of freight railroad at-grade crossings include all equipment needed to allow local jurisdictions to establish a quiet zone. This project feature is part of the project design and provides evidence supporting the impact conclusions prior to consideration of mitigation.

Mitigation Measures MM-NOI-2 (Soundwalls) and MM-NOI-3 (Low Impact Frogs) would be implemented, which would reduce noise via installation of soundwalls at identified impacted receptors and low impact frogs at crossovers which were determined to contribute to noise impacts. Mitigation Measure MM-NOI-4 (Quiet Zone Establishment) would require Metro to assist local jurisdictions to designate a quiet zone from north of Inglewood Avenue to south of 182nd Street. Establishment of a quiet zone would eliminate the regular use of freight horns in the corridor, reducing noise in the surrounding area.

With implementation of Mitigation Measures MM-NOI-2, MM-NOI-3, and MM-NOI-4, operational noise levels would be reduced to below the FTA's criteria for all sensitive receptors along the LPA, and the impact would be less than significant. Importantly, Metro has committed through Project Feature PF-NV-1 to construct all physical improvements needed for a quiet zone, such that the measure is fully enabled by the project. Once the improvements are in place, designation of a quiet zone is a ministerial act within the jurisdiction of the corridor cities under Federal Railroad Administration (FRA) regulations. Quiet zones have been routinely established in similar urban contexts once the necessary safety upgrades are complete, providing substantial evidence that this mitigation is feasible and effective.

In the event that local jurisdictions choose not to apply for a quiet zone, Mitigation Measure MM-NOI-4 would not be implemented to reduce freight horn noise, and the impact would remain significant and

unavoidable. However, CEQA Guidelines Section 15091(a)(2) expressly provides that where another agency has the authority and responsibility to implement a mitigation measure, the lead agency may find that the other agency can and should adopt the measure. Metro, therefore, finds that Mitigation Measure MM-NOI-4 is within the responsibility and jurisdiction of the corridor cities (City of Torrance, City of Redondo Beach, and City of Lawndale), and that those cities can and should implement the measure. All necessary safety upgrades to the freight crossings needed to implement a by-right quiet zone would be made as part of the project.

Impact 3.6-4.3: Excessive Ground-Borne Vibration Levels During Operations

The ground-borne vibration levels in areas where residences would experience an annoyance impact would exceed the FTA vibration impact criteria for light rail and freight. Therefore, operation of the LPA would have a significant impact related to excessive ground-borne vibration levels, and mitigation would be required. Mitigation Measure MM-VIB-4 (Low Impact Frogs) would be implemented, which would require installation of spring-loaded frogs at specific locations to reduce the impact from crossovers by reducing the width of gaps at joints when steel wheels roll over steel rails at rail joints. Mitigation Measures MM-VIB-5 (Resilient Fasteners) and MM-VIB-6 (Ballast Mats) would be implemented, which would require the use of resilient fasteners to incorporate resilience into the track support systems and ballast mats to reduce the impacts from train pass-bys caused by steel wheels rolling over steel rails at rail joints (which would provide a combined vibration reduction of up to 15 velocity level decibels [VdB]). With implementation of these mitigation measures, the LPA would not result in excessive ground-borne vibration during operation. The impact would be less than significant with mitigation.

References in the Draft and Final EIR

- > Section 3.6, Noise and Vibration, Subsection 3.6-4.3.2 of the Draft EIR
- > Chapter 4, Corrections and Additions, of the Final EIR
- > Chapter 5, Responses to Comments, Subsections MR-5.2-2, Major Topic Response MR-2: Operational Noise Analysis Methodology and Impact Thresholds; Major Topic Response MR-5.2-3, Operational Noise Project Features and Mitigation Measures; MR- MR-5.2-5, Major Topic Response MR-5, Vibration Impact Types and Impact Thresholds, of the Final EIR

Project Features

PF-NV-1. Quiet Zone Equipment Installation

The eight at-grade freight crossings between Inglewood Ave and 182nd Street have been designed and would be constructed to include all Federal Railroad Administration (FRA)-required Supplemental Safety Measures and associated improvements and equipment that are needed to qualify for Automatic FRA Approval to establish a quiet zone. In order to establish a quiet zone, local jurisdictions will need to submit a Notice of Intent to the operating railroads (e.g., BNSF), California Public Utilities Commission (CPUC), Metro, and FRA followed by a Notice of Establishment, which would ultimately eliminate the sounding of freight horns within the project limits. Crossing signal bells would continue to generate a minimum of noise level of 75 dBA at 10 feet per American Railway Engineering and Maintenance of Way requirements.

Mitigation Measures

MM-NOI-4: Quiet Zone Establishment

Metro shall cooperate with the City of Lawndale, City of Redondo Beach, and City of Torrance to provide support and guidance during the quiet zone establishment process. The cities shall comply with FRA requirements (49 Code of Federal Regulations [CFR] Section 222.35 to Section 222.57) to establish a quiet zone(s) from north of Inglewood Avenue to south of 182nd Street, including by providing written notice to BNSF, Metro, and CPUC on its intent to establish a quiet zone(s) for the listed freight crossings:

- > Inglewood Avenue
- > Manhattan Beach Boulevard
- > 159th Street
- > 160th Street
- > 161st Street
- > 162nd Street
- > 170th Street
- > 182nd Street

MM-VIB-4: Low Impact Frogs

Frogs with spring-loaded mechanisms shall be installed to close the gaps between running rails such that a 10 dB vibration reduction is achieved and the impact is reduced to below FTA criteria (80 VdB for freight and 72 VdB for light rail). The locations of the frogs shall be verified during final design using a site-specific Detailed Vibration Assessment, including transfer mobility measurements, for the preferred alignment option (as per FTA Transit Noise and Vibration Impact Assessment Manual (“FTA Guidance”), Section 6.5).

MM-VIB-5: Resilient Fasteners

Resilient fasteners shall be installed to fasten the rail to concrete track slabs or ties such that a minimum 5 dB vibration is achieved and the impact is reduced to below FTA criteria (80 VdB for freight and 72 VdB for light rail). The locations of the resilient fasteners shall be verified during final design using a site-specific Detailed Vibration Assessment, including transfer mobility measurements, for the preferred alignment option (as per FTA guidance, Section 6.5).

MM-VIB-6: Ballast Mats

Ballast mats consist of a rubber or other type of elastomer pad that is placed under the track ballast. Ballast mats shall be installed such that a minimum 10 dB vibration reduction is achieved and the impact is reduced to below FTA criteria (80 VdB for freight and 72 VdB for light rail). The locations of the ballast mats shall be verified during final design using a site-specific Detailed Vibration Assessment, including transfer mobility measurements, for the preferred alignment option (as per FTA guidance, Section 6.5).

Finding

Impact 3.6-4.1: Ambient Noise During Operation

Mitigation Measures MM-NOI-2 and MM-NOI-3 would reduce light rail transit noise impacts to less than significant. Mitigation Measure MM-NOI-4 would require Metro to assist local jurisdictions in

establishing a quiet zone from north of Inglewood Avenue to south of 182nd Street, which would eliminate freight horn noise. With implementation of MM-NOI-2, MM-NOI-3, and MM-NOI-4, the impact would be less than significant.

Metro has committed, through Project Feature PF-NV-1, to construct all physical improvements needed for the establishment of a quiet zone, thereby enabling local jurisdictions to act. Establishment of a quiet zone is a ministerial act for FRA and falls within the jurisdiction and authority of the Cities of Torrance, Redondo Beach, and Lawndale once those improvements are in place. Quiet zones have been routinely established in similar contexts once safety upgrades are complete, providing substantial evidence that this mitigation is feasible and effective.

Although Metro cannot, itself, designate the quiet zone, CEQA Guidelines Section 15091(a)(2) provides that where another agency has the responsibility and jurisdiction to implement a measure, the lead agency may properly find that the other agency can and should do so. Metro therefore finds that the Cities of Torrance, Redondo Beach, and Lawndale can and should implement MM-NOI-4, and that with implementation of this measure, the impact would be reduced to a less than significant level. Thus, Metro adopts CEQA Findings 1 and 2, as identified in Section 3 above and in Section 15091, subdivisions (a)(1), and (a)(2) of the CEQA Guidelines.

However, in the event that the corridor cities do not implement a quiet zone pursuant to MM-NOI-4, Metro, for purposes of the Statement of Overriding Considerations set forth in Section 11 below, adopts CEQA Finding 3, as identified in Section 3 above and in Section 15091, subdivision (a)(3) of the CEQA Guidelines.

Impact 3.6-4.3: Excessive Ground-Borne Vibration Levels During Operations

Implementation of Mitigation Measures MM-VIB-4, MM-VIB-5, and MM-VIB-6 would reduce the amount of excessive ground-borne vibration levels generated during project operation to a less than significant level. Thus, Metro adopts CEQA Finding 1, as identified in Section 3 above and in Section 15091, subdivision (a)(1) of the CEQA Guidelines.

5.3. BIOLOGICAL RESOURCES

The project would have a less than significant impact with mitigation related to biological resources with respect to the following significance thresholds:

- > Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service? (Impact 3.7-4.1)
- > Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? (Impact 3.7-4.5)

Impacts

Impact 3.7-4.1: Adverse Effects on Special-Status Species During Construction

The southern tarplant is known to occur within the City of Torrance Open Space Preserve adjacent to the Torrance TC. Specifically, suitable habitat for southern tarplant is present along the maintenance and emergency access path located partially within the established Open Space Preserve on its perimeter. The LPA's maintenance and emergency access path would occupy approximately 7,471 square feet of the 87,036-square-foot Preserve. Direct impacts to southern tarplant would include loss

of approximately 7,471 square feet of habitat and potential mortality of individual plants within the project footprint. Potential indirect impacts could include soil and contaminant runoff during the wet season, dust during the dry season, especially during excavations, and the introduction of non-native or invasive species that could degrade habitat and outcompete southern tarplant for resources.

Impacts to southern tarplant would be less than significant with implementation of MM-BIO-1 (General Protection Measures to Avoid and Minimize Impacts on Sensitive Biological Resources) and MM-BIO-4 (Pre-Construction Rare Plant Survey), which would require the delineation of work limits and buffers, a pre-construction rare plant survey prior to ground disturbance, and on-site monitoring by a qualified botanist. In addition, MM-BIO-5 (Off-Site Mitigation for Southern Tarplant Habitat) would require Metro to coordinate with the City of Torrance and the California Department of Fish and Wildlife (CDFW) to identify and evaluate suitable off-site mitigation sites for southern tarplant habitat, with the goal of establishing, preserving, and managing such habitat in perpetuity at a minimum 3:1 replacement ratio or higher if required by CDFW. If the City of Torrance elects to relocate and re-establish the entire preserve, Metro may fulfill its compensatory mitigation obligation under MM-BIO-5 by funding and implementing a proportional share of the new preserve area under an agreement that includes long-term maintenance provisions and performance standards consistent with the requirements set forth in that mitigation measure. If the City does not proceed with relocation, Metro would implement independent off-site mitigation meeting the same performance standards, including securing appropriate land rights, implementing habitat enhancement measures, conducting long-term monitoring, and establishing an endowment or other funding mechanism. Construction impacts on southern tarplant would be reduced to a less than significant level with implementation of the foregoing mitigation measures.

Direct impacts to special-status bird species are not likely to occur as moderate to high quality suitable habitat was not identified within the resource study area (RSA). However, potential direct impacts to breeding birds protected under the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (CFG) Sections 3500 through 3705 may occur if construction related to the demolition of the bridges or if vegetation and tree removal occurs within the nesting bird season (defined herein as February 1 through September 15). Potential direct impacts could include the destruction of occupied nests and associated loss of young, as well as loss of suitable nesting substrate. Potential indirect impacts to breeding birds during the nesting bird season may include construction-related noise and light disturbance, the degradation of habitat related to dust settlement, nest abandonment, and an increase in opportunistic predators. Bridge demolition may also impact special-status bat species, specifically, Yuma myotis. Potential direct impacts resulting from the bridge demolition may include a loss of roosting habitat and/or direct mortalities. Potential indirect impacts may include construction-related noise, vibration, and light disturbance; all of which could lead to colony/roost abandonment.

Potential impacts to breeding birds would be less than significant through implementation of Mitigation Measure MM-BIO-2 (Nesting Bird Season Restrictions and Pre-Construction Surveys), which would require a pre-construction nesting bird survey during the nesting bird season, work/construction buffers around active nests, and the monitoring of nesting activity by qualified biologists. Impacts to special-status bat species would be less than significant through implementation of Mitigation Measure MM-BIO-3 (Roosting Bat Restrictions and Survey Requirements), which would require a bat roost habitat assessment and subsequent consultation with CDFW and preparation of a mitigation plan if presence is detected.

Impact 3.7-4.1: Adverse Effects on Special-Status Species During Operations

Maintenance activities along the Metro ROW could result in both temporary direct and indirect impacts to bird species protected under the MBTA and CFGC if trees and vegetation that have potential to support nesting birds are removed or disturbed during the nesting bird season. Potential direct impacts may subsequently cause nest abandonment (and thus loss of young), nest failure, or direct mortality of individuals. However, Metro routine maintenance during operation does not typically disturb vegetation or trees that support nesting birds.

In addition, if the City of Torrance does not proceed with relocation of the Open Space Preserve adjacent to the Torrance TC, project-related maintenance activities could result in indirect impacts to southern tarplant individuals and habitat within the Preserve. These impacts could occur from oil and fluid run-off associated with project's surface parking lot and use of the maintenance and emergency egress path, which could degrade habitat and soil quality and cause die-off of southern tarplant individuals, including the seed bank. However, such impacts are not expected because the LPA's parking lot would be impervious and designed with BMPs to retain stormwater on-site. These features and BMPs would also apply to the LPA's maintenance and emergency egress path.

If the City of Torrance does not relocate the Preserve, Metro would implement stand-alone off-site mitigation consistent with Mitigation Measure MM-BIO-5 to offset the affected portion of southern tarplant habitat. Implementation of MM-BIO-1 would further avoid or minimize degradation of habitat and soil quality, thereby preventing substantial adverse effects on southern tarplant during operation. Therefore, with implementation of MM-BIO-1 and MM-BIO-5, operation of the LPA would result in a less than significant impact to southern tarplant.

Impact 3.7-4.5: Conflicts with Local Policies or Ordinances Protecting Biological Resources During Construction

Construction of the LPA would have potential to conflict with local policies or ordinances protecting biological resources. The Open Space Preserve established for southern tarplant protection is located immediately adjacent to the project footprint (specifically, the surface parking lot) and the project's maintenance and emergency egress path would occupy approximately 7,471 square feet of the 87,036-square-foot Preserve. This encroachment would conflict with the Preserve's open space and habitat objectives and, therefore, would represent a significant impact before mitigation. Implementation of MM-BIO-5 (Off-Site Mitigation for Southern Tarplant Habitat) would reduce this impact to a less than significant level through either (1) participation in and funding of the City's relocation and re-establishment of the Preserve under an agreement that meets the mitigation measure's performance standards, or (2) implementation of an independent off-site mitigation preserve meeting the same performance standards, including long-term management and funding provisions. MM-BIO-1 (General Protection Measures to Avoid and Minimize Impacts on Sensitive Biological Resources) would also be implemented to avoid and minimize temporary construction-related effects within the Preserve. Thus, with implementation of MM-BIO-1 and MM-BIO-5, potential conflicts with local policies or ordinances protecting biological resources, specifically impacts to the established Open Space Preserve, would be reduced to less than significant.

Impact 3.7-4.5: Conflicts with Local Policies or Ordinances Protecting Biological Resources During Operation

The LPA's maintenance and emergency egress path near the Torrance TC Station would be located partially within the existing City of Torrance Open Space Preserve for southern tarplant. Use of the

maintenance and emergency egress path within the Preserve would represent a potential conflict with the Preserve's open space and habitat objectives, which would constitute a significant impact before mitigation. Prior to project operation, this impact would be mitigated via Mitigation Measure MM-BIO-5 (Off-Site Mitigation for Southern Tarplant) through either (1) Metro's participation in and funding of the City's relocation and re-establishment of the Preserve under an agreement that meets the mitigation measure's performance standards, or (2) implementation of an independent off-site mitigation project meeting the same performance standards, including long-term management and funding provisions. Because MM-BIO-5 would be implemented during construction, the required mitigation would be in place before operation begins. If the City does not relocate the Preserve, implementation of MM-BIO-1 (General Protection Measures to Avoid and Minimize Impacts on Sensitive Biological Resources) together with MM-BIO-5, would ensure operational impacts related to conflicts with local policies or ordinances protecting biological resources are reduced to a less than significant level. Thus, with implementation of MM-BIO-1 and MM-BIO-5, potential operational conflicts with local policies or ordinances protecting biological resources, specifically impacts to the established Open Space Preserve, would be less than significant.

References in the Draft and Final EIR

- > Section 3.7, Biological Resources, Subsections 3.7-4.1.1 and 3.7-4.1.2 of the Draft EIR
- > Chapter 4, Corrections and Additions, of the Final EIR

Mitigation Measures

MM-BIO-1: General Protection Measures to Avoid and Minimize Impacts on Sensitive Biological Resources

Prior to the initiation of construction activities, construction work limits shall be defined and marked (i.e., by caution tape, temporary fencing, etc.). All temporary fencing or other markers must be clearly visible to construction personnel.

Prior to and during construction, a qualified Biologist, selected by Metro, shall confirm that the outer perimeter of the construction work limits, fencing, and erosion control measures are properly installed and shall monitor compliance with these measures within and adjacent to the Open Space Preserve. No native vegetation removal or grading shall occur within any remaining areas of the Open Space Preserve.

Fenced impact limits shall include erosion control measures to minimize erosion and siltation during initial vegetation clearing/removal and construction through the use of silt fencing, siltation basins, gravel bags, or other controls necessary to stabilize the soil in cleared or graded areas. Erosion control measures would be installed prior to the onset of vegetation clearing/removal. These measures would be maintained in good repair until the completion of construction. Vegetation clearing/removal during routine maintenance shall also include similar erosion control measures. Specific work areas within the Torrance TC Station site adjacent to portions of the Open Space Preserve that remain in place, if the City of Torrance does not relocate the Preserve to a different site prior to construction, shall include specific erosion and run-off control measures necessary to ensure no contaminants enter the fenced impact limits of the Open Space Preserve and consequently degrade any remaining habitat for the southern tarplant. These erosion and run-off control measures shall be implemented long-term per Regional Water Quality Control Board requirements to ensure the continued protection of the Open Space Preserve and quality of habitat within. These measures are in addition to, and not in lieu of, the compensatory mitigation requirements of MM-BIO-5, which shall be implemented prior to any ground-disturbing activities within the Southern Tarplant Open Space Preserve.

MM-BIO-2: Nesting Bird Season Restrictions and Pre-Construction Surveys

The clearance of vegetation or demolition of nesting substrate (i.e., bridge features) during construction shall occur outside of the nesting bird season (nesting bird season defined herein as February 1 through September 15), if feasible. If vegetation removal and/or demolition outside this time period is not feasible, the following additional measures shall be employed to avoid impacts to nesting birds protected under the MBTA and CFGC.

A pre-construction nesting bird survey shall be conducted by a qualified biologist (i.e., a biologist familiar and experienced with the identification and life histories of wildlife and plant species in southern California) within 72 hours, or as determined by the qualified biologist, prior to the start of construction activities to determine whether active nests are present within or directly adjacent to the construction zone. Nests found shall be recorded.

If construction activities must occur within 150 feet of an active nest of any passerine bird or within 300 feet of an active nest of any raptor, a qualified biologist shall monitor the nest on a bi-weekly (twice a week) basis, or at a frequency necessary to determine potential project impacts, and the construction activity shall be postponed until the biologist determines that the nest is no longer active.

If the recommended nest avoidance zone is not feasible, the qualified biologist shall provide justification on a case-by-case basis if a buffer reduction is possible, taking into consideration the location of work and type of activity, distance of nest from work area, surrounding vegetation, and line-of-sight between the nest and work areas, tolerance of species to disturbance, and observations of the nesting bird's reaction to construction activities (including light, noise, dust, and human presence). If the biologist determines nesting activities may fail as a result of work activities, work activities shall be modified or shall temporarily cease (except access along established roadways) within the recommended no-disturbance buffer until the biologist determines the adults and young are no longer reliant on the nest site.

Buffers shall be delineated (by or under the supervision of a qualified biologist) on-site with bright flagging, for easy identification by staff and the construction team. The perimeter of the buffer (150 feet to 300 feet depending on the species) shall be flagged so as not to draw predator attention to the direct location of the nest itself and flagging will be minimized where feasible. The on-site construction supervisor and operator staff shall be notified of the nest and the buffer limits to ensure it is maintained.

The indirect impacts of night-time construction lighting on nesting birds outside the construction limits shall be reduced by shielding or directing construction lighting to avoid light encroachment into adjacent habitats.

A summary of pre-construction surveys, monitoring efforts, and any no-disturbance buffers that were installed shall be documented in a report by the qualified biologist at the conclusion of each nesting season.

MM-BIO-3: Roosting Bat Restrictions and Survey Requirements

Prior to any construction disturbance on or near bridges, a bat roost habitat assessment shall be performed by a qualified biologist (i.e., a biologist familiar with bat identification and ecology in southern California) at each location in order to identify both potential day time and nighttime roosting activity and maternity roosts, for bat species with potential to occur. The bat roost habitat assessment shall be conducted during the spring/summer months between April 1 through August 31 to most effectively identify maternity roost activity. Signs indicating active use by bat species may include guano,

urine staining, and audible vocalizations; and shall be recorded upon observation for inclusion in a summary report.

If active maternity roosts are identified, consultation shall occur with CDFW and a bat mitigation plan shall be prepared in advance of construction that shall include measures to avoid, minimize, and mitigate project impacts to bat species per conversations with, and recommendations from, CDFW. The bat mitigation plan may include bat exclusion measures to be implemented outside the California maternity season (the maternity season is defined as April 1 through August 31 in southern California) in order to prevent potential direct impacts to individuals. During the maternity season, a recommended buffer shall be implemented around any active maternity roosts, and no project related activities shall occur within the buffer until a biologist has determined that the roost is no longer in use. In addition, the bat mitigation plan shall require the replacement of lost habitat associated with demolition of the bridges and shall include mitigation addressing loss of roosts; this replacement should be on site when feasible and off site only when on site replacement is not feasible. The mitigation plan shall include required monitoring of mitigation to ensure the success of the proposed mitigation measures.

MM-BIO-4: Pre-Construction Rare Plant Survey

Prior to construction, if the Open Space Preserve has not been fully relocated and portions of the Preserve remain, suitable habitat in the portion of the RSA immediately adjacent to the Open Space Preserve shall be visually surveyed on foot by a qualified botanist (i.e., a botanist familiar with southern tarplant identification) in order to identify potential southern tarplant presence. Surveys should be conducted during the appropriate blooming period for optimal identification (defined as May – November).

If individuals are detected, individuals shall be flagged, and this area shall be clearly marked for avoidance through visible signage and fencing. A buffer zone shall be established of at least 50 feet from the outermost perimeter of the population in order to sufficiently eliminate potential disturbance to the plants from human activity and any other potential sources of disturbance including trampling, erosion, and dust. No vegetation removal, grading, or other earthwork shall occur within areas designated for avoidance. These avoidance requirements apply to southern tarplant individuals outside the permanent impact footprint of the project within the Open Space Preserve. Impacts to individuals within the permanent project footprint shall instead be addressed through the compensatory mitigation requirements of MM-BIO-5.

A qualified botanist shall perform bi-weekly (twice per week) site visits, or at a frequency necessary to ensure protection of any remaining areas of the Open Space Preserve, during all construction activities occurring immediately adjacent to any remaining areas of the Open Space Preserve to ensure construction activities remain within the designated, and delineated, approved construction area; and that construction fencing, and other boundary demarcations remain in the appropriate condition.

MM-BIO-5: Off-Site Mitigation for Southern Tarplant Habitat

Prior to construction, Metro shall coordinate with the City of Torrance and CDFW to identify and evaluate one or more suitable off-site mitigation sites for southern tarplant habitat. The goal of this effort is to mitigate the permanent loss of southern tarplant habitat through the establishment, preservation, and long-term management of suitable off-site mitigation habitat.

Metro shall ensure that mitigation occurs at a minimum 3:1 ratio for habitat area, or at a higher ratio if required by CDFW. A site-specific biological assessment, prepared by a qualified botanist (i.e., a botanist familiar with identification, survey, and management of southern tarplant), shall demonstrate that the

selected mitigation site(s) have appropriate soil, hydrology, and ecological conditions to support self-sustaining, long-term tarplant populations.

It is Metro's understanding that the City of Torrance is currently evaluating the relocation and re-establishment of the entire Open Space Preserve to the Elm Water Yard in the City of Torrance. If the City elects to proceed with that relocation, Metro may satisfy its mitigation obligation by entering into an agreement with the City to fund and implement a proportional share of the new preserve area. This agreement must include provisions for a non-wasting endowment or other long-term funding mechanism sufficient to cover Metro's proportional share of perpetual management costs and must include performance standards equivalent or greater than those described in this mitigation measure for Metro's proportional share.

If the City of Torrance opts not to relocate and re-establish the Open Space Preserve, Metro shall implement an independent off-site mitigation project that achieves the same performance standards for habitat value and long-term viability, including securing a conservation easement, deed restriction, or other legally enforceable land protection instrument; implementing habitat enhancement measures; conducting long-term monitoring, and establishing a non-wasting endowment or other funding mechanism sufficient to cover Metro's proportional share of perpetual management costs. Metro shall make a reasonable, documented effort to implement the off-site mitigation within the City of Torrance.

If no appropriate off-site mitigation site can be identified within the City of Torrance, Metro shall identify and evaluate one or more suitable sites outside the City, such as an existing preserve that includes the same species of southern tarplant, that achieve the same habitat value and long-term viability standards as determined by a qualified botanist.

A qualified botanist shall also prepare a Southern Tarplant Translocation/Enhancement Plan in consultation with CDFW that includes feasible and achievable performance standards. The plan shall include, but is not limited to, methods and sourcing guidelines for seed collection (to occur for a minimum of two years); BMPs for planting and invasive species control; monitoring protocols, and a schedule of implementation activities. The Translocation Plan shall be finalized prior to any ground-disturbing activities that could affect the Southern Tarplant Open Space Preserve.

If, after a reasonable and documented effort, no suitable off-site mitigation site can be identified or implemented within or outside the City of Torrance, Metro shall consult with CDFW to identify an alternative mitigation strategy that achieves equivalent biological value and long-term viability. This may include payment of an in-lieu fee to a CDFW-approved land management entity, provided that the entity commits to establishing, preserving, and managing southern tarplant habitat in perpetuity at a minimum ratio of 3:1 or higher, consistent with the performance standards described above.

Findings

Impact 3.7-4.1: Adverse Effects on Special-Status Species During Construction

Implementation of Mitigation Measures MM-BIO-1, MM-BIO-2, MM-BIO-3, MM-BIO-4, and MM-BIO-5 would reduce the impact on special-status species generated by project construction to a less than significant level. Thus, Metro adopts CEQA Finding 1, as identified in Section 3 above and in Section 15091, subdivision (a)(1) of the CEQA Guidelines.

Impact 3.7-4.1: Adverse Effects on Special-Status Species During Operations

Implementation of Mitigation Measures MM-BIO-1 and MM-BIO-5 would reduce the impact on special-status species generated by project operation to a less than significant level. Thus, Metro adopts CEQA

Finding 1, as identified in Section 3 above and in Section 15091, subdivision (a)(1) of the CEQA Guidelines.

Impact 3.7-4.1: Conflicts with Local Policies or Ordinances Protecting Biological Resources During Construction

Implementation of Mitigation Measures MM-BIO-1 and MM-BIO-5 would ensure that construction of the project would not conflict with the Open Space Preserved established by the City of Torrance for southern tarplant. Thus, Metro adopts CEQA Finding 1, as identified in Section 3 above and in Section 15091, subdivision (a)(1) of the CEQA Guidelines.

Impact 3.7-4.1: Conflicts with Local Policies or Ordinances Protecting Biological Resources During Operation

Implementation of Mitigation Measures MM-BIO-1 and MM-BIO-5 would be implemented prior to operation of the project, which would ensure that operation of the project does not conflict with the Open Space Preserve. Thus, Metro adopts CEQA Finding 1, as identified in Section 3 above and in Section 15091, subdivision (a)(1) of the CEQA Guidelines.

5.4. GEOLOGY, SOILS, AND PALEONTOLOGICAL RESOURCES

The project would have a less than significant impact with mitigation related to geology, soils, and paleontological resources with respect to the following significance thresholds:

- > Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? (Impact 3.8-4.9)

Impact

Impact 3.8-4.9: Destroy A Paleontological/Geologic Feature During Construction

The northern section of the RSA is underlain by an older Quaternary alluvium geologic unit (Qoa) that has high paleontological sensitivity. Grading and excavation activities within this formation could cause potentially significant impacts to paleontological resources, should they be encountered and destroyed without intervention. For these locations, Mitigation Measure MM-GEO-1 (Engage a Qualified Paleontological Resources Specialist) would be implemented, which would require hiring a qualified paleontologist to monitor grading and excavation within highly sensitive geologic formations (or direct subsurface microfossil testing when subsurface soil observation is not possible). In the event of a discovery, MM-GEO-1 would require temporary halting of activities, examination of the discovery, and documentation and treatment of finds, as determined by the qualified paleontologist. Therefore, with implementation of MM-GEO-1, impacts would be reduced to less than significant.

References in the Draft and Final EIR

- > Section 3.8, Geology, Soils, and Paleontological Resources, Subsection 3.8-4.9.1 of the Draft EIR
- > Chapter 4, Corrections and Additions, of the Final EIR

Mitigation Measures

MM-GEO-1: Engage a Qualified Paleontological Resources Specialist

Grading and excavation equating to 1,000 cubic yards or more at depths of 13 feet or greater within highly sensitive Qoa geologic formation shall require monitoring by a qualified paleontologist, including the following measures:

> Prior to beginning any work that requires paleontological monitoring:

- Metro shall retain the services of a qualified paleontologist meeting the standards of the Society of Vertebrate Paleontology (SVP) to compose a Paleontological Resources Monitoring and Mitigation Plan (PRMMP) identifying the steps to be taken in the event of the inadvertent discovery of paleontological resources.
- A preconstruction meeting will be held that includes the qualified paleontologist, Construction Manager and/or Grading Contractor, and other appropriate personnel so the qualified paleontologist can make comments and/or suggestions concerning the monitoring program to the Construction Manager and/or Grading Contractor.
- The qualified paleontologist will (at that meeting or subsequently) submit to the Project Manager a copy of the site/grading plan (reduced to 11 x 17 inches) that identifies areas to be monitored as well as areas that may require delineation of grading limits.
- The qualified paleontologist will also coordinate with the Project Manager on the construction schedule to identify when and where monitoring is to begin and to specify the start date for monitoring.

> The qualified paleontologist will document monitoring activity on a standardized form. A record of daily activity will be sent to Metro and the Project Manager each month.

> The qualified paleontologist will be present initially during all earth-moving activities. After 50 percent of the excavations are complete within the unit, if no significant fossils have been recovered, the level of monitoring may be reduced or suspended entirely at the qualified paleontologist's discretion and in consultation with Metro.

> At locations where sensitive subsurface soils cannot be observed during ground disturbing activities, such as driving of piles, a subsurface investigation to test for the presence or absence of microfossils should be implemented under the direction of a qualified paleontologist following SVP guidelines. Prior to the start of ground disturbance, mechanical coring, or other methods determined appropriate by the paleontologist, will be used to collect a test sample of 600 lbs. (0.4 cubic yards) to be wet screened. In the event fossil remains are identified, two standard samples of 6,000 lbs. each (4.0 cubic yards) shall be collected for processing following SVP guidelines for microfossil salvage.

> Discoveries

- Discovery Process – In the event of a discovery, and when requested by the qualified paleontologist, the Project Manager will be contacted and will divert, direct, or temporarily halt ground-disturbing activities in the area of discovery to allow for preliminary evaluation of potentially significant paleontological resources. The paleontologist will also immediately notify Metro of such findings at the time of discovery.
- Determination of Significance – The significance of the discovered resources will be determined by the paleontologist in consultation with the Project Manager and Metro, who must concur with the evaluation before grading activities will be allowed to resume.
- Documentation and Treatment of Finds – Based on the scientific value and/or uniqueness of the find, the qualified paleontologist may record the find and allow work to continue, or recommend salvage and recovery of the fossil. If treatment and salvage are required,

recommendations will be consistent with SVP 2015 guidelines and currently accepted scientific practice. Work in the affected area may resume once the fossil has been assessed and/or salvaged and a paleontological monitor is present.

- > Notification of Completion – The paleontologist will notify Metro in writing of the end date of monitoring.
- > Handling and Curation of Significant Paleontological Specimens and Letter of Acceptance – The paleontologist will ensure that all significant fossils collected are appropriately prepared and permanently curated with an appropriate institution, and that a letter of acceptance from the curation institution has been submitted to Metro.
- > Final Results Reports (Monitoring and Research Design and Recovery Program) – Prior to completion of the Proposed Project, two copies of the Final Results Report (even if no significant resources were found) and/or evaluation report, if applicable, which describe the results, analysis, and conclusions of the Paleontological Monitoring Program (with appropriate graphics) will be submitted to Metro for approval.

Finding

Impact 3.8-4.9: Destroy A Paleontological/Geologic Feature During Construction

Implementation of Mitigation Measure MM-GEO-1 would reduce the impact to unique paleontological resources generated by project construction to a less than significant level. Thus, Metro adopts CEQA Finding 1, as identified in Section 3 above and in Section 15091, subdivision (a)(1) of the CEQA Guidelines.

5.5. CULTURAL RESOURCES

The project would have a less than significant impact with mitigation related to cultural resources with respect to the following significance thresholds:

- > Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5? (Impact 3.13-4.2)
- > Would the project disturb any human remains, including those interred outside of formal cemeteries? (Impact 3.13-4.3)

Impacts

Impact 3.13-4.2: Adverse Change to Archaeological Resources During Construction

Project construction is not likely to impact any known archaeological resources. The records search of the California Historical Resources Information System (CHRIS) identified one previously recorded resource, P-19-000100, within the RSAs. P-19-000100 is a prehistoric archaeological resource, represented by only two stones, that was recorded as one of a series of small prehistoric campsites in Torrance by F.H. Racer in 1939; however, the context related to the exact location of the resource and means of discovery are not fully known. It is possible that unknown archaeological resources lay buried throughout the RSA and could be impacted by project construction. The LPA has the potential to disturb or destroy a significant unknown archaeological resource. Mitigation Measure MM-CUL-1 (Cultural Resources Identification Training) would be implemented, which would require construction personnel to be trained in the identification of archaeological resources. Mitigation Measure MM-CUL-2 (Cultural Resources Monitoring and Mitigation Plan) would also be implemented, which would establish procedures to stop work in the event of an unanticipated discovery and ensure that discovered

resources would be avoided or treated in accordance with a treatment plan developed in consultation with Metro. With implementation of Mitigation Measures MM-CUL-1 and MM-CUL-2, the impact would be reduced to less than significant.

Impact 3.13-4.3: Disturb Human Remains During Construction

There are known cemeteries containing human remains within the RSA. However, the LPA has moderate sensitivity for encountering historic remains near El Nido Park and a low sensitivity for buried Native American archaeological deposits, which could include human remains. Human remains could be encountered in fill, re-deposited, or disturbed soils, as well as intact soils. Disturbance of significant unknown human remains would result in a significant impact. Mitigation Measure MM-CUL-3 (Unanticipated Discovery of Human Remains) would be implemented for construction near El Nido Park and Pacific Crest Cemetery, which would require monitoring in accordance with the Cultural Resources Monitoring and Mitigation Plan (CRMMP), as well as establish treatment measures and avoidance strategies for any remains that are identified. With implementation of Mitigation Measure MM-CUL-3, construction would result in a less than significant impact related to disturbance of human remains.

References in the Draft and Final EIR

- > Section 3.13, Cultural Resources, Subsections 3.13-4.2.1 and 3.13-4.3.1 of the Draft EIR
- > Chapter 4, Corrections and Additions, of the Final EIR

Mitigation Measures

MM-CUL-1: Cultural Resources Identification Training

Prior to the issuance of notice to proceed with construction, all construction personnel involved in ground-disturbing activities shall be provided with appropriate cultural resources training. The training shall instruct the personnel regarding the legal framework protecting cultural resources, typical kinds of cultural resources that may be found during construction, artifacts that would be considered potentially significant, and proper procedures and notifications if cultural resources and/or are inadvertently discovered. The training shall be prepared by a Secretary of the Interior (SOI) professionally qualified archaeologist, in consultation with interested Native American tribes consulting under Assembly Bill (AB) 52, who shall provide information on resources of interest to Native American tribes and include cultural resources and artifacts that would be considered potentially significant to ensure operator recognition of these materials during construction.

MM-CUL-2: Cultural Resources Monitoring and Mitigation Plan

Prior to the issuance of notice to proceed with construction, the construction contractor shall prepare, and Metro shall review and approve, a CRMMP. The CRMMP shall be prepared in consultation with a Secretary of the Interior-qualified archaeologist and interested Native American tribes consulting under AB 52.

At a minimum, the CRMMP shall:

- > Identify the areas where archaeological and Native American monitoring will occur, consistent with MM-CUL-3, and describe monitoring methods and reporting requirements.
- > Establish the protocol to follow in the event of an unanticipated discovery, requiring that, if an archaeological deposit is identified, the construction contractor shall stop construction within 50 feet of the exposed resource until a Secretary of Interior professionally qualified archaeologist can evaluate the find (see 36 CFR 800.11.1 and California Code of Regulations [CCR], Title 14, Section

15064.5[f]). If the resource is determined to be a historical resource (as defined in PRC Section 21084.1) or a unique archaeological resource (as defined in PRC Section 21083.2[g]), the CRMMP shall require:

- Avoidance of the resource, where feasible, through project redesign, preservation in place, capping or other methods consistent with Title 14, Section 15126.4(b)(3).
 - Where avoidance is not feasible, as determined by Metro, in light of factors such as the nature of the find, LPA design, costs, and other considerations, data recovery shall be implemented through excavation and documentation consistent with the Secretary of Interior's Standards for Archaeology and Historic Preservation (48 Fed. Res. 44716) and the State Office of Historic Preservation Standards.
- > Define performance standards requiring all data recovery efforts to obtain information necessary to address important research questions, that all recovered be cleaned, catalogued, and curated at a qualified repository that meets federal and state curation standards, and that a comprehensive technical report be prepared and filed with the South Central Coastal Information Center of the CHRIS.
- > Incorporate tribal consultation with Native American tribes consulting under AB 52.
- > Provide documentation and reporting protocols for submitting monitoring logs during construction and a final report documenting all findings to be submitted to Metro, consulting tribes, and CHRIS.

The CRMMP shall be implemented throughout all ground-disturbing activities in previously undisturbed areas or areas of deep excavation below the depth of prior disturbance (generally assumed to be 5 feet unless site-specific studies show a greater or lesser depth of prior disturbance), or as otherwise required by MM-CUL-3.

MM-CUL-3: Unanticipated Discovery of Human Remains

Archaeological and Native American monitoring (see MM-CUL-1 and MM-TCR-1) shall be required during all ground-disturbing activities in areas of excavation extending below the depth of prior disturbances, as defined in MM-CUL-2, and in areas adjacent to known cemeteries or other locations where the potential for encountering human remains is elevated, including El Nido Park (located between the Kingsdale Avenue and 186th Street cross section to 182nd Street) and the Pacific Crest Cemetery (2701 182nd Street). Archaeological monitoring shall be conducted in accordance with the Project CRMMP required by MM-CUL-2, which establishes monitoring methods, evaluation procedures, treatment, standards, and reporting requirements. If human remains and/or associated funerary objects are encountered, then work shall be halted within 50 feet of the find and California Health and Safety Code Section 5097.98 and PRC Section 5097.98 shall be followed, including immediate notification of the County Coroner and consultation with the Most Likely Descendent identified by the Native American Heritage Commissions.

Findings

Impact 3.13-4.2: Adverse Change to Archaeological Resources During Construction

Implementation of Mitigation Measures MM-CUL-1 and MM-CUL-2 would reduce the impact on archeological resources generated by project construction to a less than significant level. Thus, Metro adopts CEQA Finding 1, as identified in Section 3 above and in Section 15091, subdivision (a)(1) of the CEQA Guidelines.

Impact 3.13-4.3: Disturbance of Human Remains During Construction

Implementation of Mitigation Measure MM-CUL-3 would reduce the impact on human remains generated by project construction to a less than significant level. Thus, Metro adopts CEQA Finding 1, as identified in Section 3 above and in Section 15091, subdivision (a)(1) of the CEQA Guidelines.

5.6. TRIBAL CULTURAL RESOURCES

The project would have a less than significant impact with mitigation related to tribal cultural resources with respect to the following significance thresholds:

- > Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC Section 5020.1(k)? (Impact 3.14-4.1)
- > Would the project cause a substantial adverse change in the significance of a Tribal Cultural Resource, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe? (Impact 3.14-4.2)

Impacts

Impact 3.14-4.1: Substantial Adverse Change in The Significance of a Tribal Cultural Resource During Construction

Despite prior disturbances, the excavations associated with the LPA have the potential to adversely impact a significant tribal cultural resource. Thus, Mitigation Measure MM-TCR-1 (Native American Monitoring) would require retention of a Native American Monitor from, or approved by, consulting tribes under AB 52. Mitigation Measure MM-TCR-2 (Unanticipated Discovery of Tribal Cultural Resource Objects [Non-Funerary/Non-Ceremonial]), would establish procedures to stop work and determine treatment in consultation with the Native American monitor in the event of the discovery of non-funerary/non-ceremonial objects of Native American origin. Mitigation Measure MM-TCR-3 (Unanticipated Discovery of Human Remains and Associated Funerary or Ceremonial Objects), would establish procedures to stop work and determine treatment in consultation with the Native American monitor in the event of the discovery of funerary/ceremonial objects of Native American Origin. Therefore, with implementation of Mitigation Measures MM-TCR-1, MM-TCR-2, and MM-TCR-3, the impact would be reduced to less than significant.

Impact 3.14-4.2: Substantial Adverse Change in The Significance of a Tribal Cultural Resource Determined by a Lead Agency During Construction

No resources have been determined by Metro, in its discretion and supported by substantial evidence, to be significant tribal cultural resources within the RSA. However, excavations associated with construction have the potential to disturb and destroy an unknown significant tribal cultural resource. This disturbance of significant tribal cultural resources could result in a significant impact. Thus,

Mitigation Measures MM-TCR-1, MM-TCR-2, and MM-TCR-3 would be implemented. With implementation of Mitigation Measures MM-TCR-1, MM-TCR-2, and MM-TCR-3, the impact would be reduced to less than significant.

References in the Draft and Final EIR

- > Section 3.14, Tribal Cultural Resources, Subsections 3.14-4.1.1 and 3.14-4.2.1 of the Draft EIR
- > Chapter 4, Corrections and Additions, of the Final EIR

Mitigation Measures

MM-TCR-1: Native American Monitoring

Prior to the issuance of notice to proceed with construction, Metro shall document retention of a Native American Monitor from, or approved by, consulting tribes under AB 52.

Native American monitoring shall be required during all excavation that extends below the depth of prior disturbance, as defined in MM-CUL-2, and in any areas identified through the cultural resources search or tribal consultation as having higher potential for intact tribal cultural resources. Native American monitoring shall be conducted in coordination with archaeological monitoring required under MM-CUL-3 and consistent with the CRMMP prepared under MM-CUL-2.

If, after a good-faith effort, a qualified Native American monitor is not available at the time ground-disturbing activities are scheduled, construction may proceed with archaeological monitoring in accordance with MM-CUL-3, provided that consultation with the tribes continues regarding treatment of any tribal cultural resources identified. For the purposes of this measure, a good-faith effort shall consist of documented outreach to consulting tribes regarding the construction schedule, made at least 15 working days in advance of the ground-disturbance start date, with at least one follow-up attempt by phone or email if no response is received.

The Native American Monitor shall prepare monitoring documentation describing the relevant ground-disturbing activities, the type of construction activities performed, locations of ground-disturbing activities, locations of monitoring, soil types, and any cultural or tribal resources identified, including but not necessarily limited to, Native American cultural and historical artifacts, remains, places of significance, etc., as well as any discovered Native American (ancestral) human remains and burial goods. The documentation shall be prepared in accordance with the CRMMP and provided to Metro. Metro shall make the documentation available to consulting tribes upon request.

Native American monitoring may conclude when Metro determines, in consultation with the project archaeologist and consulting tribes, that all ground-disturbing activities with the potential to affect tribal cultural resources have been completed.

MM-TCR-2: Unanticipated Discovery of Tribal Cultural Resource Objects (Non-Funerary/Non-Ceremonial)

In the event that potential cultural material is discovered during ground-disturbing activities, all construction activities in the immediate vicinity of the discovery shall cease (i.e., not less than the surrounding 50 feet). The discovery shall be evaluated promptly by the archaeological and Native American monitors in accordance with the CRMMP required by MM-CUL-2. If the find is determined to be a tribal cultural resource under PRC Section 21074, Metro, in consultation with the monitors and consulting tribes under AB 52, shall determine appropriate treatment consistent with the protocols and performance standards set forth in MM-CUL-2. Preservation in place, including avoidance or protective

measures such as capping, shall be the preferred treatment. If preservation in place is not feasible, mitigation shall be implemented through data recovery and documentation in accordance with the SOI's Standards and CEQA Guidelines Section 15126.4(b), with tribal consultation to ensure culturally appropriate treatment.

MM-TCR-3: Unanticipated Discovery of Human Remains and Associated Funerary or Ceremonial Objects

Native American human remains are defined in PRC 5097.98 (d)(1) as an inhumation or cremation, and in any state of decomposition or skeletal completeness. Funerary objects, called associated grave goods in PRC Section 5097.98, are also to be treated according to this statute.

In the event that human remains or associated funerary objects are encountered during ground-disturbing activities, construction shall halt within 50 feet of the find. The discovery shall be addressed in accordance with the CRMMP required by MM-CUL-2 and the protocols set forth in MM-CUL-3. Consistent with California Health and Safety Code Section 7050.5, the County Coroner shall be notified immediately. If the remains are determined to be Native American, the Native American Heritage Commission shall be contacted, and consultation shall occur with the Most Likely Descendant identified by the Commission, pursuant to PRC Section 5097.98.

Native American human remains and associated funerary or ceremonial objects shall be treated together as a single burial unit under PRC Section 5097.98(d), with preservation in place as the preferred treatment.

If preservation in place is not feasible, the Most Likely Descendant, in consultation with Metro, shall determine culturally appropriate treatment in accordance with PRC Section 5097.98(d)(2). Any discovery of human remains/burial goods shall be kept confidential to prevent further disturbance.

Findings

Impact 3.14-4.1: Substantial Adverse Change in The Significance of a Tribal Cultural Resource During Construction

Implementation of Mitigation Measures MM-TCR-1, MM-TCR-2, and MM-TCR-3 would reduce the impact on tribal cultural resources from project construction to a less than significant level. Thus, Metro adopts CEQA Finding 1, as identified in Section 3 above and in Section 15091, subdivision (a)(1) of the CEQA Guidelines.

Impact 3.14-4.2: Substantial Adverse Change in The Significance of a Tribal Cultural Resource Determined by a Lead Agency During Construction

Implementation of Mitigation Measures MM-TCR-1, MM-TCR-2, and MM-TCR-3 would reduce the impact from project construction on unique tribal cultural resources as determined by a lead agency to a less than significant level. Thus, Metro adopts CEQA Finding 1, as identified in Section 3 above and in Section 15091, subdivision (a)(1) of the CEQA Guidelines.

6. FINDINGS FOR ENVIRONMENTAL IMPACTS FOUND TO BE LESS THAN SIGNIFICANT

This section discusses the impacts found to be less than significant, and no mitigation is required.

6.1. TRANSPORTATION

The project would have a less than significant impact related to transportation with respect to the following significance thresholds:

- > Will the project conflict with a program, plan ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities? (Impact 3.1-4.1)
- > Will the project conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b) [increase in VMT]? (Impact 3.1-4.2)
- > Will the project substantially increase hazards due to a geometric design feature or incompatible uses? (Impact 3.1-4.3)
- > Will the project result in inadequate emergency access? (Impact 3.1-4.4)

Impacts

Impact 3.1-4.1: Conflict with Plans During Construction

Given the temporary nature of construction, it is not expected that construction of the LPA would preclude any programs, plan ordinances, or policies addressing the circulation system. Construction will temporarily reduce travel lanes and has the potential to temporarily close access through railroad crossings, which could necessitate that traffic be detoured to another parallel route. Constructing the trenches at 170th Street in Lawndale and 182nd Street in Redondo Beach may require alternating full closures of roadways, and construction of the roadway bridges crossing the trenches would be phased so as not to simultaneously close parallel adjacent crossings. As part of Project Feature PF-T-1 (Construction Traffic Management Plan), prior to the initiation of localized project construction activities, construction traffic management plans (CTMPs) would be prepared. The CTMPs will specify street closure information, detour plans, haul routes, and staging plans and will include provisions for maintaining safe access or alternate routes of travel for all road users and transit. PF-T-1 reflects standard construction practice for Metro projects and provides part of the substantial evidence supporting the conclusion that the LPA would not conflict with a program, plan, or policy addressing the circulation system during construction. Therefore, a less than significant impact would occur.

Impact 3.1-4.1: Conflict with Plans During Operations

The LPA introduces a new transit option consistent with several local jurisdictions' transportation policy objectives, provides new bicycling and walking infrastructure along the Metro ROW, and offers an alternative to driving that is anticipated to reduce vehicle trips.

As described in the 2025 Ridership Summary Report, available on the Metro website, Metro has updated the operational scenario for the LPA to reflect the C-2 Operating Plan. This change affects only how Metro designates and operates its service lines and does not alter the LPA's physical features, alignment, station locations, construction methods, or operational characteristics relevant to environmental impacts (e.g., train frequency, electrical demand, or service hours). Ridership modeling under the C-2 Operating Plan shows improved connectivity within the regional rail network, resulting in

higher projected ridership and associated travel benefits. Therefore, the conclusions of the environmental analysis remain valid, and the LPA would continue to have a less than significant impact.

As described in Section 3.2 above, per CEQA Guidelines, § 15088.5(a), recirculation of an EIR is required only when “significant new information” is added to the EIR or the record, such as information showing that the project would result in new or substantially more severe significant environmental impacts, or that a feasible alternative or mitigation measure considerably different from those previously analyzed would substantially reduce one or more significant impacts are available but the project proponent declines to adopt it. The updates reflected in the C-2 Operating Plan do not trigger any of these conditions. Rather, the revised operating plan clarifies and updates the operational assumptions analyzed in the Draft EIR without changing the project’s physical characteristics, environmental setting, or mitigation commitments. (See Memorandum re: Vehicle Miles Traveled Correction to the C Line (Green) Extension to Torrance Project, October 2025). Accordingly, the new information does not constitute significant new information within the meaning of CEQA Guidelines section 15088.5, and recirculation of the EIR is not required.

Impact 3.1-4.2: Induce Vehicle Miles Traveled During Construction

Due to the temporary nature of construction traffic associated with the LPA, a substantial increase in vehicle miles traveled (VMT) would not be anticipated to result from construction. Given the temporary nature of construction industry jobs, the relatively large regional construction industry, and the total number of construction workers needed during any construction phase, it is likely that the labor force from within the region would be sufficient to complete the majority of project construction without a substantial influx of new workers and their families and would not result in a substantial increase in VMT. Therefore, construction of the LPA would not conflict or be inconsistent with CEQA Guidelines Section 15064.3 and there would be a less than significant impact.

Impact 3.1-4.2: Induce Vehicle Miles Traveled During Operations

Per CEQA Guidelines Section 15064.3(b), transportation projects that reduce or have no impact on VMT should be presumed to cause a less than significant transportation impact. As a non-automobile modal option, the LPA is expected to result in either a positive or neutral effect on VMT, resulting in consistency with CEQA Guidelines Section 15064.3(b). Thus, project operation would result in a less than significant impact.

Impact 3.1-4.3: Increase Hazards Due to Geometric Design During Construction

Project construction would introduce partial and full street closures and closed worksites on streets for construction activities, such as foundations and steel erection. Construction worksites would be fenced, and lane closures and associated lane tapers, temporary advance warning signs, detour signs, etc., would be implemented in accordance with the Part 6 (Temporary Traffic Control) of the California Manual on Uniform Traffic Control Devices (CAMUTCD) to ensure that no significant geometric design hazards are introduced during the construction period. As elements such as columns are constructed, the potential for visibility obstructions for road users could be introduced. As part of Project Feature PF-T-1, CTMPs would be prepared in compliance with the CAMUTCD. The CTMPs would provide for safe separation of road users from construction activities, ensure visibility of pedestrians and at marked or signalized crossings meets engineering standards, and if necessary, detour vehicles, pedestrians, and/or bicyclists along a safer route, minimizing inconvenience to the extent practical. PF-T-1 reflects standard construction practice for Metro projects and provides part of the substantial evidence supporting the conclusion that construction of the LPA would not substantially increase hazards due to a geometric design feature or incompatible uses. Accordingly, a less than significant impact would occur.

Impact 3.1-4.3: Increase Hazards Due to Geometric Design During Operations

The LPA would not include support columns for section of elevated guideway near intersections that obstruct a motorist's view of a crossing pedestrian as part of the elevated configuration portion of the alignment. Proposed bridges or columns are not expected to degrade visibility, as they would be sufficiently high or not within stopping distance of any signalized intersections. In addition, the two roadways that cross the trench portion of the alignment would be reconstructed as bridges over the trench with safe clearance and barriers to prevent road users from entering the trench. Eight existing freight crossings between Inglewood Avenue and 182nd Street would be upgraded with railroad crossing gates and warning devices consistent with CAMUTCD standards. Thus, project operation would not substantially increase hazards due to a geometric design feature or incompatible uses, and a less than significant impact would occur.

Impact 3.1-4.4: Inadequate Emergency Access During Construction

Project construction would occur in various phases, which would have different effects on the street system. Any temporary full or partial street closures during construction would, by necessity, increase traffic volumes on the detour routes, which could increase traffic congestion on those routes. However, the LPA is located in an established urban area that is well-served by the surrounding roadway network, and multiple routes exist parallel to the affected streets. Emergency vehicle drivers normally have a variety of options for avoiding traffic such as using sirens to clear a path of travel, driving in the lanes of opposing traffic or center turn lanes, and bypassing signals and stopped traffic. As part of Project Feature PF-T-1, CTMP would be prepared to maintain access in and around the project construction areas and component sites throughout all construction activities. PF-T-1 reflects standard construction practice for Metro projects and provides part of the substantial evidence supporting the conclusion that adequate emergency access would be maintained. Therefore, there would be a less than significant impact.

Impact 3.1-4.4: Inadequate Emergency Access During Operations

The LPA fully grade-separates the light rail and maintains the existing road network above the two trenches at 170th Street and 182nd Street. Thus, there would be no effect on emergency access. Existing freight rail crossings would remain at-grade and would not decrease emergency access compared to existing conditions. Existing freight rail service is generally infrequent (e.g., typically one to two trains per day) and potential blocking of crossings is rare. Therefore, there would be a less than significant impact.

References in the Draft and Final EIR

- > Section 3.1, Transportation, Subsections 3.1-4.1, 3.1-4.2, 3.1-4.3, and 3.1-4.4 of the Draft EIR
- > Chapter 4, Corrections and Additions, of the Final EIR

Project Features

PF-T-1. Construction Traffic Management Plan

The MRDC requires that contractors develop a CTMP prior to the initiation of localized construction activities. Per Metro standard practice, this CTMP (inclusive of street closure information, detour plans, haul routes, and a staging plan) shall be prepared and submitted to the Cities of Lawndale, Redondo Beach, and Torrance for review. For the Hawthorne Option, it would also be submitted to Caltrans. Caltrans would also review selected areas of the LPA, such as bridge construction over Hawthorne Boulevard. The CTMPs shall be based on the nature and timing of the specific construction activities at

each of the construction sites. This coordination will ensure construction activities of the concurrent related projects and associated hauling activities are managed in collaboration with one another and the project. The CTMPs may be updated during construction to reflect evolving conditions and site-specific needs. The CTMPs will include, but not be limited to, the following elements, as appropriate:

- > As traffic lane, parking lane, sidewalk closures and full road closures are anticipated, worksite traffic control plans, approved by the local jurisdictions and Caltrans, shall be developed and implemented to route vehicular traffic, bicyclists, and pedestrians around any such closures.
- > As partial and full street closures are anticipated at various locations during portions of the Project construction, detour plans, approved by the local jurisdictions, shall be developed and implemented to route vehicular traffic, pedestrians and bicyclists to alternative routes during these periods, including maintaining access for these modes across Hawthorne Boulevard during construction.
- > Ensure that vehicle and pedestrian access will remain available from at least one entry and egress point for properties in proximity to the LPA and component sites during construction with access to businesses maintained during normal business hours; nighttime closures may be possible and accordingly arranged with property owners.
- > Coordinate with the city and emergency service providers to ensure emergency access is provided to the LPA and component sites and neighboring land uses. Emergency access points will be marked accordingly in consultation with local fire departments, as applicable.
- > Provide off-site truck staging in a legal area furnished by the construction truck contractor.
- > Schedule deliveries and pick-ups of construction materials during non-peak travel periods to the extent possible and coordinate to reduce the potential of trucks waiting to load or unload for protracted periods.

Mitigation Measures

The impacts under the thresholds above will be less than significant, and mitigation measures are not required.

Findings

For the reasons stated above, Metro finds that these transportation impacts will be less than significant.

6.2. LAND USE AND PLANNING

The project would have a less than significant impact related to land use and planning with respect to the following significance thresholds:

- > Would the project physically divide an established community? (Impact 3.2-4.1)
- > Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect? (Impact 3.2-4.2)

Impacts

Impact 3.2-4.1: Divide an Established Community During Construction

Construction activities would likely cause disruptions in traffic flow, including road closures and potential traffic delays where construction activities would occur. Less substantial roadway construction activities that would occur for the LPA include construction of at-grade freight crossings, curb ramps,

striping, and signage. All construction impacts would be temporary, the duration of activity would be limited, and construction would be completed in phases, limiting their ability to divide the communities. As part of Project Feature PF-T-1, a CTMP would be prepared and implemented to maintain automobile, walking, bicycling, and other transportation access during all phases of construction. Consistent with Metro standard practice, the CTMP (including street closure information, detour plans, haul routes, and a staging plan) would be submitted to the Cities of Lawndale, Redondo Beach, and Torrance for review. PF-T-1 reflects standard construction practice and provides part of the substantial evidence supporting the conclusion that construction of the LPA would not physically divide an established community. Therefore, the impact would be less than significant.

Impact 3.2-4.1: Divide an Established Community During Operations

The key operational elements of the LPA that could impact the cohesion of an established community are light rail transit tracks, TPSS sites, fencing, realigned freight tracks, and stations. The majority of east-west streets along the corridor currently dead-end at the existing Metro ROW. Thus, the addition of a light rail line would not change the overall roadway network and connectivity within the RSA. Currently, the existing freight tracks run through a predominantly residential area in Lawndale, where safety fencing (required where adjacent to freight) is not maintained or has been breached, allowing local residents to cross the Metro ROW outside of the designated crossings and use the freight corridor for recreational activities. With the operation of the light rail line and rebuilding of freight track, local residents would no longer be able to freely cross the Metro ROW in areas where existing fencing is breached, as the LPA would include new or repaired security fencing and other barriers (such as soundwalls proposed as mitigation) adjacent to the light rail tracks. These barriers would restrict the current level of unauthorized pedestrian access into the Metro ROW, but they would not physically divide the community because residents would still be able to cross the Metro ROW at the existing crossings (159th, 160th, 161st, 162nd, 170th, and 182nd Streets), which would all be rebuilt with upgraded safety infrastructure for freight trains. As access across these existing east-west roadways would be maintained, the community would not be physically divided. Other project elements including stations, TPSS sites, and crossing equipment would not impede access. Thus, project operation would not divide an established community and less than significant impact would occur.

Impact 3.2-4.2: Conflict with Land Use Policy During Construction

Construction activities would be temporary and would not directly conflict with applicable regional and local land use plans, policies, and regulations adopted for the purpose of avoiding or mitigating an environmental effect. Further, the LPA would comply with all applicable regulations and local ordinances governing construction activities to the extent feasible. Therefore, construction of the LPA would have a less than significant impact.

Impact 3.2-4.2: Conflict with Land Use Policy During Operations

The LPA would not change the existing land use setting or conflict with the described plans and policies during operation. Additionally, the City of Redondo Beach's General Plan Circulation Element specifically calls for an extension of the Metro C Line as Policy P31. Thus, the LPA would have a less than significant impact.

References in the Draft and Final EIR

- > Section 3.2, Land Use and Planning, Subsections 3.2-4-1 and 3.2-4.2 of the Draft EIR
- > Chapter 4, Corrections and Additions, of the Final EIR

- > Chapter 5, Responses to Comments, Subsection 5.2-10, Major Topic Response MR-10: Changes to Community Character, of the Final EIR.

Project Features

None

Mitigation Measures

The impacts under the thresholds above would be less than significant, and mitigation measures are not required.

Findings

For the reasons stated above, Metro finds that these land use impacts would be less than significant.

6.3. AESTHETICS

The project would have a less than significant impact related to aesthetics with respect to the following significance thresholds:

- > In non-urbanized areas, would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality? (Impact 3.3-4.3)
- > Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area, or create new shade or shadows that would substantially affect outdoor recreation facilities or other public areas? (Impact 3.3-4.4)

Impacts

Impact 3.3-4.3: Degrade Existing Visual Character During Construction

Construction activities would include the addition of construction equipment, vehicles, signs, staging, and personnel within the RSA. Construction activities would result in site disturbances, partial or full demolition of existing structures, use and movement of heavy construction equipment, import and export of materials, and removal of vegetation, use of erosion devices, and installation of piles, columns, and piers. Construction would also require the temporary use of staging and laydown areas, and installation of temporary lighting and fencing. Overall, construction would represent a temporary change in the visual quality and character of the RSA, similar to other construction projects in the city. However, the existing visual quality is low to moderately low throughout the entire RSA and construction activities would not substantially degrade the visual quality of the immediate area.

As part of Project Feature PF-AES-1 (Local Zoning Ordinances), Metro will verify that construction activities occurring outside of the Metro and public ROWs comply with applicable zoning regulations within the Cities of Hawthorne, Lawndale, Redondo Beach, and Torrance throughout the duration of construction. PF-AES-1 reflects standard practice for Metro projects and provides part of the substantial evidence supporting the conclusion that the LPA would not conflict with applicable general plan policies or local codes governing scenic quality. Because construction would not substantially change the primarily urban views in the RSA, impacts during construction would be less than significant.

Impact 3.3-4.3: Degrade Existing Visual Character During Operations

Overall, project operation would represent a visual change as compared to existing conditions. However, the project corridor is located in a primarily urbanized area that provides a mix of architectural styles and land uses. Viewers in the RSA, such as pedestrians, residents, commuters, and patrons and employees of commercial businesses, would have a low to moderate sensitivity to this visual change. As part of Project Feature PF-AES-1 (Local Zoning Ordinances), all project components located on properties outside of the existing Metro and public ROWs would adhere to local zoning ordinances. As part of PF-AES-2 (Metro Design Standards), project components, including track guideway, auxiliary facilities, and stations, would be designed in accordance with Metro established design standards and consistent with Metro's Art Program Policy. Landscaping and operational lighting would also be provided, consistent with these standards. Together, PF-AES-1 and PF-AES-2 reflect Metro's standard commitments and provide part of the substantial evidence supporting the conclusion that the LPA would be consistent with the local policies regarding visual character and scenic quality. Therefore, the LPA would be consistent with zoning requirements and other regulations governing scenic quality, and the potential impact would be less than significant.

Impact 3.3-4.4: Create New Source of Substantial Light/Glare During Operation

The LPA is within an urbanized area with various sources of existing nighttime lighting. During operation, new light sources would include security lighting and point sources of lighting at the new stations that would contribute to the overall ambient nighttime lighting conditions in the RSA. However, the lighting would be comparable to existing lighting for the existing Redondo Beach (Marine) Station. As part of Project Feature PF-AES-2 (Metro Design Standards), all lighting would be designed consistent with Metro's established standards, including requirements that address operational lighting, and would also comply with applicable lighting regulations verified during the permitting process. PF-AES-2 reflects Metro's standard design commitments and provides part of the substantial evidence supporting the conclusion that the increase in light generated by the LPA would not adversely affect day or nighttime views in the area.

During operation, the LPA would include at-grade, elevated, and trench configurations throughout the alignment. Supporting columns would be required in order to support the elevated structures in the northern segment of the alignment. The shade and shadow pattern created by the elevated structures would change throughout the day and seasonally. An adverse shadow impact could occur when new shadows substantially affect existing outdoor recreation facilities, such as parks, playgrounds, or similar. Although there are several outdoor recreational facilities present within the RSA, none are located adjacent to the proposed elevated structures. At El Nido Park, the only outdoor recreation facility close enough to be considered for analysis, the light rail tracks would be transitioning from a trench to at-grade, and it would not cause an adverse shadow impact.

Accordingly, the LPA would have a less than significant impact related to light and glare, as well as shading and shadows during operation.

References in the Draft and Final EIR

- > Section 3.3, Aesthetics, Subsections 3.3-4.3 and 3.3-4.4.2 of the Draft EIR
- > Chapter 4, Corrections and Additions, of the Final EIR

Project Features

PF-AES-1. Local Zoning Ordinances

All project components located on properties outside of existing Metro ROW and public ROW would adhere to local zoning ordinances.

PF-AES-2. Metro Design Standards

All project components, including, but not limited to track guideway, auxiliary facilities, and station (public and ancillary) facilities will be designed per the MRDC and consistent with the objectives of the Metro Art Program Policy, Metro's Transit Service Policies & Standards, Systemwide Station Design Standards Policy, and Standard/Directive Drawings, or equivalent. Landscaping and operational lighting will also be installed consistent with these design standards.

Mitigation Measures

The impacts under the thresholds above would be less than significant, and mitigation measures are not required.

Findings

For the reasons stated above, Metro finds that these aesthetics impacts would be less than significant.

6.4. AIR QUALITY

The project would have a less than significant impact related to air quality with respect to the following significance thresholds:

- > Would the project conflict with or obstruct implementation of the applicable air quality plan? (Impact 3.4-4.1)
- > Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard? (Impact 3.4-4.2)
- > Would the project expose sensitive receptors to substantial pollutant concentrations? (Impact 3.4-4.3)
- > Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people? (Impact 3.4-4.4)

Impacts

Impact 3.4-4.1: Conflict with Air Quality Plans During Construction

Construction of the trench segment for the LPA under 170th and 182nd Streets would involve approximately 0.7 miles of excavation. Maximum daily emissions during construction of the LPA would be below applicable South Coast Air Quality Management District (SCAQMD) mass daily thresholds screening levels. The assessment used a scaling approach, applying a conservative estimate that the LPA would require up to 172 daily truckloads (344 one-way truck trips, generating approximately 63.3 pounds per day of emissions of nitrogen oxides [NO_x]) based on the volume of excavation and the forecasted schedule. When combined with other concurrent construction activities, the maximum daily NO_x emissions for the LPA would be approximately 84.2 pounds per day, which is below the SCAQMD threshold of 100 pounds per day. All other emissions would also be below the corresponding SCAQMD screening thresholds.

As part of Project Feature PF-AQ-1 (Metro Green Construction Policy Compliance), construction would adhere to Metro's Green Construction Policy for off-road equipment, generators, and on-road trucks. As part of Project Feature PF-AQ-2 (SCAQMD Rule 403 Compliance), construction would implement BMPs identified in SCAQMD Rule 403 to control and minimize fugitive dust. As part of Project Feature PF-AQ-3 (Metro Moving Beyond Sustainability Strategic Plan Compliance), construction would follow Metro's sustainability commitments, including renewable diesel requirements and opportunities to decarbonize fuel sources at construction sites. These project features reflect Metro's standard policies and practices and provide part of the substantial evidence supporting the conclusion that daily construction emissions would remain below applicable thresholds.

In addition, all heavy-duty trucks would comply with California Air Resources Board (CARB) Airborne Toxic Control Measure (ATCM) 2485—which limits the idling of vehicles to no more than five minutes in any particular location to reduce diesel emissions—and the Truck and Bus Regulation. Compliance with these requirements provide further evidence that maximum daily regional and localized emissions would remain below the applicable mass daily thresholds developed by the SCAQMD.

Construction would not introduce new growth in population or housing to the RSA. The project is programmed in the Southern California Association of Governments (SCAG) Connect SoCal 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) as a financially constrained project under the listing “Green Line South Bay Extension” (RTP ID 1TR1001), meaning that its implementation has been accounted for in the federally approved transportation conformity determinations for those planning documents.

Therefore, construction of the LPA would result in a less than significant impact related to air quality plan consistency.

Impact 3.4-4.1: Conflict with Air Quality Plans During Operations

The LPA would reduce on-road VMT associated with increased transit ridership, offsetting approximately 43,094 VMT relative to 2042 without project conditions on a daily basis through the displacement of passenger vehicle trips. The expansion of high-quality transit infrastructure and reduction of VMT that would occur with implementation of the LPA are key objectives of the SCAG RTP/SCS and would have a beneficial effect on air quality.

Project operations would not introduce new permanent growth in population or housing to the South Coast Air Basin (SCAB) or SCAG region. The extension of the light rail corridor would result in a marginal increase in regional electricity demand but would not require the expansion of Southern California Edison (SCE) capacity or substantial changes to its existing electrical infrastructure. The project is programmed in the financially constrained projects list in the Connect SoCal 2020–2045 RTP/SCS. Long-term operation of the project beginning in 2031 would not compromise the validity of the growth projections incorporated into the 2016 Air Quality Management Plan (AQMP) or the Connect SoCal 2020–2045 RTP/SCS. Therefore, operation of the LPA would result in a less than significant impact related to air quality plan consistency.

It should be noted that since the release of the Draft EIR, SCAG has released and adopted its 2024-2050 RTP/SCS, Connect SoCal 2024. The guiding policies, strategies, and regional planning assumptions in Connect SoCal 2024 are materially similar to those in the prior 2020-2045 RTP/SCS and continue to support development of high-capacity transit infrastructure, such as the LPA. (See Memorandum re: Regional Transportation Plan/Sustainable Communities Strategies Comparison, October 2025). Therefore, the LPA remains consistent with the RTP/SCS, including Connect SoCal 2024's emphasis on expanding transit, reducing VMT, and supporting compact, infill development.

Impact 3.4-4.2: Cumulative Net Increase of Criteria Pollutants During Construction

The RSA is currently designated as nonattainment for the National Ambient Air Quality Standards (NAAQS) for ozone (O₃), and particulate matter less than 2.5 microns in diameter (PM_{2.5}) and is designated nonattainment for the California Ambient Air Quality Standards (CAAQS) for O₃, particulate matter less than 10 microns in diameter (PM₁₀), and PM_{2.5}. CEQA requires that projects demonstrate that they will not generate emissions in excess of the air quality significance thresholds for O₃ precursors (volatile organic compounds [VOC] and NO_x) and PM₁₀ and PM_{2.5} to substantiate that they would not adversely contribute to the attainment of the air quality standards. Construction would not generate emissions in excess of any applicable SCAQMD regional-scale mass daily threshold established for the purpose of screening projects with less than significant air quality impacts. These emissions would also be considered less than significant at the cumulative level. Therefore, construction would result in a less than significant impact related to a cumulatively considerable net increase in emissions of O₃ precursors or particulate matter.

With respect to SCAG's adoption of its 2024-2050 RTP/SCS, Connect SoCal 2024, the travel demand modeling and growth forecasts used in the Draft EIR to reflect incremental population and employment growth in the study area and surrounding region remain valid for evaluating cumulative impacts. The differences between Connect SoCal 2024 and the Connect SoCal 2020-2045 RTP/SCS are not substantial enough to alter the environmental conclusions of the Draft EIR. Accordingly, an updated analysis using Connect SoCal 2024 as the basis for cumulative conditions is not required, as the results and findings would not be substantially different than what is presented in the Draft EIR.

Impact 3.4-4.2: Cumulative Net Increase of Criteria Pollutants During Operations

Operation of the LPA would not introduce a substantial permanent source of emissions to the RSA and would provide air quality benefits by replacing passenger vehicle trips with transit ridership. With a VMT reduction of 43,094 under the C-2 Operating Plan, the LPA would reduce air pollutant emissions as shown in Table 1.

Table 1. LPA Operations Emissions Analysis – 2042

	Criteria Pollutants					
	VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Daily Reduction in Emissions (lbs./day)	-0.6	-2.1	-53.6	-0.2	-5.7	-1.2

VOC = volatile organic compounds; NO_x = nitrous oxides; CO = carbon monoxide; SO_x = sulfur oxides; PM₁₀ = respirable particulate matter; PM_{2.5} = fine particulate matter

This would indirectly decrease regional emissions of O₃ precursors and particulate matter. Therefore, operation of the LPA would not result in a cumulatively considerable increase in nonattainment pollutant or precursor emissions, and this impact would be less than significant.

SCAG's adoption of the 2024-2050 RTP/SCS after the release of the Draft EIR does not alter the conclusions of the transportation cumulative impact analysis. Connect SoCal 2024 carries forward similar growth forecasts, land use patterns, and transportation priorities as the 2020-2045 RTP/SCS on which the EIR was based. (See Memorandum re: Regional Transportation Plan/Sustainable Communities Strategies Comparison, October 2025). Accordingly, the LPA remains consistent with applicable regional plans, and no new or more severe impacts would occur.

Impact 3.4-4.3: Pollutant Concentrations During Construction

The localized analysis assessed maximum daily emissions generated by construction activities by assuming 40 pieces of equipment per acre with receptors within 50 feet of the construction site boundary. As part of Project Feature PF-AQ-1 (Metro Green Construction Policy Compliance), all heavy-duty off-road equipment would be required to comply with the provisions of the Metro Green Construction Policy, which includes that engines meet Tier 4 emissions standards and use Level 3-equivalent diesel particulate filters, where feasible. Based on the requirements, maximum daily emissions of NO_x, carbon monoxide (CO), PM₁₀, and PM_{2.5} generated at construction sites would remain below the applicable corresponding SCAQMD Localized Significance Threshold screening values for all individual and combined activities analyzed. PF-AQ-1 also requires that all diesel-fueled off-road equipment would be required to have engines meeting Tier 4 emissions standards, which would substantially reduce emissions of diesel particulate matter and other toxic gases. Additionally, all off-road equipment would be required to limit idling to no more than five minutes to minimize excess emissions and would be maintained in accordance with the optimal manufacturer specifications. Other construction BMPs would limit diesel particulate emissions from on-road trucks near construction sites. These features reflect Metro's standard construction policies and provide part of the substantial evidence supporting the conclusion that pollutant concentrations would remain below localized thresholds.

Therefore, construction of the LPA would result in a less than significant impact regarding elevated concentrations of criteria pollutants and the occurrence of substantial toxic air contaminant concentrations at nearby sensitive receptor locations.

Impact 3.4-4.3: Pollutant Concentrations During Operations

No direct source of air pollutant emissions along the LPA alignment would occur as the light rail cars, stations, and systems and signals would be electrically powered and connected to the electrical grid. Minor stationary sources would be associated with the use of landscaping equipment and sanitation service vehicle trips at station facilities. Operations would not involve a facility where a significant number of vehicles would dwell at nearby intersections.

Project operation would reduce daily regional VMT by approximately 43,094 miles relative to the 2042 without project conditions, thereby decreasing daily mobile source air toxics (MSAT) emissions throughout the RSA.

Regarding CO hot-spots, although the SCAB is designated as a maintenance area for CO, it is no longer a pollutant of concern in the region. As indicated in the CARB EMFAC model, CO emission rates would be substantially less in the future when the project opens, compared to 2003 when CO attainment was demonstrated in the AQMP. Therefore, there is no potential for CO emissions to result in an exceedance of air quality standards.

Both light rail and freight train operations would generate small amounts of dust due to braking friction and resuspended particulates from trains passing over unpaved areas. However, these emissions would not result in a substantial increase in localized PM concentrations along the alignment near residential receptors. Additionally, the proposed soundwalls would serve as a physical barrier between adjacent residences and uses and would reduce dust dispersion and deposition into the surrounding communities.

Therefore, operations would result in a less than significant impact related to criteria pollutant concentrations, toxic air contaminants, and CO hot-spots.

Impact 3.4-4.4: Adverse Other Emissions During Construction

Construction activities would not generate a substantial source of construction odors or visible dust plumes. Construction would result in temporary exhaust fumes through gasoline- or diesel-powered equipment and asphalt paving. Such emissions would occur intermittently, and associated odors would dissipate rapidly within the immediate vicinity of the work area. As part of Project Feature PF-AQ-1 (Metro Green Construction Policy Compliance), construction would follow Metro's Green Construction Policy, including use of BMPs to address emissions from construction equipment, and would comply with SCAQMD Rule 402 (Nuisance) regarding odors and dust. PF-AQ-1 reflects Metro's standard construction policy and provides part of the substantial evidence supporting the conclusion that construction activities would not result in nuisance odors or visible dust plumes.

Therefore, construction of the LPA would result in a less than significant impact related to public nuisance for odors or visible dust plumes.

Impact 3.4-4.4: Adverse Other Emissions During Operations

Operations would not involve a substantial source of odorous or particulate emissions that could cause public nuisances. Any unpleasant odors from transit operations would be subject to management under the odor complaint tracking system mandated by SCAQMD Rule 402 (Nuisance), which prevents nuisance odor conditions. With regards to the experience of future transit riders, Metro's heavy and light rail cars use high-efficiency air filters rated at MERV-8 or higher that recirculate air every two to four minutes. The onboard filtration systems would prevent the occurrence of persistent odors affecting future transit riders. As a result, operation of the LPA would have a minor, if any, impact with respect to odors. Therefore, the LPA would result in a less than significant impact related to operational odors.

References in the Draft and Final EIR

- > Section 3.4 Air Quality, Subsections 3.4-4-1, 3.4-4.2, 3.4-4.3, 3.4-4.4 of the Draft EIR
- > Chapter 4, Corrections and Additions, of the Final EIR

Project Features

PF-AQ-1. Metro Green Construction Policy Compliance

Following construction equipment requirements, construction BMPs and implementation strategies for all construction projects performed on Metro properties or rights-of-way.

- > Construction equipment shall incorporate, where feasible, emissions-reducing technology such as hybrid drives and specific fuel economy standards.
- > Maintain equipment according to manufacturer specifications.
- > Idling of construction equipment and heavy-duty trucks shall be restricted to a maximum of five minutes when not in use (certain exceptions apply based on CARB exemptions).
- > All off-road diesel-powered construction equipment greater than 50 horsepower (hp) shall meet Tier-4 off-road emission standards at a minimum.
- > All on-road heavy-duty trucks with a gross vehicle weight rating greater than or equal to 14,000 pounds must have engines meeting U.S. 2010 on-road emission standards.
- > Where applicable and feasible, work with local jurisdictions to improve traffic flow by signal synchronization during construction activities.

- > Use electric power in lieu of diesel power where available.
- > Generators: every effort shall be made to utilize grid-based electric power at any construction site, where feasible. Where access to the power grid is not available, on-site generators must:
 - Meet a 0.01 gram per brake-horsepower-hour (g/bhp-hr) standard for PM; or,
 - Be equipped with Best Available Control Technology (BACT) for PM emissions reductions.
- > Inspections: Metro shall conduct inspections of construction sites and affected off-road and on-road equipment and generator as well as compliance with air quality rules.
- > Records: Prior to Notice to Proceed (NTP) to commence construction and to be verified afterwards consistent with project contract requirements and through enforcement provisions above, the Contractor shall submit to Metro the following information for all construction equipment to be used on Metro properties or rights-of-way:
 - A certified statement that all construction equipment used conform to the requirements specified above;
 - A list of all the equipment and vehicles (i.e., off-road equipment, include the CARB-issued Equipment Identification Number) to be used;
 - A copy of each Contractor's certified U.S. Environmental Protection Agency (USEPA) rating and applicable paperwork issued either by CARB, the SCAQMD, and any other jurisdiction that has oversight over the equipment.

PF-AQ-2. SCAQMD Rule 403 Compliance

Construction of the project would implement the following BMPs in compliance with SCAQMD Rule 403 – Fugitive Dust:

- > Backfilling: Backfill material stabilization when actively handling or inactive and stabilize soil at completion of activity.
- > Clearing/Grubbing: Maintain stability of soil through watering of site prior to, during, and after all clearing/grubbing activities.
- > Cut and Fill: Pre-water soils prior to cut and fill activities using water trucks; stabilize soil during and after activities.
- > Debris Hauling: All trucks hauling dirt, sand, soil, or other loose materials are to be tarped with a fabric cover and maintain a freeboard height of 12 inches.
- > Demolition Activities: Prohibit demolition activities when wind speeds exceed 25 mph; apply water to disturbed soils after demolition is completed or at the end of each day of cleanup.
- > Disturbed Soil: Stabilize disturbed soil throughout the construction site by limiting vehicular traffic and disturbance on soil where possible and applying water or a stabilizing agent in sufficient quantities to prevent the generation of visible dust plumes (Rule 401 – Visible Emissions).
- > Disturbed Surface Areas: Apply dust suppression in sufficient quantity and frequency to maintain a stabilized surface; apply water at three-hour intervals to at least 80% of the un-stabilized area.

- > Earth-Moving Activities: Pre-apply water to depth of proposed cuts and reapply as necessary to maintain soils in a damp condition and to ensure that visible dust plumes do not exceed 100 feet in any direction.
- > Importing/Exporting of Bulk Materials: Stabilize material with tarps or other suitable enclosures on trucks while loading/unloading to reduce fugitive dust emissions and maintain at least six inches of freeboard on haul vehicle; provide water during loading/unloading to prevent dust plumes.
- > Staging Areas and Unpaved Roads: Stabilize surface areas and limit vehicle speeds to 15 miles per hour.
- > Stockpiles/Bulk Material Handling: Stabilize stockpiled materials with intermittent watering and limit stockpiles to eight feet in height within 100 yards of off-site occupied buildings.
- > Trenching: Stabilize surface soils with pre-watering where trencher or excavator and support equipment will operate; wash mud and soils from equipment at completion of activities.

PF-AQ-3. Metro Moving Beyond Sustainability Strategic Plan Compliance

Construction and operation of the project will adhere to the commitments established by the Metro Moving Beyond Sustainability Strategic Plan 2020, including, but not limited to the application of renewable diesel requirements for contractors and identify opportunities to decarbonize fuel sources at construction sites.

PF-AQ-4. Metro Rail Design Guidelines

The project will be designed in accordance with the MRDC and the Metro Systemwide Station Design Standards Policy, which includes the installation of high-efficiency light emitting diode (LED) lighting in all fixtures to reduce electricity consumption.

Mitigation Measures

The impacts under the thresholds above would be less than significant, and mitigation measures are not required.

Findings

For the reasons stated above, Metro finds that these air quality impacts would be less than significant.

6.5. GREENHOUSE GAS EMISSIONS

The project would have a less than significant impact related to GHG emissions with respect to the following significance thresholds:

- > Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment? (Impact 3.5-4.1)
- > Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs? (Impact 3.5-4.2)

Impacts

Impact 3.5-4.1: Generate Greenhouse Gas Emissions During Construction

Construction of the trench segment as part of the LPA under 170th and 182nd Streets would generate GHG emissions that would be offset over time through operational benefits, including reductions in regional on-road VMT. Construction of the LPA was estimated to generate approximately 15,250 metric

tons of carbon dioxide equivalent (MTCO₂e) over the duration of the construction period. The amortized construction emissions over a 30-year operational project lifetime would be approximately 508.3 MTCO₂e.² Construction-related GHG emissions under the LPA would be offset by the reductions in regional vehicle travel emissions within less than 10 years of operations. The magnitude of temporary construction-phase GHG emissions would not be sufficient to impede or delay the region's effort. Therefore, construction of the LPA would not conflict with any relevant plan for reducing GHG emissions and would result in a less than significant impact during construction.

Impact 3.5-4.1: Generate Greenhouse Gas Emissions During Operations

Implementation of the LPA under the C-2 Operating Plan would decrease regional on-road VMT by 43,094 daily miles through transportation mode shift, with an annual net GHG-emissions reduction of 1,833.58 MTCO₂e in 2042 due to displaced on-road vehicle trips. Long-term operation of the project would advance state, regional, and local initiatives to reduce GHG emissions by providing alternative modes of transportation and creating an efficient, well-connected public transit network to serve surrounding communities. The project is consistent with CARB plans and policies to reduce GHG emissions from passenger vehicles by providing alternative transportation modes for both local and regional trips. Implementation of the project and other planned transportation and transit improvements in the region are critical to achieving the Senate Bill (SB) 375 regional per capita targets for light duty vehicles. Therefore, implementation of the LPA would result in a less than significant impact related to the generation of GHG emissions.

Impact 3.5-4.2: Conflict With Emission Reduction Plans During Construction

Construction of the LPA would temporarily generate GHG emissions associated with off- road equipment and on-road vehicle activities, and following completion of the light rail transit corridor, sources involved in construction activities would no longer produce emissions associated with the LPA. The cumulative nature of GHG emissions implicitly precludes the potential for short-term emissions generated during construction to interfere with long-term GHG-emission-reduction targets established by state, regional, and local planning documentation. In accordance with SCAQMD guidance, the GHG emissions that would be generated during construction were amortized over a 30-year operational lifetime and considered in conjunction with the long-term operational effects of the project. Therefore, the LPA is consistent with the SCAG RTP/SCS, and would result in a less than significant impact related to regional GHG reductions.

Impact 3.5-4.2: Conflict With Emission Reduction Plans During Construction

Implementation of the LPA would directly contribute to the statewide efforts to reduce light-duty automobile VMT, inducing a daily displacement of approximately 43,094 light-duty vehicle miles. The LPA would provide an expansion of light rail transit service that would directly increase transit capacity,

² Chapter 4, Corrections and Additions, of the Final EIR, subsection 4.21 (Evaluation of Alternatives) describes the LPA as generating approximately 95 percent of the hauling-related GHG emissions for the Trench Option, which was determined to result in a less than significant impact. The Final EIR based this percentage on a conservative number of haul trips and did not estimate the construction emissions specific to the LPA. This Findings of Fact presents a more refined analysis based on the LPA construction assumptions presented in Table 2.5-1 of the Final EIR.

which would support the SCAG RTP/SCS' goal of improved accessibility and mobility relative to the future (2042) baseline condition. By enhancing connectivity to the regional transit network, the LPA would result in environmental benefits and would accommodate further strategies to reduce emissions at the community level. The LPA supports transportation efforts to reduce VMT and achieve GHG-emission-reduction targets outlined in the CARB Climate Change Scoping Plan and the SCAG Connect SoCal 2020–2045 RTP/SCS. By default, Metro will prioritize and ensure consistency with its own 2019 Climate Action and Adaptation Plan (CAAP) and 2020 Moving Beyond Sustainability Strategic Plan for all projects being implemented. At the local level, the LPA alignment would traverse portions of the cities of Lawndale, Redondo Beach, and Torrance and would also comply with each city's GHG-reduction plan to the extent feasible. Therefore, the LPA would result in a less than significant impact related to GHG plan and policy conflicts.

Since the release of the Draft EIR, SCAG has released and adopted its 2024-2050 RTP/SCS, Connect SoCal 2024. The guiding policies, strategies, and regional planning assumptions in Connect SoCal 2024 are materially similar to those in the prior 2020-2045 RTP/SCS and continue to support development of high-capacity transit infrastructure, such as the LPA. Therefore, the LPA remains consistent with the RTP/SCS, including Connect SoCal 2024's emphasis on expanding transit, reducing VMT, and supporting compact, infill development.

References in the Draft and Final EIR

- > Section 3.5 Greenhouse Gas Emissions, Subsections 3.5-4.1 and 3.5-4.2 of the Draft EIR
- > Chapter 4, Corrections and Additions, of the Final EIR

Project Features

None

Mitigation Measures

The impacts under the thresholds above would be less than significant, and mitigation measures are not required.

Findings

For the reasons stated above, Metro finds that these GHG impacts would be less than significant.

6.6. GEOLOGY, SOILS, AND PALEONTOLOGICAL RESOURCES

The project would have a less than significant impact related to geology and soils with respect to the following significance thresholds:

- > Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking? (Impact 3.8-4.2)
- > Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction? (Impact 3.8-4-3)
- > Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides? (Impact 3.8-4.4)
- > Would the project result in substantial soil erosion or the loss of topsoil? (Impact 3.8-4.5)

- > Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse? (Impact 3.8-4.6)
- > Would the project be located on expansive soil, as defined in Section 1803.5.3 of the California Building Code¹, creating substantial direct or indirect risks to life or property? (Impact 3.8-4.7)

Impacts

Impact 3.8-4.2: Exposure to Strong Seismic Ground Shaking During Construction

Faults, such as the Palos Verdes and Newport-Inglewood Faults, which are the closest to the RSA are capable of producing earthquakes with magnitudes up to 7.7 and high ground accelerations. The RSA is approximately four miles east of the Palos Verdes and Newport-Inglewood Fault Zone. The construction of the LPA would involve the presence of construction workers at the site, thus increasing the potential risk of loss, injury, or death during a strong seismic event. However, given the intermittent and temporary nature of construction work and the relative rarity of strong seismic events in the region, the occurrence of strong seismic ground shaking during construction is unlikely. Therefore, construction of the LPA would have a less than significant impact related to risk of loss, injury, or death involving strong seismic ground shaking.

Impact 3.8-4.2: Exposure to Strong Seismic Ground Shaking During Operations

The LPA would be designed to accommodate the high seismic ground motion and associated consequences (such as liquefaction-induced vertical settlements/lateral spreading, if present). The structures would be designed to perform in accordance with the MRDC maximum design earthquake (MDE) and operating design earthquake (ODE) thresholds. As part of PF-GEO-1 (Metro Geotechnical Design Standards), site-specific geotechnical investigations would be performed in accordance with MRDC Section 5.6. The results of these investigations would be incorporated into the project's final design to address seismic demands and provide appropriate engineering solutions. Also, the LPA would comply with the latest applicable local and state building codes and regulations. PF-GEO-1 reflects Metro's established design standards and provides part of the substantial evidence supporting the conclusion that the project will be designed to withstand strong seismic ground shaking. Therefore, there would be a less than significant impact related to the risk of loss, injury, or death involving strong seismic ground shaking for the LPA during operations.

Impact 3.8-4.3: Liquefaction During Construction

The LPA is not located within a liquefaction zone mapped by the California Geological Survey (CGS). However, shallow groundwater was recorded in the northern area of the project footprint based on the existing geotechnical data. Based on review of the historically highest groundwater levels at the site, the groundwater depth will be 30 feet below ground surface (bgs) or deeper. As part of Project Feature PF-GEO-1 (Metro Geotechnical Design Standards), site-specific geotechnical investigations would be performed during final design to verify the potential for liquefaction and to incorporate appropriate design enhancements, if needed, to address identified conditions. PF-GEO-1 reflects Metro's established design requirements and provides part of the substantial evidence supporting the conclusion that the LPA would be designed to accommodate any liquefaction risk. Given the intermittent and temporary nature of construction work and the relative rarity of seismic events, the occurrence of seismic ground shaking resulting in liquefaction during construction of the LPA is unlikely. Therefore, risk of loss, injury, or death involving seismic-related ground failure, including liquefaction, as a result of the construction of the LPA is less than significant.

Impact 3.8-4.3: Liquefaction During Operations

The LPA would not involve any type of operational activities that would result in seismic-related ground failure, including liquefaction, during operation. As part of Project Feature PF-GEO-1 (Metro Geotechnical Design Standards), the LPA would be designed and constructed to meet Metro's seismic design criteria, incorporating site-specific geotechnical investigations and engineering measures to ensure structures are seismically resistant and capable of withstanding liquefaction and its effects during operation. PF-GEO-1 reflects Metro's established design standards and provides part of the substantial evidence supporting the conclusion that the LPA would be seismically resilient. Therefore, the LPA would have a less than significant impact related to seismic related failures, including liquefaction during operation.

Impact 3.8-4.4: Landslides During Construction

The RSA is located in a relatively low relief area, and the nearest CGS-mapped landslide zone is over 1.5 miles west and south. Therefore, there is no mapped landslide potential for the LPA. However, construction activities for embankments and retaining walls have the potential to temporarily destabilize the soils surrounding the RSA and could result in seismically induced slope failures. As part of Project Feature PF-GEO-1 (Metro Geotechnical Design Standards), any permanent unretained and retained sloped areas within the RSA would be evaluated for geotechnical global stability under both static and seismic loading events in accordance with the MRDC. PF-GEO-1 reflects Metro's established design requirements and provides part of the substantial evidence supporting the conclusion that slopes would be designed and constructed to meet applicable stability standards. Given the intermittent and temporary nature of construction work and the relative rarity of seismic events, the occurrence of seismic ground shaking resulting in slope failure during construction of the LPA is unlikely. Therefore, the risk of loss, injury, or death due to landslides or seismically induced slope failures as a result of construction of the LPA would be less than significant.

Impact 3.8-4.4: Landslides During Operations

The LPA would not involve any operational activities that could directly or indirectly cause substantial adverse effects related to the risk of loss, injury, or death involving landslides. As part of Project Feature PF-GEO-1 (Metro Geotechnical Design Standards), slope stability analyses for the operational configuration of the LPA would be conducted and would account for all potential loading cases, including light train loads and earth pressures. PF-GEO-1 reflects Metro's established design requirements and provides part of the substantial evidence supporting the conclusion that slopes and associated structures would be designed and constructed to maintain stability during operation. Therefore, the risk of loss, injury, or death involving landslides or seismically induced slope failures as a result of the operation of the LPA would be less than significant.

Impact 3.8-4.5: Soil Erosion During Construction

Based on previous geotechnical data in the vicinity of the RSA, the surficial soils mainly consist of cohesionless coarse-grained soils that can be susceptible to erosion. Construction activities for embankments, retaining walls, aerial guideways, at-grade crossings, and station platforms would disturb topsoil and, therefore, could result in topsoil erosion. As part of Project Features PF-GEO-1 (Metro Geotechnical Design Standards), site-specific investigations would inform design and construction methods that account for soil stability. In addition, PF-HWQ-1 (Stormwater Pollution Prevention Plan [SWPPP] Implementation per Construction General Permit and MS4 Permit), provides for development and implementation of a SWPPP, including BMPs for soil stabilization and sediment control, consistent with applicable permit requirements. These project features reflect Metro's established design and

construction practices and provide part of the substantial evidence supporting the conclusion that erosion control measures would be in place throughout construction. Therefore, substantial soil erosion and loss of topsoil for the LPA as a result of construction would be less than significant.

Impact 3.8-4.6: Unstable Geologic Units or Soils During Construction

The LPA is not located within a CGS-mapped liquefaction zone. The project footprint is generally in a relatively low relief area, and the nearest CGS-mapped landslide zone is over 1.5 miles west and south. Based on prior studies and existing geotechnical data, there is a low potential for subsidence and naturally occurring collapsible soils within the project area. Therefore, the LPA is not located on a geologic unit or soil that is unstable or would become unstable as a result of the LPA, and resulting impacts associated with unstable soils and their consequences are considered minimal. However, deep excavations for piles could encounter unconsolidated or water-saturated soils. Existing geotechnical investigations indicate that shallow groundwater was recorded in the northern portion of the project footprint. As part of PF-GEO-1 (Metro Geotechnical Design Standards), site-specific geotechnical investigations would be conducted during final design to assess the subsurface conditions and current groundwater depth. In accordance with PF-GEO-1, the results of these investigations would be incorporated into project design and construction, including evaluation of risks, such as landslides, lateral spreading, subsidence, liquefaction, and collapse, and use of appropriate engineering measures, such as deep foundations and ground improvements where necessary. PF-GEO-1 reflects Metro's established design standards and provides part of the substantial evidence supporting the conclusion that the LPA would be designed to address any unstable soil conditions identified. Given the intermittent and temporary nature of construction work and the relative rarity of seismic events, the occurrence of seismic ground shaking resulting in liquefaction, lateral spreading, landslides, or seismically induced slope failures during construction of the LPA is unlikely. In addition, there is no evidence of groundwater pumping within or around the project footprint that could cause ground subsidence, although this would be confirmed and evaluated during the final design phase. Therefore, the construction impacts for LPA would be less than significant on unstable soils as a result of landslides, lateral spreading, subsidence, liquefaction, or collapse.

Impact 3.8-4.6: Unstable Geologic Units or Soils During Operations

The LPA would not involve any activities during operation that could directly cause landslides, lateral spreading, subsidence, liquefaction, or collapse. As part of Project Feature PF-GEO-1 (Metro Geotechnical Design Standards), site-specific geotechnical investigations would be conducted during final design to evaluate conditions such as slope stability, subsidence potential, liquefaction susceptibility, and soil collapse. The findings of those investigations would be incorporated into the LPA's design and construction, with appropriate engineering measures applied where necessary to ensure long-term stability. PF-GEO-1 reflects Metro's established design requirements and provides part of the substantial evidence supporting the conclusion that the project will be designed and constructed to operate safely under expected geologic conditions. Therefore, landslides, lateral spreading, subsidence, liquefaction, or collapse would result in operational impacts for the LPA that are less than significant.

Impact 3.8-4.7: Expansive Soils During Construction

Based on available geotechnical data from previous geotechnical investigations in the vicinity of the RSA, the upper approximately 10 feet of soils along the entire alignment consists mainly of cohesionless coarse-grained soils. These coarse-grained soils have low expansion potential. However, deeper excavations (e.g., construction of retaining walls and station platforms) could encounter fine-grained soil

with higher expansive potential. As part of Project Feature PF-GEO-1 (Metro Geotechnical Design Standards), site-specific geotechnical investigations would be performed during final design to verify the presence of expansive soils, if any, and determine appropriate engineering responses as necessary. This could include measures such as removal and replacement of expansive soils or stabilization through lime or cement treatment, which would be incorporated into project construction as standard engineering practices. PF-GEO-1 reflects Metro's established design requirements and provides part of the substantial evidence supporting the conclusion that construction would be designed to address any expansive soils encountered. Therefore, the risk to life or property due to expansive soils during construction of the LPA is less than significant.

Impact 3.8-4.7: Expansive Soils During Operations

Operation of the LPA would not be adversely affected by expansive soils. As part of Project Feature PF-GEO-1 (Metro Geotechnical Design Standards), the LPA would be underlain by non-expansive engineered soil fills and/or treated on-site fill soils, and would be designed in compliance with MRDC and the latest state and local building codes. PF-GEO-1 reflects Metro's established design requirements and provides part of the substantial evidence supporting the conclusion that the project will be designed to address expansive soil conditions. Therefore, the LPA would result in less than significant impact as a result of operational activities.

References in the Draft and Final EIR

- > Section 3.8, Geology, Soils, and Paleontological Resources, Subsections 3.8-4.2, 3.8-4.3, 3.8-4.4, 3.8-4.5.1, 3.8-4.6, and 3.8-4.7 of the Draft EIR
- > Chapter 4, Corrections and Additions, of the Final EIR
- > Chapter 5, Responses to Comments, Subsection 5.2-13 Major-Topic Response MR-13: Soil Stability and Sinkholes, of the Final EIR

Project Features

PF-GEO-1. Metro Geotechnical Design Standards

Prior to construction, Metro will complete soil investigations, including examination of any potential sinkholes by the geotechnical engineer of record, to inform site-specific design and construction measures.

The project shall be designed and constructed per the MRDC. Key compliance sections of the MRDC relative to geology and soils are Section 5.3, Section 5.4, Section 5.6, and MRDC Section 5 Appendix, Metro Supplemental Seismic Design Criteria (SSDC). Section 5.6 of the MRDC provides detailed requirements for planning and conducting a geotechnical investigation, geotechnical design methodologies, and reporting. In accordance with the MRDC, geotechnical report recommendations shall be incorporated into the project plans and specifications. These recommendations shall be a product of final design and shall address potential subsurface hazards. In addition, Caltrans and the California Building Code (CBC) have independent design criteria for bridges, aerial structures and building structures, which shall be followed.

As noted in Section 3.8-1.2, SSDC outlined in the MRDC Section 5 appendix (Metro, 2017) recommends the seismic stability and potential permanent deformation of sloping ground or embankments supporting aerial guideway and bridges along the LPA be investigated. Investigations should include evaluation of the potential for ground liquefaction and related deformations. The evaluations and associated analyses shall be displacement-based leading to the determinations of potential lateral

deformations of slopes or embankments and ground settlement. It is recommended that the total settlement and lateral ground deformations under ODE seismic events shall not be allowed to exceed two inches to allow for track re-leveling or re-alignment. Larger deformations may be allowed for MDE events on a case-by-case basis on approval by Metro.

The MRDC section also provides details on how the stability analysis of the slopes and embankments is to be performed. Two options are provided: (1) seismic coefficient approach for pseudo-static case or (2) slope displacement method. If the factor of safety is less than 1.1, then slope performance shall be evaluated using Method (2) where displacements are computed using Newmark time-history analyses.

Metro SSDC outlined in the MRDC Section 5 appendix provides guidance for liquefaction studies. If potentially liquefiable soils are identified along the LPA, liquefaction susceptibility shall be determined using the procedures documented in the American Association of State Highway and Transportation Officials-California Load and Resistance Factor Design Bridge Design Specifications. The liquefaction potential assessment should consider the impact of the following effects where liquefaction is judged to occur:

- > Loss of strength of liquefied layers (post liquefaction residual strength)
- > Flow failures, slope deformations
- > Post liquefaction ground settlement

According to the SSDC, the displacement performance of slopes and embankments underlain by liquefied soils may be evaluated in a similar manner to non-liquefiable cases, except residual strengths of liquefied soils are used in analyses. The post-liquefaction settlement of liquefied soil layers may be determined using procedures documented by Tokimatsu and Seed (1987). The bridge and elevated rail structures located in liquefaction sites should be analyzed for non-liquefiable and liquefiable soil configurations. For the liquefiable condition, residual strengths of liquefied soil layers are used for lateral and axial deep foundation response analyses. For those sites where liquefaction related permanent lateral ground displacements are determined to occur, the effects on pile performance shall be evaluated. Down drag forces on piles due to post liquefaction settlement shall also be evaluated. If the above impact assessments yield unacceptable performance of the structures, appropriate measures shall be incorporated into the design.

As outlined in the MRDC Section 5.6, the geotechnical investigation should evaluate impacts related to potential settlement due to lowering of the groundwater table or excavation instability due to draining of perched groundwater during construction activities. Specific topics to be considered in the geotechnical investigation include the following:

- > Selection of appropriate construction methodology that minimizes permanent changes to sub-surface drainage conditions or groundwater pressures.
- > Installation of dewatering wells outside trench walls, sump pumps within the trench, deep secant pile walls to minimize excavation base instability, heaving of soils on the upgradient side of the trench, fluidization, and erosion.
- > Identification of zones of relatively high permeability strata with high potential to excessive groundwater influx and recommend construction methodology and design technologies such as keying secant pile walls into lower permeability strata.

Mitigation Measures

The impacts under the thresholds above would be less than significant, and mitigation measures are not required.

Findings

For the reasons stated above, Metro finds that these impacts related to geology and soils would be less than significant.

6.7. HAZARDS AND HAZARDOUS MATERIALS

The project would have a less than significant impact related to hazards and hazardous materials with respect to the following significance thresholds:

- > Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? (Impact 3.9-4.1)
- > Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? (Impact 3.9-4.2)
- > Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? (Impact 3.9-4.3)
- > Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? (Impact 3.9-4.4)
- > Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? (Impact 3.9-4.7)

Impacts

Impact 3.9-4.1: Hazardous Materials Transport During Construction

Construction equipment may inadvertently drip small quantities of hazardous materials (e.g., fuel oil and grease) and contaminate soil. Excavation and demolition of existing bridges would require the removal, transport, and disposal of soil and bridge materials that have potentially been contaminated by various contaminants of concern. The LPA would be in an active freight ROW, where historic railroad operations may have led to the presence of hazardous materials. The LPA includes several project features that reflect Metro's standard policies and contractor requirements on this subject. As part of PF-HHM-1 (Handling, Storage, and Transport of Hazardous Materials and Wastes), hazardous materials management plans detailing BMPs consistent with federal and state regulations for transport, storage, and use, and cleanup. As part of Project Feature PF-HHM-2 (Demolition Plans), demolition plans would be prepared detailing the procedures for asbestos-containing materials (ACM), lead-based paint (LBP), polychlorinated biphenyls (PCB), treated wood waste (TWW), and universal waste encountered during demolition activities in accordance with federal and state regulations. As part of Project Feature PF-HHM-3 (Property Acquisition Phase II Site Investigation), Phase II site investigations, including testing for aerially deposited lead (ADL) pursuant to ASTM International standards, would be performed to determine the presence of hazardous materials in soil on sites to be acquired, with necessary corrective action completed under agency oversight in compliance with federal and state regulations.

Contaminated groundwater from off-site sources could be encountered where pile foundations are installed for elevated structures. As part of Project Feature PF-HHM-4 (Soil, Soil Vapor, and Groundwater Management Plans), soil and soil vapor management plans would be developed consistent with Metro and regulatory requirements. Contaminated soil, if any, would be disposed of at a permitted landfill per the specifications of Department of Toxic Substances Control (DTSC) or Regional Water Quality Control Board (RWQCB) or other agencies overseeing project construction. As part of Project Feature PF-HHM-5 (Disposal of Groundwater), Metro would consult with the RWQCB to comply with all discharge permits, including the National Pollutant Discharge Elimination System (NPDES) permit, if contaminated groundwater is encountered. These project features provide part of the substantial evidence supporting the conclusion that hazardous materials would be handled in compliance with applicable federal, state, and local regulations. Therefore, impacts related to the transport, storage, use, or disposal of hazardous materials during construction would be less than significant.

Impact 3.9-4.1: Hazardous Materials Transport During Operations

Operation of the LPA would involve the occasional use, storage, and disposal of hazardous materials that could include limited quantities of maintenance vehicle fuels, oils, transmission fluids, paints, solvents, cleaners, and pesticides. The light rail transit vehicles are to be electrically powered and, therefore, would not use hazardous materials, such as diesel or natural gas, as fuel. The LPA would not generate significant amounts of hazardous materials that would require routine transport, use, or dispose of hazardous materials or create conditions involving the release of hazardous materials into the environment. As part of Project Feature PF-HHM-1 (Handling, Storage, and Transport of Hazardous Materials and Wastes), Metro would prepare and follow a hazardous materials management plan consistent with applicable regulatory requirements, including BMPs for transport, storage, use, and cleanup. PF-HHM-1 reflects Metro's established operational requirements and provides part of the substantial evidence supporting the conclusion that hazardous materials associated with LPA operation would be managed in compliance with applicable regulations. Therefore, the LPA would result in a less than significant impact related to routine transport, use, and disposal of hazardous materials during operation.

Impact 3.9-4.2: Release of Hazardous Materials into Environment During Construction

Oil and gas pipelines are located adjacent to the project corridor, and oil refineries are located near the southern end. Oil or gas could be released through spills during construction or rupture of a pipeline during construction, and such releases could pose potential fire and explosion hazards. At this phase of design, Metro has obtained as-built drawings from utility owners and developed preliminary plans for relocation or protect-in-place. To the greatest extent possible, pipelines and utilities would be protected in place during construction of the LPA, following all applicable safety regulations and utility owner standards regarding necessary clearances. Consistent with the MRDC, Metro would continue to coordinate with utility owners in future phases of design and present preliminary relocation concepts for affected facilities. Prior to and during construction, Metro and its contractors would follow established utility protection protocols and construction techniques and procedures to prevent accidental damage to underground utilities. As part of Project Feature PF-US-1 (Utility Identification and Coordination), all oil and gas pipelines within the Metro ROW would be identified and marked on-site in coordination with the utility owners prior to ground-disturbing activities. Metro would conduct additional surveys and potholing as needed to verify the relocation plans, which would avoid any conflicts with pipelines during construction. Utility agreements would be finalized to ensure the designs are prepared by third-party utility owners, and the final design layouts would be confirmed or adjusted as needed based on field verification conducted prior to construction. Anticipated levels of ground-

borne vibration during construction are below the levels at which damage to underground utilities could occur.

The LPA would traverse through small portions of Lawndale and Torrance oil fields. Construction activities in this area would involve constructing the at-grade light rail guideway and relocating the freight track and would not involve deep subsurface disturbance. There is one plugged and abandoned dry well hole within the RSA, but emissions are considered negligible. As part of PF-HHM-6 (Oil and Gas Wells), oil wells (including abandoned or suspected wells) within 200 feet of the LPA would be identified, inspected, and addressed in accordance with California Geologic Energy Management Division (CalGEM) standards and in coordination with the well owners.

Pile foundations for aerial structures could encounter potentially contaminated groundwater. As part of PF-HHM-4 (Soil, Soil Vapor, and Groundwater Management Plans) and PF-HHM-5 (Disposal of Groundwater), contaminated groundwater would be managed and disposed of in consultation with the RWQCB and in compliance with all applicable permits.

Other buried utilities could be disturbed during construction activities. Disturbance to the dry utilities could result in temporary interruptions of service, but would not cause the release of hazardous materials into the environment. Wet utilities, such as sewer lines or domestic water lines, if damaged, could release gray or black water and cause localized subsurface contamination. As part of PF-US-1, the contractor would coordinate with utility owners prior to construction and verify the location of existing utilities to avoid these conditions.

Together, these project features reflect Metro's established design and construction practices and provide part of the substantial evidence supporting the conclusion that utility-related hazards, including the potential release of hazardous materials during construction, would be effectively managed. Therefore, the impact would be less than significant.

Impact 3.9-4.2: Release of Hazardous Materials into Environment During Operations

Operation of the LPA would involve the occasional use and storage of routine detergents and cleansers for vehicle maintenance activities. There would also be potential for small quantities of fuels, oils, and transmission fluids to drip or spill from Metro support vehicles. Because only limited quantities of these materials would be stored and used on the project site, the potential for exposure of individuals to hazardous materials would be minimal. The LPA would not involve the use or storage of chemicals that have the potential to result in an off-site upset or accidental event.

The LPA would also not increase the risk of freight train derailment and, therefore, would not increase the risk of accidental release of hazardous materials in the unlikely event of such a derailment. The project would replace existing freight rails with modern rails, which would reduce the risk of track-related incidents. In addition, the light rail and freight trains would not pose a risk to underground utilities, as utilities affected by the LPA would have been either relocated during construction in compliance with utility setback requirements or protected in place using appropriate engineering measures. Vibration levels generated by the operation of light rail transit vehicles and freight trains during operation would remain well below thresholds known to cause damage to buried pipelines. Therefore, there would be a less than significant impact related to accident conditions involving the release of hazardous materials into the environment during operation.

Impact 3.9-4.3: Hazardous Materials Within Quarter-Mile of Schools During Construction

Several schools are located within one-quarter mile of the LPA, including RK Lloyd Continuation High School, Centinela Valley Independent Study School, Environmental Charter High School, William Green

Elementary School, Adams Middle School, Washington Elementary School, Franklin School, and the under-construction Friendship Campus.

Demolition of older structures could release ACMs. As part of Project Feature PF-HHM-2 (Demolition Plans), demolition activities would be carried out under demolition plans specifying the procedures for ACMs, LBP, PCB, TWW, and universal waste, consistent with federal and state regulations. Excavation of soils within the RSA that may be contaminated with VOCs would be subject to proper handling and disposal requirements. The hazardous waste and hazardous materials plan prepared as part of PF-HHM-1 would address the handling and transport of hazardous materials in compliance with applicable regulations, including SCAQMD Rule 1166. In addition, as part of Project Feature PF-AQ-1 (Metro Green Construction Policy Compliance), construction would comply with Metro's Green Construction Policy, including provisions for emissions controls and fugitive dust suppression.

Commercially available hazardous materials such as gasoline, brake fluids, coolants, and paints would also be used during construction. Standard equipment maintenance and good housekeeping practices would limit the potential for release. Any release of such substances, if it were to occur, would be localized and unlikely to pose a risk to nearby schools. Given the limited scale of these materials and the LPA components enacted as part of PF-HHM-1, PF-HHM-2, and PF-AQ-1, construction would not pose a risk to nearby schools.

Accordingly, construction of the LPA would result in a less than significant impact related to the potential to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of a school.

Impact 3.9-4.4: Hazardous Material Sites During Construction

Table 3.9-2 of the Draft EIR lists recognized environmental condition (REC) sites within the RSA that may have potential subsurface contamination that could be implicated by the proposed construction. Construction activities such as grading, or any other ground-disturbing activities could encounter contaminants or interfere with ongoing remediation efforts. Construction at sites with existing contamination could also result in the generation of additional waste materials and could expose workers to hazardous materials.

Project-related effects of hazardous-waste-containing chemical compounds would generally be limited to areas where the RECs have been identified or unanticipated contamination at unknown releases. The individuals most at-risk would be construction workers, or others in the immediate vicinity during excavation, transportation, or storage of hazardous wastes, or during demolition and construction. The exposure pathways through which these individuals could be exposed include inhalation, ingestion, or dermal contact.

The contractor would be required to implement federal and state handling and disposal regulations. As part of Project Feature PF-HHM-1 (Handling, Storage, and Transport of Hazardous Materials and Wastes), contractors would prepare and follow a hazardous materials management plan consistent with applicable federal and state requirements. As part of PF-HHM-4 (Soil, Soil Vapor, and Groundwater Management Plans), construction management plans would be prepared to address the handling of contaminated materials if encountered, consistent with applicable regulatory requirements and standard BMPs. As part of PF-HHM-3 (Property Acquisition Phase II Site Investigation), Phase II site investigations would be completed prior to construction for the sites identified in Table 3.9-2 of the Draft EIR, and the results would inform construction management plans for spoils in areas identified as contaminated. Additionally, as part of Project Feature PF-HHM-5 (Disposal of Groundwater), contaminated groundwater would be managed in consultation with regulatory agencies and in

compliance with applicable permits. These project features reflect Metro's standard practices and contractor specifications and provide part of the substantial evidence supporting the conclusion that construction activities would comply with federal and state handling and disposal regulations for hazardous materials. Therefore, the LPA would have a less than significant impact related to hazardous material sites during construction.

Impact 3.9-4.7: Interfere With Emergency Response Plans During Construction

As part of Project Feature PF-T-1 (Construction Traffic Management Plan), the contractor would prepare a CTMP addressing emergency access during construction. The CTMP would include street closure information, detour plans, haul routes, and a staging plan based on the nature and timing of specific construction activities at each of the construction sites. As PF-T-1 is a standard requirement of Metro projects, construction would be planned and coordinated to maintain emergency access and avoid conflicts with adopted emergency response or evacuation plans. Therefore, construction of the LPA would result in a less than significant impact related to impairment of an adopted emergency response plan or emergency evacuation route.

Impact 3.9-4.7: Interfere With Emergency Response Plans During Operations

The operation of the LPA would maintain or improve all existing freight crossings. The light rail would be fully grade-separated from all roadways and, therefore, would not create closures of any crossings during operations. Therefore, operation of the LPA would result in a less than significant impact to emergency response and evacuation plans.

References in the Draft and Final EIR

- > Section 3.9, Hazardous Materials, Subsections 3.9-4.1, 3.9-4.2, 3.9-4.3, 3.9-4.4 and 3.9-4.7 of the Draft EIR
- > Chapter 4, Corrections and Additions, of the Final EIR
- > Chapter 5, Responses to Comments, Subsection 5.2-7, Major Topic Response MR-7: Utility Relocation and Hazardous Materials Safety; Subsection 5.2-8, Major Topic Response Mr-8: Light Rail and Freight Train Safety; and Subsection 5.2-20: Major Topic Response 20: Proximity Impacts of Relocated Freight Tracks, of the Final EIR

Project Features

PF-HHM-1. Handling, Storage, and Transport of Hazardous Materials and Wastes

Prior to the start of construction, the contractor would provide Metro with a hazardous waste and hazardous materials management plan, such as a plan defined in Title 19 CCR, or a Spill Prevention, Control, and Countermeasure Plan. The plan will be completed to Metro contractor specifications and will comply with the State Water Resources Control Board (SWRCB) Construction Clean Water Act (CWA) Section 402 General Permit conditions and requirements for transport, labeling, containment, cover, and storage of hazardous materials during construction and operation. The plan will identify the responsible parties and outline procedures for hazardous waste and hazardous materials handling, storage, and transport. The excavation and transport of soils contaminated by heavy metals (e.g., lead) would be managed according to SCAQMD Rule 1466 (Control of Particulate Emissions from Soils with Toxic Air Contaminants) and SCAQMD Rule 1166 (VOC emissions from Decontamination of Soil). The plan would also prescribe BMPs to follow to prevent hazardous material releases and for cleanup of any hazardous material releases that may occur. The transportation of hazardous materials and waste shall be conducted in accordance with the applicable regulations codified in 49 CFR Parts 101, 106, 107, and

171 to 180, including, but not limited to, those related to packaging, pre-transportation functions, transportation functions, and functions not subject to the requirements of the federal Hazardous Materials Regulations.

Additionally, the contractor would comply with applicable federal and state regulations regarding hazardous material handling and storage practices, such as the Resource Conservation and Recovery Act, Comprehensive Environmental Response, Compensation, and Liability Act, the Hazardous Materials Release Response Plans and Inventory Law, and the Hazardous Waste Control Act.

PF-HHM-2. Demolition Plans

Prior to the start of construction, the contractor would prepare demolition plans for the safe dismantling and removal of roadways, building components, and debris. The demolition plans would also include plans for testing and abatement procedures for asbestos-containing materials, lead-based paint, and polychlorinated biphenyls, as well as handling and disposal of treated wood waste, such as creosote and arsenic-treated railroad ties, and universal waste in accordance with federal and state regulations, including the 1994 Federal Occupational Exposure to Asbestos Standards, SCAQMD Rule 1403 (Asbestos Emissions from Demolition/Renovation Activities), Title 22 CCR Division 4.5 (Hazardous Waste), the U.S. Department of Housing and Urban Development Lead- Based Paint Guidelines, and Title 40 of the Code of Federal Regulations Part 761.

PF-HHM-3. Property Acquisition Phase II Site Investigation

Consistent with Metro's standards, a Phase II site investigation would be conducted during the preliminary engineering phase on sites that would be acquired/utilized for the project to determine whether the suspected contamination had resulted in soil, groundwater, or soil vapor contamination exceeding regulatory action levels. Aerial deposited lead testing would be included as part of the Phase II site investigation. If the Phase II site investigation concludes that the site is contaminated, remediation or corrective action (e.g., removal of contamination, in-situ treatment, capping) would be conducted prior to or during construction under the oversight of federal, state, and/or local agencies (e.g., USEPA, DTSC, RWQCB, Los Angeles County) and in full compliance with current and applicable federal and state laws and regulations. Additionally, Voluntary Cleanup Agreements may be used for parcels where remediation or long-term monitoring is necessary. Generally, RECs, also known as sites of concern as identified in the Phase I Environmental Site Assessment (ESA), would be remediated by the property owner prior to acquisition of the property and construction on the site, depending on the arrangement negotiated during property acquisition.

PF-HHM-4. Soil, Soil Vapor, and Groundwater Management Plans

Prior to the start of construction, the contractor would retain a qualified environmental consultant to prepare a Soil Management Plan, Soil Reuse Management Plan, and/or a Soil, Soil Vapor, and Groundwater Management Plan. These plans would be completed to Metro's contractor specifications and submitted to Metro prior to any ground-disturbing activities for the Project.

The Soil and Soil Vapor Management Plan would establish provisions for the disturbance of contaminated materials (known and undocumented). Proper management and disposition of contaminated soils and gases would be determined in consultation with appropriate regulatory agencies and in accordance with applicable federal and/or state guidance (USEPA, DTSC, RWQCB, and other local agencies). The Soil Reuse Management Plan would establish provisions for the reuse of contaminated known or undocumented soils. Proper management and disposition of contaminated soils would be determined in consultation with appropriate regulatory agencies and in accordance with applicable

federal and/or state guidance (USEPA, DTSC, RWQCB, and other local agencies). Contaminated soil shall be disposed of at a permitted landfill per the specifications of DTSC or RWQCB or other agencies overseeing the project construction.

The Groundwater Management Plan would establish provisions for encountering and managing contaminated groundwater (known and undocumented). Proper disposal of contaminated groundwater would be determined in consultation with appropriate regulatory agencies and in accordance with applicable federal and/or state guidance (USEPA, DTSC, RWQCB, and other local agencies).

Where open or closed regulatory release cases are already managed by a regulatory agency (e.g., USEPA, DTSC, RWQCB) and construction involves plans to alter the use of the site and/or disturb contaminated soil and/or groundwater on-site, Metro would notify the regulatory agency of the planned land use changes prior to ground-disturbing activities at the location of the open or closed regulatory release site. The regulatory agency would determine the level of investigation and/or remediation (performance standards) necessary on a case-by-case basis. A closure or no further action determination letter from the regulatory agency would be obtained when investigation and/or remediation is complete.

PF-HHM-5. Disposal of Groundwater

If disposal of contaminated groundwater is required during construction, Metro would consult with the RWQCB, and the Project would comply with permits required by the RWQCB. The RWQCB may require a NPDES permit and/or WDR permit for dewatering and discharge activities. The County of Los Angeles Department of Public Works (LACDPW) would be contacted prior to discharging groundwater into their sewer or stormwater systems. The groundwater discharge and disposal requirements vary by agency, location, concentration, and contaminants of concern and are therefore developed in consultation with the agencies.

PF-HHM-6. Oil and Gas Wells

Prior to ground-disturbing activities, all oil wells (including abandoned or suspected wells) within 200 feet of the project would be identified, inspected, and addressed in accordance with the California Department of Conservation, CalGEM standards and in coordination with the well owners. Where the alignment cannot be adjusted to avoid well casings, CalGEM and a re-abandonment specialty contractor would be contacted to determine the appropriate method of re-abandoning the well. Oil well abandonment must proceed in accordance with California Laws for Conservation of Petroleum and Gas (1997), Division 3. Oil and Gas, Chapter 1. Oil and Gas Conservation, Article 4, Sections 3228, 3229, 3230, and 3232. The requirements include written notification to CalGEM, protection of adjacent property, and before commencing any work to abandon any well, obtaining approval by CalGEM. Abandonment work, including sealing off oil and gas bearing units, pressure grouting, etc., must be performed by a state-licensed contractor under the regulatory oversight and approval of CalGEM. If an unknown well is encountered during Project construction, the contractor will notify Metro, California OSHA, and CalGEM and proceed in accordance with state requirements.

Mitigation Measures

The impacts under the thresholds above would be less than significant, and mitigation measures are not required.

Findings

For the reasons stated above, Metro finds that these impacts related to hazards and hazardous materials would be less than significant.

6.8. HYDROLOGY AND WATER QUALITY

The project would have a less than significant impact related to hydrology and water quality with respect to the following significance thresholds:

- > Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality? (Impact 3.10-4.1)
- > Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin? (Impact 3.10-4.2)
- > Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces in a manner which would result in substantial erosion or siltation on- or off-site? (Impact 3.10-4.3)
- > Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces in a manner which would substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site? (Impact 3.10-4.4)
- > Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces in a manner which would create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? (Impact 3.10-4.5)
- > Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces in a manner which would impede or redirect flood flows? (Impact 3.10-4.6)
- > Would the project, in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation? (Impact 3.10-4.7)
- > Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan? (Impact 3.10-4.8)

Impacts

Impact 3.10-4.1: Degrade Water Quality During Construction

Project construction could introduce chemicals and/or hazardous substances from construction equipment into surface waters and groundwater. Dust and erosion resulting from soil exposure and disturbance during construction could lead to sedimentation of stormwater, and existing contaminants in newly exposed and eroded soil could also degrade surface water quality and groundwater quality. Introduction of these substances to receiving waters could exacerbate existing water quality impairments or introduce new water quality impairments. As part of Project Feature PF-HWQ-1 (SWPPP Implementation per Construction General Permit and MS4 Permit) Metro would prepare and implement

a SWPPP consistent with the Construction General Permit. The SWPPP would include BMPs for soil stabilization, sediment control, and pollution prevention to protect water quality during construction.

Where excavation encounters groundwater, as identified through Phase II site investigations pursuant to PF-HHM-3, Project Feature PF-HWQ-2 (Groundwater Treatment and Discharge per RWQCB Waste Discharge Requirements for Construction Dewatering), provides that dewatered groundwater would be treated, if necessary, and discharged in accordance with RWQCB requirements. In the trench segment, surface runoff would be collected, treated (if necessary), pumped out of the trench, and discharged to a pervious area on-site for infiltration into the soil in accordance with PF-HWQ-4 (Trench Construction Runoff Collection and Treatment). In addition, Project Feature PF-HWQ-5 (Temporary Storm Drain Inflow Rerouting), provides that stormwater inflows temporarily rerouted during construction would be captured, treated (if required), and discharged consistent with waste discharge requirements detailed in the MS4 Permit.

These project features reflect Metro's standard construction practices and regulatory compliance obligations and provide part of the substantial evidence supporting the conclusion that construction activities will be managed to meet applicable water quality requirements. Therefore, the LPA would have a less than significant impact during construction related to violation of water quality standards or discharge requirements or to degradation of water quality.

Impact 3.10-4.1: Degrade Water Quality During Operations

Operation of the LPA would increase impervious surfaces and human presence in the area, which could introduce new or exacerbate existing surface water quality impairments. Potential sources of water quality effects include sedimentation from runoff on new impervious surfaces; nitrates from landscape fertilizing; and trash, debris, or bacteria from increased human activity. As part of Project Feature PF-HWQ-6 (Low Impact Development [LID] BMPs per Regional Requirements), the LPA would be designed with LID measures sized to retain the stormwater quality design volume (SWQDv) on-site in accordance with regional requirements. Retained stormwater would infiltrate on-site only after being managed through LID BMPs, ensuring that infiltration does not degrade groundwater quality. PF-HWQ-6 also provides for continued maintenance of existing catch basins to prevent debris and trash from entering storm drains. In the trench segment, surface runoff would be collected, treated as necessary, and discharged to the storm drain system in accordance with Project Feature PF-HWQ-7 (Trench Operation Runoff Collection and Treatment). These features reflect Metro's standard design requirements for stormwater management.

Project operation would not involve direct contact with groundwater. The LPA's trench segment would be lined with impervious retaining walls and a paved bottom that would prevent groundwater from entering the trench in substantial volumes. Any incidental groundwater that does permeate the trench would be collected and, if necessary, treated and discharged in compliance with relevant requirements of the RWQCB. No contaminants would be stored within the trench, and Metro vehicles running within the trench would be serviced regularly off-site. Together, PF-HWQ-6 and PF-HWQ-7 provide part of the substantial evidence supporting the conclusion that stormwater and trench runoff would be managed consistent with applicable regulatory requirements. Therefore, the LPA would have a less than significant impact during operation related to violation of water quality standards or discharge requirements or to degradation of water quality.

Impact 3.10-4.2: Decrease Groundwater Supplies During Construction

Construction of the LPA would not substantially interfere with groundwater supplies or groundwater recharge. Construction would require some water for activities like dust control and concrete mixing;

this water would be sourced from local utility lines that may depend on groundwater for a portion of their water supply. However, the water needed for construction of the LPA would be extremely minimal and temporary and would not substantially decrease groundwater supplies.

Construction may also require groundwater dewatering during excavation activities. As part of Project Feature PF-HWQ-2 (Groundwater Treatment and Discharge per RWQCB Waste Discharge Requirements for Construction Dewatering), dewatered groundwater would be discharged in a pre-approved location consistent with RWQCB requirements. The volume of groundwater potentially requiring dewatering would be small relative to the overall size of the West Coast Subbasin, and because the water would be discharged within or close to the RSA, it would ultimately recharge the subbasin. Further, detention basins considered for implementation on-site under PF HWQ-6 (LID BMPs per Regional Requirements) would retain runoff and allow infiltration, thereby helping recharge groundwater supplies. Project Feature PF-HWQ-4 (Trench Construction Runoff Collection and Treatment) also provides for collection and discharge of trench runoff to pervious areas on-site, thereby further recharging the groundwater basin. Together, these project features reflect Metro's standard construction and design practices and provide part of the substantial evidence supporting the conclusion that construction of the LPA would not cause a substantial decrease in groundwater supplies or interfere with groundwater recharge. Therefore, the impact would be less than significant.

Impact 3.10-4.2: Decrease Groundwater Supplies During Operations

Operational water usage primarily involves routine cleaning of equipment within the above- or at-grade alignment and occasional power washing of the surface parking lot; this water would be sourced from local utility lines that may depend on groundwater for a portion of their water supply. Proposed water uses for construction and operation would be minimal compared to the basin's overall annual demand. The LPA would increase the percentage of impervious surfaces within the permanent footprint, which would be similar to the Trench Option (from 19% existing to 37% proposed), as discussed in Section 3.10-4.2.2 of the Draft EIR. This increase in impervious surfaces would reduce the total amount of pervious areas capable of groundwater recharge. As part of Project Feature PF-HWQ-6 (LID BMPs per Regional Requirements), the LPA would incorporate LID measures designed to retain the SWQDv on-site, supporting infiltration and groundwater recharge. In the trench segment, Project Feature PF-HWQ-7 (Trench Operation Runoff Collection and Treatment) provides that runoff exceeding the SWQDv would be collected, treated as necessary, and conveyed to the existing storm drain system in accordance with applicable regulatory requirements. The majority of runoff would be infiltrated on-site during project operation. These project features reflect Metro's standard design practices and provide part of the substantial evidence supporting the conclusion that most stormwater generated on-site during operation would be retained for infiltration, and overall, operational water use would be minimal relative to basin supplies. Therefore, operation of the LPA would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge, and the impact would be less than significant.

Impact 3.10-4.3: Substantial Erosion During Construction

Construction of the LPA would not result in substantial drainage pattern alteration such that erosion or siltation occurs. As part of Project Feature PF-HWQ-1 (SWPPP Implementation per Construction General Permit and MS4 Permit) a SWPPP would be prepared and implemented with measures to stabilize soil, control sediment, and manage stormwater consistent with regulatory requirements. These measures would also reduce stormwater runoff velocity, thereby limiting its capacity to result in erosion and siltation on- or off-site, including in sumps. In the trench segment, Project Feature PF-HWQ-4 (Trench

Construction Runoff Collection and Treatment) would provide for surface runoff to be collected and discharged in a controlled manner, consistent with Basin Plan requirements. Where trench runoff is directed to different discharge points than existing points, Project Feature PF-HWQ-5 (Temporary Storm Drain Inflow Rerouting) provides for collection and rerouting of inflows in a manner that avoids erosion or siltation impacts. These project features reflect Metro's standard construction and water quality practices and provide part of the substantial evidence supporting the conclusion that drainage patterns during construction would be managed consistent with applicable requirements. Thus, the LPA would result in a less than significant impact during construction related to erosion or siltation.

Impact 3.10-4.3: Substantial Erosion During Operations

The LPA would increase the percentage of impervious surfaces within the permanent footprint (from 19% existing to 37% proposed). As part of Project Feature PDF-HWQ-6 (LID BMPs per Regional Requirements), the LPA would incorporate LID measures designed to retain the SWQDv on-site, supporting infiltration and reducing uncontrolled runoff. In the trench segment, Project Feature PF-HWQ-7 (Trench Operation Runoff Collection and Treatment) provides for collection, treatment (if necessary), and conveyance of excess runoff to the storm drain in accordance with RWQCB requirements. These project features reflect Metro's standard operational stormwater practices and provide part of the substantial evidence supporting the conclusion that drainage patterns during operation would be managed consistent with applicable requirements. Thus, there would be a less than significant impact during operations related to erosion or siltation.

Impact 3.10-4.4: Surface Runoff During Construction

Project excavation, equipment laydown, and other ground-disturbing activities could alter the existing drainage pattern within the project footprint and concentrate or redirect surface runoff such that flooding occurs on- or off-site. However, substantial drainage alterations are not expected because significant natural and manmade drainage features are absent from the area and any changes in surface runoff would be temporary in nature. As part of Project Feature PF-HWQ-1 (SWPPP Implementation per Construction General Permit and MS4 Permit) construction would be conducted under a SWPPP with measures for soil stabilization, sediment control, and stormwater management consistent with permit requirements. These measures would manage runoff in a way that limits potential for localized flooding on- or off-site. In the trench segment, Project Feature PF-HWQ-4 (Trench Construction Runoff Collection and Treatment) provides for the collection and controlled discharge of surface runoff. Where storm drain inflows are temporarily rerouted during construction, Project Feature PF-HWQ-5 (Temporary Storm Drain Inflow Rerouting) provides for their capture, treatment if necessary, and discharge consistent with applicable requirements. These project features reflect Metro's standard construction and water quality practices and provide part of the substantial evidence supporting the conclusion that surface runoff during construction would be managed consistent with applicable regulatory requirements. Thus, the LPA would result in a less than significant impact related to flooding during construction.

Impact 3.10-4.4: Surface Runoff During Operations

The LPA would increase impervious surfaces compared to existing conditions, which could affect surface runoff and contribute to localized flooding if unmanaged. As part of Project Feature PF-HWQ-6 (LID BMPs per Regional Requirements), the LPA would incorporate LID measures designed to retain the SWQDv on-site in accordance with regional requirements. In the trench segment, Project Feature PF-HWQ-7 (Trench Operation Runoff Collection and Treatment) provides for excess runoff to be collected, treated if necessary, and discharged to existing storm drain facilities in compliance with RWQCB Basin

Plan requirements. These project features reflect Metro's standard operational stormwater practices and provide part of the substantial evidence supporting the conclusion that the LPA would not exceed stormwater drainage system capacity or generate additional polluted runoff. Thus, the LPA would result in a less than significant impact related to flooding during operation.

Impact 3.10-4.5: Stormwater Drainage Capacity During Construction

Construction activities such as excavation, equipment laydown, and other ground-disturbing activities could temporarily alter drainage patterns within the project footprint and concentrate or redirect surface runoff. These temporary alterations could increase volumes or flow rates and, if unmanaged, potentially exceed the capacity of the stormwater drainage system or introduce additional sources of polluted runoff. Project Feature PF-HWQ-1 (SWPPP Implementation per Construction General Permit and MS4 Permit) provides for stormwater BMPs that limit stormwater runoff velocity and control erosion and sedimentation during construction. Project Feature PF-HWQ-4 (Trench Construction Runoff Collection and Treatment) establishes collection and on-site infiltration of trench runoff, avoiding exceedance of existing storm drain capacity. As part of Project Feature PF-HWQ-5 (Temporary Storm Drain Inflow Rerouting), any temporary rerouting of storm drain inflows would be designed consistent with the RWQCB Basin Plan water quality requirements and in a manner that maintains stormwater drainage system capacity. With these standard construction practices in place, the LPA would result in a less than significant impact during construction related to stormwater drainage system capacity or generation of additional polluted runoff.

Impact 3.10-4.5: Stormwater Drainage Capacity During Operations

Operation of the LPA would not result in substantial drainage pattern alteration such that runoff exceeds stormwater drainage systems or additional sources of polluted runoff are generated. As part of Project Feature PF-HWQ-6 (LID BMPs per Regional Requirements), the SWQDv would be retained on-site, thereby minimizing the potential for excessive and/or polluted runoff to enter storm drains. For the trench segment, as part of Project Feature PF-HWQ-7 (Trench Operation Runoff Collection and Treatment), additional runoff in the trenches would be collected, treated (if necessary), and transferred to nearby storm drains. Because most stormwater would be retained on-site and additional stormwater would be directed to existing storm drain facilities consistent with the RWQCB Basin Plan water quality requirements, operation of the LPA would not result in exceedances of stormwater drainage system capacity or generation of additional polluted runoff. Thus, the impact of project operation relating to the addition of impervious surfaces in a manner which would exceed stormwater drainage system capacity or substantially add sources of polluted runoff would be less than significant.

Impact 3.10-4.6: Redirect or Impede Floodflows During Construction

Project construction would not result in substantial drainage pattern alteration such that flood flows are impeded or redirected. A very small portion of the project's temporary footprint near the Torrance TC is located within a 100-year flood zone, which would be for a temporary construction easement. As part of Project Feature PF-HWQ-8 (City of Torrance Flood Zone Requirements), construction within this area would comply with the City of Torrance's flood hazard requirements, which establish permitting, administration, and construction standards designed to reduce potential run-ins with flood waters. Although portions of the alignment would be trenched below grade, this lowered elevation would not create a new flood zone area since the footprint is not located near any existing flood zones or large drainage features. These requirements reflect existing City code and Metro's standard construction practices, and they provide part of the substantial evidence supporting the conclusion that flood flows

would not be impeded or redirected. Thus, construction of the LPA would result in a less than significant impact regarding flood flows.

Impact 3.10-4.6: Redirect or Impede Floodflows During Operations

Operations would not result in substantial drainage pattern alteration such that flood flows are impeded or redirected. Portions of the LPA would operate at approximately the same elevation or in certain locations elevated above the existing railroad and freight rights-of-way and would not exacerbate the existing flood risk or impede or redirect flood flows. Although the trench would run below grade, the trench would not create a new flood zone given its distance from existing flood zones and from large drainage features. Although runoff from the trench may be directed to different discharge points than existing points, runoff would not be directed into an existing flood zone. Thus, operations would not result in substantial drainage pattern alteration which would impede or redirect flood flows, and the impact would be less than significant.

Impact 3.10-4.7: Inundation During Construction

Construction would not risk release of pollutants due to project inundation in a flood hazard, tsunami, or seiche zone. A very small portion of the temporary footprint is located within a 100-year flood zone, which would be for a temporary construction easement for the removal of an existing spur track. As part of Project Feature PF-HWQ-1 (SWPPP Implementation per Construction General Permit and MS4 Permit), BMPs would be implemented to manage stormwater and prevent the release of pollutants, including in the unlikely event of localized flooding. In addition, as part of Project Feature PF-HWQ-8 (City of Torrance Flood Zone Requirements), construction within mapped flood zones would comply with the City of Torrance's established requirements for construction within flood hazard areas, designed to reduce potential run-ins with flood waters. These project features reflect existing regulatory requirements and Metro's standard construction practices, and they provide part of the substantial evidence supporting the conclusion that inundation during construction would not result in pollutant release. Therefore, construction would not risk the release of pollutants in flood hazard, tsunami, or seiche zones, and the impact would be less than significant.

Impact 3.10-4.7: Inundation During Operations

Operations would not risk release of pollutants due to project inundation in a flood hazard, tsunami, or seiche zone. No portions of the permanent project footprint would be located within the 100-year flood zone. As part of PF-HWQ-6 (LID BMPs per Regional Requirements), the LPA's design would incorporate LID measures to retain the SWQDv, thereby ensuring that the majority of stormwater is managed within the project footprint. This design feature reflects Metro's standard operational stormwater practices and provides part of the substantial evidence supporting the conclusion that operations would not risk the release of pollutants due to flood hazard, tsunami, or seiche zones. Therefore, the impact would be less than significant.

Impact 3.10-4.8: Conflict with Water Quality Plan During Construction

Project construction would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. A groundwater sustainability plan has not been developed for the West Coast Subbasin of the Coastal Plain of the Los Angeles Groundwater Basin, as it is considered a "very low priority" by the state. Therefore, project construction would not conflict with a sustainable groundwater management plan. The RWQCB Basin Plan (e.g., water quality control plan) pertinent to the RSA includes beneficial uses, water quality objectives, and waste discharge requirements designed to protect surface water and groundwater quality within the region. As part of

Project Features PF-HWQ-1 (SWPPP Implementation per Construction General Permit and MS4 Permit) and Project Feature PF-HWQ-2 (Groundwater Treatment and Discharge per RWQCB Waste Discharge Requirements for Construction Dewatering), the project incorporates measures that ensure compliance with applicable regulatory requirements for construction stormwater management and groundwater handling. These design features reflect Metro's standard construction practices and provide part of the substantial evidence supporting the conclusion that construction would be consistent with the Basin Plan. Therefore, construction of the LPA would not conflict with implementation of the Basin Plan, and the impact would be less than significant.

Impact 3.10-4.8: Conflict with Water Quality Plan During Operations

A groundwater sustainability plan has not been developed for the West Coast Subbasin of the Coastal Plain of the Los Angeles Groundwater Basin; therefore, project operation would not conflict with a sustainable groundwater management plan. The RWQCB Basin Plan (i.e., water quality control plan) pertinent to the RSA includes beneficial uses, water quality objectives, and waste discharge requirements designed to protect surface water and groundwater quality within the region. As part of Project Feature PF-HWQ-6 (LID BMPs per Regional Requirements), the project will incorporate LID BMPs consistent with Metro's design criteria and regional MS4 permit requirements, including measures to retain the SWQDv on-site and maintain catch basins to prevent debris and trash from entering storm drains. This would protect surface water and groundwater quality and help ensure compliance with beneficial uses and water quality objectives for surface water and groundwater within the region. These features provide part of the substantial evidence supporting the conclusion that runoff during operation would be managed consistent with applicable Basin Plan requirements. Therefore, operation of the LPA would not conflict with implementation of the Basin Plan, and the impact would be less than significant.

References in the Draft and Final EIR

- > Section 3.10, Hydrology and Water Quality, Subsections 3.10-4.1, 3.10-4.2, 3.10-4.3, 3.10-4.4, 3.10-4.5, 3.10-4.6, 3.10-4.7, and 3.10-4.8 of the Draft EIR
- > Chapter 4, Corrections and Additions, of the Final EIR

Project Features

PF-HWQ-1. SWPPP Implementation per Construction General Permit and MS4 Permit

Construction of the project would disturb greater than one acre of ground surface and is thus subject to the Construction General Permit SWPPP requirements. The SWPPP would include BMPs designed to prevent impacts to water quality from occurring during construction. BMPs included would be the minimum BMPs required by the MS4 Permit for all construction sites and additional BMPs determined necessary by the SWPPP developer. BMPs designed to prevent the introduction of chemicals, trash, and/or hazardous substances into waters may include but are not limited to fueling equipment offsite, secondary containment, drip pans, spill response plans, and designed waste receptacles on site. BMPs designed to prevent erosion, prevent sedimentation, and slow and capture runoff on the construction site may include but are not limited to stabilized construction entrances/exits, fiber rolls, silt fences, sandbags, water application for dust control, check dams, drainage inlet protections, infiltration basins, and hydroseeding. BMPs would be implemented before, during, and/or immediately after construction.

PF-HWQ-2. Groundwater Treatment and Discharge per RWQCB Waste Discharge Requirements for Construction Dewatering

Per the requirements of the RWQCB Waste Discharge Requirements for Construction Dewatering, dewatered groundwater would be treated if necessary and then discharged in a pre-approved location specified by said requirements.

PF-HWQ-4. Trench Construction Runoff Collection and Treatment

During trench construction for the LPA, surface runoff flowing within the trench would be collected, pumped out of the trench, treated (if necessary), and discharged to a pervious area on site for infiltration into the soil. BMPs used for surface runoff collection, treatment, and discharge would minimize the potential for introduction of pollutants into surface runoff, as well as the potential for erosion, siltation, flooding, and exceedance of existing storm drain system capacities on or offsite. Surface runoff treatment and discharge would comply with RWQCB Basin Plan water quality requirements.

PF-HWQ-5. Temporary Storm Drain Inflow Rerouting

Although no existing storm drain rerouting is proposed under the LPA, runoff from the LPA footprint may be directed to different discharge points than existing points to avoid adverse hydrology and water quality impacts.

For the LPA, stormwater inflows would be captured, treated (if necessary), rerouted around the construction site, and discharged into the existing storm drain system. Treatment and discharge of storm drain inflows to the existing storm drain system would be conducted per RWQCB Basin Plan water quality requirements.

PF-HWQ-6. LID BMPs per Regional Requirements

The operational design of the project would include LID BMPs designed to retain the SWQDv on site per regional LID requirements. Examples of potential LID BMPs that may be implemented include but are not limited to increasing runoff's flow path length of travel and providing on-site detention basins for retainment and infiltration. Additional runoff (beyond the SWQDv) would continue to be discharged via new or existing tie-ins to the existing stormwater drainage system. In elevated portions of the LPA, runoff would be collected by down drains. Discharge locations of underdrains installed along the project would be the same as existing discharge locations. Although no existing storm drain rerouting is proposed under the LPA, runoff from the LPA footprint may be directed to different existing discharge points. Existing catch basins on adjacent storm drains would be retained during operation to prevent debris and trash from entering the stormwater drainage system.

PF-HWQ-7. Trench Operation Runoff Collection and Treatment

During LPA operation, runoff that exceeds the SWQDv in the trench would be collected via a sump drainage system at the low point along the trenched alignment. Runoff collected in the sump would be treated as needed, and then would either be pumped or flow via gravity from the sump to the existing storm drain system in compliance with RWQCB Basin Plan water quality requirements.

PF-HWQ-8. City of Torrance Flood Zone Requirements

A small portion of the project temporary footprint would be located within the 100-year flood zone, where a temporary construction easement would be needed for removal of an existing spur track. Construction in this area would be required to comply with Division 7, Chapter 9 of the Torrance City

Code, titled “Flood Hazard Insurance.” This section establishes a development permit process for flood hazard areas, designates a floodplain administrator for the City, and establishes standards for construction within flood hazard areas.

Mitigation Measures

The impacts under the thresholds above would be less than significant, and mitigation measures are not required.

Findings

For the reasons stated above, Metro finds that these impacts related to hydrology and water quality would be less than significant.

6.9. UTILITIES AND SERVICE SYSTEMS

The project would have a less than significant impact related to utilities and service systems with respect to the following significance thresholds:

- > Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects? (Impact 3.11-4.1)
- > Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years? (Impact 3.11-4.2)
- > Would the project result in a determination by the wastewater treatment provider which serves or may serve the Project that it has adequate capacity to serve the LPA’s projected demand in addition to the provider’s existing commitments? (Impact 3.11-4.3)
- > Would the project generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals? (Impact 3.11-4.4)

Impacts

Impact 3.11-4.1: Expansion of Utility Facilities During Construction

The LPA would require the relocation of certain utilities, such as water and power lines, which could potentially result in environmental effects related to construction and the temporary disruption of services, including construction emissions and disrupting roadway circulation. No publicly owned oil or gas facilities are identified to be relocated. Existing telecommunication facilities would be protected in place. As part of Project Feature PF-US-1 (Utility Identification and Coordination), Metro would verify the locations of existing utilities, conduct field investigations, and develop layouts to address required separations and any relocations. In addition, as part of Project Feature PF-US-2 (Service Interruption Notification), the construction contractor would coordinate with utility and service providers to minimize service disruptions, provide temporary connections where needed, and notify the public of anticipated service interruptions, if any.

With respect to stormwater runoff, the LPA may require minor modifications to existing storm drain infrastructure, including the relocation of one storm drain pipeline. Consistent with Metro’s standard practice, coordination would occur with stormwater facility operations and service users would be notified (PF-US-1 and PF-US-2). Stormwater management during construction would also occur as part

of Project Features PF-HWQ-1 (SWPPP Implementation per Construction General Permit and MS4 Permit), PF-HWQ-4 (Trench Construction Runoff Collection and Treatment) and PF-HWQ-5 (Temporary Storm Drain Inflow Rerouting), ensuring that the existing storm drain capacity is not exceeded.

Project construction has no potential to require new or expanded electric power, natural gas, oil, or telecommunication facilities. Minimal electricity would be used to power field offices for the construction contractor. Minimal electricity would be used to power contractor field offices.

The project features described above reflect Metro's established utility coordination, service notification, and stormwater practices and provide part of the substantial evidence supporting the conclusion that construction would not result in significant impacts related to water, stormwater drainage, electric, natural gas and oil, or telecommunications facilities. Therefore, the impact would be less than significant.

Impact 3.11-4.1: Expansion of Utility Facilities During Operations

The LPA would not involve a significant long-term, permanent source of water use or wastewater generation. The LPA would increase impervious surface areas, resulting in a potential increase in stormwater runoff during operations. However, as part of Project Feature PF-HWQ-6 (LID BMPs per Regional Requirements), the LPA would incorporate LID measures designed to retain the SWQDv on-site, limiting the potential for additional demand on stormwater facilities. Electricity would be provided to the light rail line by TPSS units and to stations by traditional distribution connection facilities (e.g., power poles, underground wires, transmission lines, and distribution lines). The LPA would require 6,946,500 kWh (6,946.5 MWh) of annual electricity use to power the extension. To offset electricity consumption levels across the Metro rail system, Metro constructed photovoltaic installations in 2018, which generated 2.9 million kWh in 2018; additional photovoltaic systems to generate renewable energy are expected in the future. The electrically powered transit line would not use oil or natural gas. It is not anticipated that natural gas would be utilized to maintain or store trains at the existing facility. There would be no potential for the LPA to require new or expanded natural gas or oil facilities. Operational activities associated with the LPA have no potential to interfere with telecommunication facilities, which would be entirely outside of the alignment. Therefore, the LPA would have a less than significant impact during operation related to utility facilities.

Impact 3.11-4.2: Sufficient Water Supplies During Construction

Construction of the LPA would not require substantial consumption of potable water. Water use would occur primarily related to water trucks required for dust control. This short-term use would require minimal water supplies when compared to regional supplies. Water supplies would not be impacted by limited water use during construction activities. Therefore, construction of the LPA would result in a less than significant impact related to water supplies.

Impact 3.11-4.2: Sufficient Water Supplies During Operations

The LPA does not include a significant long-term, permanent source of water use. The LPA would not construct station restroom facilities nor a new minimal storage facility. Some water use may be needed to clean stations or wash trains. This minimal water use would not interfere with the existing and planned capacity of water facilities. In addition, station perimeters would include drought-tolerant landscaping requiring nominal amounts of water consumption. There is no potential for the LPA to interfere with regional water supply services. Therefore, operations of the LPA would result in a less than significant impact related to water supplies.

Impact 3.11-4.3: Wastewater Treatment Capacity During Construction

The LPA would generate wastewater during construction through the use of temporary worker restrooms and limited construction uses. Any wastewater generated during construction would be transported to wastewater facilities via vacuum service trucks. The Sanitation Districts of Los Angeles County operates the Joint Water Pollution Control Plant (JWPCP) that serves the entire South Bay community as well as communities located as far east as Pomona and as far north as La Cañada Flintridge for wastewater treatment. Wastewater generated by temporary worker restrooms for construction of the LPA would represent a negligible proportion of the daily wastewater processed by the JWPCP, and the facility is anticipated to have adequate capacity to serve the project. Therefore, construction of the LPA would result in a less than significant impact related to wastewater treatment capacity.

Impact 3.11-4.4: Solid Waste Capacity During Construction

Construction of the LPA would generate solid waste related to discarded construction material. Construction of the LPA would require soil excavation and export at a similar, but lower, amount as the Trench Option (which is estimated to require approximately 340,000 CY of excavation and export of approximately 202,600 CY of soil, with 10% of that assumed to be contaminated). Contaminated soil and waste would be disposed of at a permitted landfill per the specifications of DTSC or RWQCB or other agencies overseeing construction of the LPA. The nearest landfills which actively process contaminated soil are the Hazmat TSD facility and Soil Safe of California Incorporated, located in San Bernardino County. Based on the processing capacity of the two sites, they would be able to adequately process the contaminated soil anticipated to be generated by the LPA. Construction of the LPA would be required to comply with all applicable federal, state, and local statutes and regulations pertaining to solid waste disposal, including AB 939. Regional facilities that process contaminated soil should have the capacity for construction related solid waste. Therefore, construction of the LPA would result in a less than significant impact related to compliance with solid waste standards and capacity.

References in the Draft and Final EIR

- > Section 3.11, Utilities and Service Systems, Subsections 3.11-4.1, 3.11-4.2, 3.11-4.3.1, and 3.11-4.4.1 of the Draft EIR
- > Chapter 4, Corrections and Additions, of the Final EIR
- > Chapter 5, Responses to Comments, Subsection 5.2-7, Major Topic Response MR-7, Utility Relocation and Hazardous Materials Safety, of the Final EIR

Project Features

PF-US-1. Utility Identification and Coordination

Per Metro standard practice, as design progresses, Metro will continue to verify the locations of existing utilities potentially affected by construction activities. This will include coordinating with all existing utility providers for wet and dry utilities (water, sewer, oil, gas, electric, and telecommunications) and with private utility owners to obtain documentation of existing utility locations. Field verification (i.e., potholing and other methods as appropriate) shall be conducted throughout the preliminary engineering and final design phases to document the locations of all utilities within proximity to the guideway and station foundations of the guideway and station foundations, and other project elements that may affect utilities. Based on the information from the field investigations, the final designer will develop layouts of pipe separations based on coordination with the appropriate utility

owners/operators to determine specific setback requirements for each utility line and the need for any stabilization for protection in place or relocation measures. During the construction and prior to digging, the contractor will conduct additional field verifications, which include requirements such as contacting a utility location service to verify the position of existing pipes, and conducting additional potholing so that the final design layouts can be confirmed or adjusted as needed.

PF-US-2. Service Interruption Notification

Per Metro standard practice, prior to the start of any demolition or construction activities, Metro will be responsible for coordinating with utility and service providers regarding potential utilities service interruptions due to relocation of existing utilities. Metro will develop a construction plan in coordination with utilities and service providers to minimize interruptions of utilities systems to the greatest extent feasible, including providing temporary connection for services that must be disconnected for extended periods of time. Further, Metro will develop a contingency plan in cooperation with the utility providers for emergency repairs of any utilities unexpectedly found or that disintegrated because of age during excavations. The public would be notified of areas where temporary utilities service interruptions are anticipated.

Mitigation Measures

The impacts under the thresholds above would be less than significant, and mitigation measures are not required.

Findings

For the reasons stated above, Metro finds that these impacts related to utilities and service systems would be less than significant.

6.10. ENERGY

The project would have a less than significant impact related to energy with respect to the following significance thresholds:

- > Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation? (Impact 3.12-4.1)
- > Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency? (Impact 3.12-4.2)

Impacts

Impact 3.12-4.1: Wasteful Energy Consumption During Construction

Construction of the LPA would require a one-time expenditure of diesel fuel and gasoline over the six-year construction period; as described in Section 4.21, Corrections and Additions, of the Final EIR, this amount would be higher than what would be required to construct the Elevated/At-Grade Alignment (approximately 1,300,000 gallons of diesel fuel and 102,000 gallons of gasoline) but lower than the Trench Option (approximately 1,900,000 gallons of diesel fuel and 153,000 gallons of gasoline). As part of Project Feature PF-AQ-1 (Metro Green Construction Policy Compliance), construction equipment and trucks would meet advanced emissions and fuel-efficiency standards. As part of Project Feature PF-AQ-3 (Metro Moving Beyond Sustainability Strategic Plan Compliance), the LPA would be consistent with Metro's broader sustainability commitments, including the use of renewable diesel, where applicable. As part of Project Feature PF-AQ-4 (Metro Rail Design Guidelines), construction activities would use

energy efficiently. These project features reflect Metro's standard construction and design practices and provide part of the substantial evidence supporting the conclusion that construction energy would be used efficiently. Furthermore, the energy expenditure associated with construction fuel consumption would eventually be offset by the energy savings of replacing and shortening on-road passenger vehicle trips with use of light rail. Therefore, the LPA would have a less than significant impact during construction related to energy.

Impact 3.12-4.1: Wasteful Energy Consumption During Operations

The LPA would consume energy related to the light rail propulsion systems and lighting and accessory equipment at station platforms. It would also indirectly change regional energy consumption through changes in regional VMT by displacing vehicle trips for transit trips, which would reduce petroleum fuels consumption. With a VMT reduction of 43,094, annual regional energy consumption would be reduced by approximately 28.38 million MJ in the design/horizon year of 2042, when compared to the no project condition. Total electricity consumption to power the light rail extension would be 7,829 MWh (28,182,841 MJ), which would represent an increase of 0.4% of total Metro system and facilities annual electricity consumption as of 2019. This incremental increase in electricity demand would not place an undue burden on the existing electrical infrastructure and represents a miniscule fraction of the total Metro electricity use. Overall, the LPA would result in a net energy benefit, and a less than significant impact would occur.

Impact 3.12-4.2: Conflict With Energy Plans During Construction

Energy-resource consumption during construction of the LPA would be predominantly combustion of petroleum-based transportation fuels. Project Feature PF-AQ-1 (Metro Green Construction Policy Compliance) commits Metro contractors to using less-polluting construction equipment and vehicles and implementing best practices to reduce harmful diesel emissions. Best practices include Tier 4 emission standards for off-road diesel-powered construction equipment with greater than 50 hp and restricting idling to a maximum of five minutes. Compliance with these provisions would limit excess petroleum fuels consumption during active use of off-road equipment and on-road vehicles. The CALGreen Code Tier 2 requires reduction, disposal, and recycling of at least 80% of nonhazardous construction materials and requires demolition debris to be recycled and/or salvaged, which would ultimately result in reductions of indirect energy use associated with waste disposal and storage. Therefore, construction would have a less than significant impact related to conflicting with or obstructing plans for renewable energy or energy efficiency.

Impact 3.12-4.2: Conflict With Energy Plans During Operations

The LPA is a light rail system extension providing energy efficient mass transit to communities in need of enhanced accessibility options. The LPA would reduce auto passenger vehicle trips and reliance on petroleum-based transportation fuels. The benefits of the LPA are consistent with the goals, objectives, and policies of SCAG and the Cities of Lawndale, Redondo Beach, and Torrance. As the renewable energy portfolios of Metro and local jurisdictions expand over time, natural resources consumption to provide the electricity required for operations would become more energy efficient. The LPA would not conflict with any adopted plan or regulation to enhance energy efficiency or reduce transportation fuels consumption and would support the initiatives of the Metro CAAP. In addition, the LPA would not interfere with renewable portfolio targets and would not result in a wasteful or inefficient expenditure of energy resources. The LPA would positively contribute to statewide, regional, and local efforts to create a more efficient and sustainable transportation infrastructure network. Therefore, operations

would result in a less than significant impact related to conflicting with or obstructing plans for renewable energy or energy efficiency.

References in the Draft and Final EIR

- > Section 3.12, Energy, Subsections 3.12-4.1 and 3.12-4.2 of the Draft EIR
- > Chapter 4, Corrections and Additions, of the Final EIR

Project Features

None

Mitigation Measures

The impacts under the thresholds above would be less than significant, and mitigation measures are not required.

Findings

For the reasons stated above, Metro finds that these impacts related to energy would be less than significant.

6.11. TRIBAL CULTURAL RESOURCES

The project would have a less than significant impact related to tribal cultural resources with respect to the following significance thresholds:

- > Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC Section 5020.1(k)? (Impact 3.14-4.1)
- > Would the project cause a substantial adverse change in the significance of a Tribal Cultural Resource, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe? (Impact 3.14-4.2)

Impacts

Impact 3.14-4.1: Substantial Adverse Change in The Significance of a Tribal Cultural Resource During Operation

Operational activities of the LPA would be limited to light rail operations on established tracks and at facilities constructed as part of the LPA. The operation of light rail transit traffic and other rail operations would not cause subsurface ground disturbance, nor alter any existing setting that would impact a tribal cultural resource within the RSA. Therefore, the impact would be less than significant.

Impact 3.14-4.2: Substantial Adverse Change in The Significance of a Tribal Cultural Resource Determined by a Lead Agency During Operation

Operational activities of the LPA would be limited to light rail operations on established tracks and at facilities constructed as part of the LPA. The operation of light rail transit and other rail operations would not cause subsurface ground disturbance nor alter any existing setting that would impact a resource of tribal significance within the RSA. Therefore, the impact would be less than significant.

References in the Draft and Final EIR

- > Section 3.14, Tribal Cultural Resources, Subsections 3.14-4.1 and 3.14-4.2 of the Draft EIR
- > Chapter 4, Corrections and Additions, of the Final EIR

Project Features

None

Mitigation Measures

The impacts under the thresholds above would be less than significant, and mitigation measures are not required.

Findings

For the reasons stated above, Metro finds that these impacts related to tribal cultural resources would be less than significant.

6.12. PUBLIC SERVICES

The project would have a less than significant impact related to public services with respect to the following significance thresholds:

- > Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection? (Impact 3.15-4.1)
- > Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for police protection? (Impact 3.15-4.2)
- > Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to meet demand for schools? (Impact 3.15-4.3)
- > Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to meet demand for parks? (Impact 3.15-4.5)

- > Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? (Impact 3.15-4.6)
- > Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? (Impact 3.15-4.7)

Impacts

Impact 3.15-4.1: Fire Protection Response Times During Construction

There are no fire stations or other related government facilities in or adjacent to the RSA. Construction staging areas would, therefore, not result in the acquisition of any fire facilities within the RSA, nor result in the alteration of existing facilities or construction of new facilities to maintain fire protection services the RSA. Roadways that intersect the LPA would need to be temporarily closed to accommodate construction activities, which could impede the vehicle circulation network in the RSA. As part of Project Feature PF-T-1 (Construction Traffic Management Plan), Metro's construction contractor would coordinate with the cities and emergency providers to develop CTMPs that are communicated to those providers. The CTMPs would clearly identify alternative routes to ensure that fire services response times would remain compliant with NFPA guidelines. This project feature reflects Metro's standard construction coordination practices and provides part of the substantial evidence supporting the conclusion that construction would not result in the need for new or physically altered fire protection facilities.

Although construction of the LPA would create additional jobs in the project area, it would not indirectly result in population growth, and therefore, not lead to the need for additional fire protection facilities to maintain service ratios. Therefore, construction of the LPA would not result in the need for new or physically altered fire protection facilities and this impact would be less than significant.

Impact 3.15-4.1: Fire Protection Response Times During Operations

During operation of the LPA, fire protection services would continue to be provided by Los Angeles County Fire Department, Redondo Beach Fire Department, and the Torrance Fire Department. The LPA would fully grade-separate light rail transit from roadways and, therefore, would not have the potential to increase emergency vehicle delays and affect response times of fire protection services. Operation of the LPA would not induce unplanned population growth that would impact the demand for fire protection facilities. Therefore, operation of the LPA would not result in the need for new or physically altered fire protection facilities and this impact would be less than significant.

Impact 3.15-4.2: Police Protection Response Times During Construction

There are no police stations within the RSA. Construction staging areas would, therefore, not result in the acquisition of any police facilities within the RSA, nor would it result in the alteration of existing facilities or construction of new facilities to service the RSA. Construction activities of the LPA would be temporary and generally confined within the existing Metro ROW. Roadways that intersect the LPA would need to be temporarily closed to accommodate construction activities, which could impede the vehicle circulation network in the RSA. As part of Project Feature PF-T-1 (Construction Traffic Management Plan), Metro's contractor would coordinate with affected cities and emergency providers to prepare CTMPs that are communicated to those providers. The CTMPs would identify alternative routes to ensure that police response times remain adequate. This feature reflects Metro's standard

practice for construction coordination and provides part of the substantial evidence supporting the conclusion that construction would not interfere with police protection response times.

Construction activities would also be conducted in compliance with Metro's MRDC, which follows the principles of Crime Prevention through Environmental Design (CPTED) and Metro safety and security programs. Incorporation of CPTED principles would reduce potential impacts to police service performance ratios that may arise from the introduction of construction staging areas.

Although construction of the LPA would create additional jobs in the project area, it would not indirectly result in population growth and, therefore, not lead to the need for additional police facilities to maintain service ratios. Thus, construction of the LPA would not result in the need for new or physically altered police facilities and this impact would be less than significant.

Impact 3.15-4.2: Police Protection Response Times During Operations

During operations, police protection services would continue to be provided by the Los Angeles Sheriff's Department, Hawthorne Police Department, Redondo Beach Police Department, and Torrance Police Department within their respective jurisdictions. The LPA would fully grade separate light rail transit from roadways and, therefore, would not increase emergency vehicle delays. Operation of the LPA would not induce unplanned population growth that would impact the demand for police protection services. Therefore, operation of the LPA would not result in the need for new or physically altered police protection facilities and this impact would be less than significant.

Impact 3.15-4.3: School Demand During Construction

No educational facilities are located immediately adjacent to the proposed alignment or transit stations. Construction of the LPA would not require the acquisition of any public facilities, including educational facilities. Construction activity would be limited to the Metro ROW and staging areas and would not result in direct physical impacts to any school. As part of Project Feature PF-T-1 (Construction Traffic Management Plan), access to nearby schools would be maintained during construction and detour routes would be identified to ensure circulation is provided during construction. This feature reflects Metro's standard practice for construction coordination and provides part of the substantial evidence supporting the conclusion that construction would not interfere with access to educational facilities. Therefore, construction of the LPA would not result in the need for new or physically altered educational facilities and this impact would be less than significant.

Impact 3.15-4.5: Park Demand During Construction

El Nido Park is located adjacent to the existing Metro ROW and would be adjacent to construction staging areas at 182nd Street. Thus, construction activities could potentially hinder or block access to this park facility. Additionally, construction staging areas at 170th Street would potentially reduce access to William Green Park. Roadways that intersect the LPA would need to be temporarily closed to accommodate construction activities, which could impede the vehicle circulation network in the RSA. As part of Project Feature PF-T-1 (Construction Traffic Management Plan), alternative vehicular and pedestrian access routes to park facilities would be identified, clearly marked, and maintained throughout construction. This feature reflects Metro's standard practice for construction coordination and provides part of the substantial evidence supporting the conclusion that access to park facilities would be preserved.

Although construction of the LPA would create additional jobs in the project area, it would not indirectly result in population growth, and therefore, not lead to the need for additional park facilities to maintain

service ratios. Therefore, construction of the LPA would not result in the need for new or physically altered park facilities and this impact would be less than significant.

Impact 3.15-4.5: Park Demand During Operation

The LPA would not include stations at parks adjacent to the Metro ROW. El Nido Park would be located within a quarter mile of the Redondo Beach TC Station and may see some increased demand for and usage of its facilities during operation of the LPA. However, this station would be located adjacent to high-volume commercial uses and transportation connections, which are expected to attract greater numbers of riders than surrounding residential and open space destinations. Therefore, the LPA is reasonably anticipated to not generate substantial additional demand for and usage of El Nido Park beyond the existing maintenance capacity of the City of Torrance Park Services Division.

Metro acknowledges that residents currently use the Metro ROW as recreational space, although it is not a designated park or walkway, and its primary purpose is rail transportation. Operation of the LPA would result in a closure of the portion of the Metro ROW (which would include active light rail and freight service) to public access where fencing is currently breached, for the safety of residents. The closure of this portion of the Metro ROW would not, however, lead to the need for new or physically altered government facilities in order to meet demand for parks. The LPA would include the construction of two multi-use recreational paths. These paths would increase the overall capacity of recreational uses. The provision of new recreational facilities could benefit other facilities by potentially reducing the usage of other existing parks in the RSA.

Based on the above, project operation would not result in the need for new or physically altered park facilities and this impact would be less than significant.

Impact 3.15-4.6: Park Deterioration During Construction

The LPA would neither directly nor indirectly result in population growth that could lead to increased or accelerated deterioration of recreational facilities. Construction workers may potentially increase the usage of and demand for parks and recreational facilities, but this increased usage would be temporary and nominal compared to total facility usage by all local residents. The existing parks and recreational facilities in the RSA would continue to be regularly maintained by the respective recreational departments of the Cities of Hawthorne, Lawndale, Redondo Beach, and Torrance, and would continue to serve the existing surrounding residential population during construction activities. Therefore, construction impacts of the LPA would not result in the substantial deterioration of park facilities and this impact would be less than significant.

Impact 3.15-4.6: Park Deterioration During Operations

The LPA would not include stations at parks adjacent to the Metro ROW. El Nido Park would be located within a quarter mile of the Redondo Beach TC Station and may see some increased demand for and usage of its facilities during operation of the LPA. However, this station would be located adjacent to high-volume commercial uses and transportation connections, which are expected to attract greater numbers of riders than surrounding residential and open space destinations. Therefore, the LPA is reasonably anticipated to not generate substantial additional demand for and usage of El Nido Park beyond the existing maintenance capacity of the City of Torrance Park Services Division.

Metro acknowledges that residents currently use the Metro ROW as recreational space, although it is not a designated park or walkway, and its primary purpose is rail transportation. Operation of the LPA would result in a closure of the portion of the Metro ROW (which would include active light rail and freight service) to public access where fencing is currently breached, for the safety of residents. The

closure of this portion of the Metro ROW would not, however, lead to the need for new or physically altered government facilities in order to meet demand for parks. The LPA would include the construction of two multi-use recreational paths. These paths would increase the overall capacity of recreational uses. The provision of new recreational facilities could benefit other facilities by potentially reducing the usage of other existing parks in the RSA.

Based on the above, project operation would not result in the substantial deterioration of park facilities and this impact would be less than significant.

Impact 3.15-4.7: Expansion of Recreation During Construction

The LPA includes two multi-use recreational paths within the Metro ROW, neither of which would result in displacement of existing designated recreational facilities or adverse physical effects on the environment. Construction workers would temporarily work in the area and would not likely relocate to the project area on a permanent basis. Construction workers may potentially increase the usage of and demand for parks and recreational facilities, but this increased usage would be temporary and nominal compared to total facility usage by all local residents. Therefore, impacts related to adverse physical effects of construction of recreational facilities would be less than significant.

Impact 3.15-4.7: Expansion of Recreation During Operations

The LPA would not indirectly induce unplanned population growth that would impact the demand for recreational facilities. The LPA includes two multi-use recreational paths within the Metro ROW, which would provide passive recreation uses. The primary purpose of the multi-use paths would be transportation for pedestrians and bicyclists and would be similar to the existing usage of the Metro ROW as a non-designated recreational greenspace. The new multi-use paths are anticipated to be utilized by existing residents in the RSA and would not induce demand or new vehicle trips such as a new regional park or recreational facility. The multi-use paths would still allow residents to use a portion of the Metro ROW for recreational use. Therefore, impacts related to adverse physical effects of operation of recreational facilities would be less than significant.

References in the Draft and Final EIR

- > Section 3.15, Public Services and Utilities, Subsections 3.15-4.1, 3.15-4.2, 3.15-4.3.1, 3.15-4.5, 3.15-4.6, and 3.15-4.7 of the Draft EIR
- > Chapter 4, Corrections and Additions, of the Final EIR
- > Chapter 5, Responses to Comments, Subsection 5.2-10, Major Topic Response MR-10: Changes to Community Character; Subsection 5.2-12, Major Topic Response MR-12: Emergency Access, of the Final EIR

Project Features

PF-PS-1. Coordination with Torrance Refining Company and Emergency Responders

Before construction of the project and during the advanced design stages, Metro would work with the Torrance Refining Company and Torrance Logistics Company, BNSF Railway, the City of Torrance, and other City entities responsible for emergency response to coordinate emergency communication systems so that, in the event of an emergency relating to flaring or other refinery operations-related hazards, Metro could hold or detour trains to avoid traveling near the refinery.

Mitigation Measures

The impacts under the thresholds above would be less than significant, and mitigation measures are not required.

Findings

For the reasons stated above, Metro finds that these impacts related to public services and recreation would be less than significant.

7. FINDINGS FOR ENVIRONMENTAL RESOURCES FOUND NOT TO BE IMPACTED

Metro finds that there would be no impacts for the following environmental resources, as found in the referenced sections of the Draft EIR.

Aesthetics

- > Scenic Vistas: Construction (Subsection 3.3-4.1.1) and Operation (Subsection 3.3-4.1.2)
- > Scenic Highways: Construction (Subsection 3.3-4.2.1) and Operation (Subsection 3.3-4.2.2)

Noise and Vibration

- > Airports: Construction and Operation (Subsection 3.6-4.2)

Biological Resources

- > Riparian Habitat/Sensitive Natural Community: Construction (Subsection 3.7-4.2.1) and Operation (Subsection 3.7-4.2.2)
- > Wetlands: Construction (Subsection 3.7-4.3.1) and Operation (Subsection 3.7-4.3.2)
- > Movement of Fish & Wildlife Species: Construction (Subsection 3.7-4.4.1) and Operation (Subsection 3.7-4.4.2)
- > Conflicts with Habitat Conservation Plans: Construction (Subsection 3.7-4.6.1) and Operation (Subsection 3.7-4.6.2)

Geology, Soils, and Paleontological Resources

- > Known Earthquake Fault Zone: Construction (Subsection 3.8-4.1.1) and Operation (Subsection 3.8-4.1.2)
- > Soil Erosion: Operation (Subsection 3.8-4.5.2)
- > Septic Tanks or Alternative Wastewater Disposal Systems: Construction and Operation (Subsection 3.8-4.8)
- > Paleontological Features: Operations (Subsection 3.8-4.9.2)

Hazards and Hazardous Materials

- > Hazardous Materials Within One-Quarter Mile of School: Operation (Subsection 3.9-4.3.2)
- > Hazardous Materials Sites: Operation (Subsection 3.9-4.4.2)
- > Airport Land Use Plans: Construction and Operation (Subsection 3.9-4.5)
- > Private Air Strip: Construction and Operation (Subsection 3.9-4.6)

- > Wildfire Hazards: Construction and Operation (Subsection 3.9-4.8)

Utilities and Service Systems

- > Wastewater Treatment Capacity: Operation (Subsection 3.11-4.3.2)
- > Solid Waste Capacity: Operation (Subsection 3.11-4.3.4)
- > Compliance with Solid Waste Regulations: Construction (Subsection 3.11-4.3.5) and Operation (Subsection 3.11-4.3.6)

Cultural Resources

- > Adverse Change to Historical Resources: Construction (Subsection 3.13-4.1.1) and Operation (Subsection 3.13-4.1.2)
- > Adverse Change to Archaeological Resources: Operation (Subsection 3.13-4.2.2)
- > Disturbance of Human Remains: Operation (Subsection 3.13-4.3.2)

Public Services and Recreation

- > School Demand During Operation (Subsection 3.15-4.3.2)
- > Demand for Library Facilities: Construction (Subsection 3.15-4.4.1) and Operation (Subsection 3.15-4.4.2)

Other CEQA Considerations

- > Agricultural and Forestry Resources: Construction and Operation (Subsection 3.16-2.1)
- > Mineral Resources: Construction and Operation (Subsection 3.16-2.2)
- > Population and Housing: Construction and Operation (Subsection 3.16-2.3)
- > Wildfire: Construction and Operation (Subsection 3.16-2.4)

8. FINDINGS FOR CUMULATIVE IMPACTS

CEQA Guidelines Section 15130(a)(3) defines “cumulatively considerable” to mean the incremental effects of an individual project are significant when viewed in connection with effects of past, present, and reasonably foreseeable probable future projects. Refer to Section 3.0, Introduction of the Draft EIR for the methodology used to assess the potential for cumulative impacts, as well as for a list of the probable future projects considered in the cumulative analysis.

8.1. TRANSPORTATION

Overlapping construction activities could be potentially disruptive if construction occurred concurrently, but given the shorter and more intermittent duration of the nature of these types of roadway improvement projects, overlap of construction periods would be minimal, if at all. Construction of these projects is not expected to result in significant duration or disruption.

During operations, the cumulative projects are not within the footprint of the LPA and would not cumulatively create new geometric hazards, obstructed visibility, or reduce emergency access.

Finding

For the reasons stated above and based on substantial evidence in the record as a whole, Metro finds that the LPA, combined with past, present, and reasonably foreseeable projects, would not result in a cumulatively significant impact related to transportation during construction or operations.

8.2. LAND USE AND PLANNING

Simultaneous construction of other projects and the LPA could occur, potentially resulting in short-term and temporary construction disruptions to the existing built environment and circulation through temporary roadway or sidewalk closures or construction laydown areas. Given the shorter and more intermittent duration of the nature of these types of roadway improvement projects, overlap of construction periods would be minimal, if at all. The roadway closures and laydown areas during construction in conjunction with other projects would not divide existing communities as access within and out of the communities as they would generally be required to be maintained through their respective construction traffic management plans.

Operation of the LPA would not divide the existing community in conjunction with the related projects as access within and out of the communities would be unchanged or changed very little by these projects. Further, the cumulative projects would be required to be consistent with applicable general plans and zoning codes.

Finding

For the reasons stated above and based on substantial evidence in the record as a whole, Metro finds that the LPA, combined with past, present, and reasonably foreseeable projects, would not result in a cumulatively significant impact to land use and planning during construction or operations.

8.3. AESTHETICS

Scenic Vistas or Scenic Highways

No scenic vistas or scenic highways are located near the LPA.

Conflicts with Regulations on Scenic Quality

Construction of the LPA in combination with other projects would represent a temporary change in the visual quality and character of the RSA. This temporary change during construction would be similar to other construction projects in the RSA, which would also have a temporary impact on visual character and quality of the RSA and its surroundings compared to existing conditions. As part of Project Feature PF-AES-2 (Metro Design Standards), construction activities would comply with applicable zoning regulations within the Cities of Lawndale, Redondo Beach, and Torrance, as well as with BMPs and development standards within each City.

During operation, the LPA would result in a visual change compared to existing conditions, but would not conflict with local regulations related to scenic quality.

Light and Glare

Construction of the LPA could result in construction-related illumination and nighttime construction lighting. Cumulative projects may be constructed during the same timeframe as the LPA and may also require night-time lighting. Mitigation Measure MM-AES-1 (Construction Lighting) would require that construction lighting be shielded and directed downward and away from adjacent residential and commercial areas. Similar to the LPA, cumulative projects are expected to comply with applicable regulations with each City related to light and glare, and to incorporate mitigation measures that would reduce light and glare impacts to the maximum extent feasible.

During operations, the LPA would be lit to provide adequate lighting for maintenance activities and ensure a safe environment. As part of PF-AES-2 (Metro Design Standards), all lighting would comply with Metro Design Standards and applicable lighting regulations that would be verified during the permitting process. Cumulative projects are also expected to comply with applicable city regulations related to light and glare, and to incorporate mitigation measures that would reduce light and glare impacts to the maximum extent feasible.

Findings

For the reasons stated above and based on substantial evidence in the record as a whole, with implementation of Mitigation Measure MM-AES-1, the LPA would not result in a cumulatively considerable impact related to construction lighting. Thus, with respect to this cumulative impact, Metro adopts CEQA Finding 1, as identified in Section 3 above and in Section 15091, subdivisions (a)(1) of the CEQA Guidelines.

For other impacts related to aesthetics, Metro finds that the LPA would either not result in a cumulatively significant impact or the incremental contribution to the cumulative impact would not be cumulative considerable.

8.4. AIR QUALITY

Construction of the LPA would generate emissions of air pollutants through the use of heavy-duty off-road equipment and light- and heavy-duty on-road vehicles. In addition to diesel exhaust fumes, off-road equipment would produce fugitive emissions including dust during ground disturbance and material stockpiling and volatile asphalt off-gassing during paving activities. As described in Section 3.4, Air Quality of the Draft EIR and Chapter 4, Correction and Additions of the Final EIR, construction activities for the LPA would not generate mass daily emission in excess of any regional-scale SCAQMD threshold for individual projects under CEQA.

Attainment of the air quality standards is accomplished at the regional level, and the SCAQMD has adopted the rationale that projects with mass daily emissions below the regional screening thresholds would not generate sufficient air pollution to render cumulative impacts potentially significant. Although construction of other projects would occur within SCAB during construction of the LPA, emissions from LPA construction would not be cumulatively considerable for nonattainment pollutants and would also not be cumulatively significant based on the SCAQMD guidance.

Construction of the LPA would not generate localized emissions of NOX, CO, or particulate matter in excess of the applicable LST screening values. Although it is possible that construction of other cumulative projects may occur within the localized RSA during construction of the LPA, emissions from LPA construction would be controlled to the maximum extent feasible through implementation of BMPs contained within the Metro Green Construction Policy and would not exceed the SRA 3 LST screening values.

Long-term operation of the LPA would not introduce a new substantial stationary, area, or mobile source of air pollutant emissions into the SCAB. The primary effect of operations on regional air quality would be the displacement of on-road VMT resulting from increased transit ridership. Operation of the LPA would reduce emissions of air pollutants within the SCAB overall through the elimination of passenger vehicle trips. The 2016 AQMP emissions budgets are partially developed based on the 2016–2040 RTP/SCS, and the two planning documents are developed in conjunction with one another. The project is included in the 2016–2040 RTP/SCS, the 2020–2045 RTP/SCS and the 2024–2050 RTP/SCS under RTP ID 1TR1001 and Federal Transportation Improvement Program (FTIP) ID LA0G632, which demonstrates that the regional transportation and emissions modeling budget in the 2016 AQMP accounts for implementation of the LPA in its conformity demonstration. Therefore, operation of the LPA would not contribute in a significant way to cumulative effects related to air quality violations, timely attainment of the air quality standards, or emissions of nonattainment pollutants. Operation of the LPA would not introduce a substantial new source of emissions that could result in sensitive receptor exposures to unhealthy localized pollutant concentrations or public nuisances related to odors.

Finding

For the reasons stated above and based on substantial evidence in the record as a whole, Metro finds that the LPA's incremental contribution to cumulatively significant impacts related to air quality during construction and operation would not be cumulatively considerable.

8.5. GREENHOUSE GAS EMISSIONS

All construction activities for the LPA would comply with Project Features PF-AQ-1 (Metro Green Construction Policy Compliance), PF-AQ-3 (Metro Moving Beyond Sustainability Strategic Plan Compliance), and PF-AQ-4 (Metro Rail Design Guidelines). These features are integral components of Metro's standard construction and design requirements and ensure that equipment and vehicles are maintained according to manufacturer specifications and are subject to idling limitations consistent with applicable regulations. The LPA would not interfere with state and regional GHG-reduction targets.

Reasonably foreseeable actions within the RSA include all transportation projects that are programmed in the Connect SoCal 2020–2045 RTP/SCS. CARB issued a determination that the Connect SoCal SCS successfully demonstrated that the region would attain its established SB 375 per capita GHG emissions targets in the 2035 horizon year of the analysis on October 30, 2020. This determination relies on projects that are programmed into the RTP/SCS being implemented, one of which is the project as identified under RTP ID TR1001 (and FTIP ID LA0G632). Although implementation of the LPA would generate long-term indirect GHG emissions through energy use (i.e., light rail transit propulsion, lighting

and accessory equipment at station platforms), those emissions would be more than fully offset by reductions in on-road motor vehicle emissions due to mode shift from automobiles to transit. The LPA is anticipated to reduce overall GHG emissions relative to future 2042 baseline conditions and would not conflict with GHG emissions reductions plans and policies. In particular, under the C-2 Operating Plan, the LPA would achieve a net reduction of approximately 1,833.58 MTCO₂e compared to the future 2042 baseline. (See Memorandum re: Vehicle Miles Traveled Correction to the C Line (Green) Extension to Torrance Project, October 2025). The LPA would ultimately provide environmental and community benefits related to GHG emissions reductions and active transportation.

Finding

For the reasons stated above and based on substantial evidence in the record as a whole, Metro finds that the LPA's incremental contribution to cumulatively significant impacts related to GHG emissions during construction and operation would not be cumulatively considerable.

8.6. NOISE AND VIBRATION

Noise

Construction of the LPA would require heavy earth-moving equipment, generators, cranes, pneumatic tools, and other similar machinery. The existing cumulative noise condition is characterized by existing traffic noise and existing freight noise which was captured by existing ambient noise measurements. Construction noise levels for the LPA would exceed FTA and local noise standards due to the intensive nature of light rail construction activities and the proximity of sensitive land uses to the corridor. Implementation of Mitigation Measure MM-NOI-1 (Noise Control Plan) would reduce construction noise levels, but there may still be temporary or periodic exceedances of the FTA construction noise criteria and local standards resulting in temporary adverse effects related to construction noise. Similar to the LPA, construction of projected future projects would likely include the use of heavy construction equipment that would generate elevated construction noise levels. Projected future projects would go through their own environmental clearance process and would include mitigation for construction noise to reduce impacts. Related projects within 500 feet of construction could result in a cumulative construction noise impact at sensitive receptors. Although it is not possible to predict which related projects would result in a cumulative construction noise scenario, the construction noise levels associated with the LPA could increase ambient noise levels. Therefore, the LPA's incremental contribution to cumulatively significant noise impacts during construction would be cumulatively considerable.

Operation of the LPA would result in significant operational noise impacts at sensitive receptors along the project alignment from combined light rail and freight noise. The noise environment in the vicinity of the alignment can be primarily defined by traffic on adjacent roadways, freight trains, and the existing Metro C (Green) Line, and cumulative growth and development in the cities located in the vicinity of the LPA could result in increases in roadway traffic volumes over time that would concurrently increase ambient noise levels in the vicinity of the LPA. However, future increases in roadway noise are expected to be minimal along the alignment because of limited roadway capacity. Freight train noise is generally intermittent, as there are only two train pass-bys each day. Implementation of MM-NOI-2 (Soundwalls) and MM-NOI-3 (Low Impact Frogs), which would require installation of soundwalls and low impact frogs, would reduce the light rail transit operation noise impacts to a less than significant level. MM-NOI-4 (Quiet Zone Establishment) would enable local jurisdictions to designate a quiet zone, by right, from north of Inglewood Avenue to south of 182nd Street to eliminate freight horn noise, which would reduce all noise impacts to a less than significant level. Metro finds that the local cities can and should

establish the quiet zone. Therefore, the LPA's incremental contribution to cumulatively significant noise impacts during operation would not be cumulatively considerable. However, should the corridor cities elect not to designate a quiet zone, the LPA's incremental contribution to cumulative noise impacts during operation would be cumulatively considerable.

Vibration

Construction of the LPA would result in significant and unavoidable vibration impacts, even with implementation of Mitigation Measures MM-VIB-1 (Vibration Control Plan), MM-VIB-2 (Construction Equipment Location), and MM-VIB-3 (Pre- and Post-Construction Surveys). However, it is not anticipated that vibration-generating equipment from past, present, and probable future projects would operate at the same time and in the same location as the construction equipment for the LPA.

Existing vibration occurs within the corridor due to the freight line. It is possible that ground-borne vibration generated from the light rail and freight line could combine to produce a cumulatively significant ground-borne vibration effect. However, implementation of MM-VIB-4 (Low Impact Frogs), MM-VIB-5 (Resilient Fasteners), and MM-VIB-6 (Ballast Mats), would reduce ground-borne vibration impacts caused by the light rail and realigned freight tracks to less than significant.

Findings

Mitigation Measure MM-NOI-1 would reduce the LPA's construction noise impacts, but the incremental contribution to the potentially significant cumulative noise impact would remain cumulatively considerable. No additional feasible mitigation measures were identified to reduce the LPA's incremental contribution to this noise impact during construction. Thus, with respect to this cumulative impact and based on substantial evidence in the record as a whole, Metro adopts CEQA Findings 1 and 3, as identified in Section 3 above and in Section 15091, subdivisions (a)(1) and (a)(3) of the CEQA Guidelines.

Mitigation Measures MM-NOI-2 and MM-NOI-3 would reduce light rail transit noise impacts to less than significant, and MM-NOI-4 would allow local jurisdictions to establish a quiet zone from north of Inglewood Avenue to south of 182nd Street, which would eliminate freight horn noise. With implementation of MM-NOI-2, MM-NOI-3, and MM-NOI-4, the impact would be less than significant. However, if local jurisdictions do not establish a quiet zone(s) as part of MM-NOI-4, a significant and unavoidable impact would remain, and the incremental contribution to significant cumulative noise impacts during operation would be cumulatively considerable. Thus, with respect to this cumulative impact and based on substantial evidence in the record as a whole, Metro adopts CEQA Findings 1, 2, and 3, as identified in Section 3 above and in Section 15091, subdivisions (a)(1), (a)(2), and (a)(3) of the CEQA Guidelines.

Mitigation Measures MM-VIB-4, MM-VIB-5, and MM-VIB-6 would reduce vibration levels to less than significant during operation, and the LPA's incremental contribution to cumulatively significant vibration impacts during operation would not be cumulatively considerable. Thus, for operational vibration impacts and based on substantial evidence in the record as a whole, Metro adopts CEQA Finding 1, as identified in Section 3 above and in Section 15091, subdivision (a)(1) of the CEQA Guidelines.

For vibration impacts during construction and based on substantial evidence in the record as a whole, Metro finds that with mitigation, the LPA, combined with past, present, and reasonably foreseeable projects, would not result in a cumulatively significant impact.

8.7. BIOLOGICAL RESOURCES

Historically, development and rapid urbanization has been occurring in the surrounding region since the late 1800s. Continued development relating to infrastructure improvement, housing construction, and other community needs is regularly, and frequently, occurring. There is an existing cumulative impact related to biological resources as a result of the highly urbanized setting and both historic and present development throughout the region. Implementation of Mitigation Measures MM-BIO-1 (General Protection Measures to Avoid and Minimize Impacts on Sensitive Biological Resources), MM-BIO-2 (Nesting Bird Season Restrictions and Pre-Construction Surveys), MM-BIO-3 (Roosting Bat Restrictions and Survey Requirements), MM-BIO-4 (Pre-Construction Rare Plant Survey), and MM-BIO-5 (Off-Site Mitigation for Southern Tarplant Habitat) would reduce impacts to southern tarplant, nesting birds, and bats to less than significant levels. Therefore, with mitigation, the LPA's incremental contribution to cumulatively significant impacts on biological resources would not be cumulatively considerable during construction.

With implementation of MM-BIO-1 and MM-BIO-5, operation of the LPA on biological resources would be reduced to less than significant. Therefore, based on substantial evidence in the record as a whole, with mitigation, the LPA's incremental contribution to cumulatively significant impacts related to biological resources during operations would not be cumulatively considerable.

Finding

With implementation of Mitigation Measures MM-BIO-1, MM-BIO-2, MM-BIO-3, MM-BIO-4, and MM-BIO-5, Metro finds that the LPA would not result in a cumulatively considerable impact related to biological resources during construction. Thus, for this cumulative impact and based on substantial evidence in the record as a whole, Metro adopts CEQA Finding 1, as identified in Section 3 above and in Section 15091, subdivision (a)(1) of the CEQA Guidelines.

For biological resources impacts during operations and based on substantial evidence in the record as a whole, Metro finds that with implementation of Mitigation Measures MM-BIO-1 and MM-BIO-5, the LPA, combined with past, present, and reasonably foreseeable projects, would not result in a cumulatively significant impact. Thus, Metro adopts CEQA Finding 1, as identified in Section 3 above and in Section 15091, subdivision (a)(1) of the CEQA Guidelines.

8.8. GEOLOGY, SOILS, AND PALEONTOLOGICAL RESOURCES

During both construction and operation, the LPA would not expose people or structures to adverse effects, including the risk of loss, injury, or death involving fault rupture or seismic hazards including liquefaction or landslides. The LPA would also not result in impacts related to soil erosion, unstable or expansive soils, or adequacy of soils to support septic tanks. The LPA would comply with all applicable state and local guidelines and mandatory design requirements related to geologic, subsurface, and seismic hazards. Projected future projects would also be required to comply with all prescribed standards, requirements, and guidance hazards, and implement mitigation measures as necessary.

While the LPA would result in significant impacts on unknown paleontological resources during construction, with implementation of Mitigation Measure MM-GEO-1 (Engage a Qualified Paleontological Resources Specialist), impacts would be reduced to less than significant. Other projects disturbing ground and subsurface areas would similarly be required to mitigate potential impacts to paleontological resources in highly sensitive paleontological areas.

Finding

For the reasons stated above and based on substantial evidence in the record as a whole, Metro finds that with implementation of Mitigation Measure MM-GEO-1, the LPA, combined with past, present, and reasonably foreseeable projects, would not result in a cumulatively significant impact related to geology, soils, and paleontological resources during construction or operation. Thus, Metro adopts CEQA Finding 1, as identified in Section 3 above and in Section 15091, subdivision (a)(1) of the CEQA Guidelines for this impact.

8.9. HAZARDS AND HAZARDOUS MATERIALS

The LPA would not result in significant impacts related to hazards and hazardous materials during construction or operations. The LPA would be required to comply with all prescribed standards, requirements, and guidance related to hazards and hazardous waste. Impacts associated with hazards and hazardous materials are site-specific and largely localized. This project and other future projects would also comply with all the same requirements and apply mitigation measures as necessary to minimize impacts.

Finding

For the reasons stated above and based on substantial evidence in the record as a whole, Metro finds that the LPA, combined with related past, present, and probable future projects, would not result in a cumulatively significant impact related to hazards and hazardous materials during construction or operations.

8.10. HYDROLOGY AND WATER QUALITY

Water Quality

The LPA is located in the Santa Monica Bay and Dominguez Channel watersheds, which currently are both impaired from development in the region. Additionally, development has resulted in limited availability of water resources, due to the use of groundwater for municipal water supplies and existing pollutant loads of surface water sources. Construction of the LPA has the potential to further introduce chemicals and/or hazardous substances as well as sediment into surface waters and groundwaters, or degrade surface water quality via dewatering of groundwater. Operations could impact water quality via sedimentation caused by runoff from newly added impervious surfaces; nitrates from landscape fertilizing; and trash, debris, and bacteria from human presence. However, multiple project features would be implemented as a part of the LPA that would protect water quality and ensure appropriate treatment and discharge of contaminated water. Probable future projects would also be required to comply with the same regulations and permits as the LPA. Nonetheless, given the existing levels of impairment, the cumulative water quality impact is significant. The LPA's incremental contribution to this cumulative impact, however, would be less than cumulatively considerable.

Groundwater Recharge and Groundwater Supplies

Development in the region has resulted in limited availability of water resources due to the use of groundwater for municipal water supplies and existing pollutant loads of surface water sources. This is considered a significant cumulative impact. Construction of the LPA would require water for activities like dust control and concrete mixing, which would be sourced from local utility lines that may depend on groundwater for a portion of their water supply. However, the water needed for construction would be minimal, and would not substantially decrease groundwater supplies. All dewatered groundwater would be discharged in a pre-approved location specified by the RWQCB Waste Discharge Requirements

for Construction Dewatering. LPA operation would involve minimal water usage for activities like routine cleaning, which would not substantially decrease groundwater supplies. As part of Project Feature PF-HWQ-6 (LID BMPs per Regional Requirements), the LPA would be designed with LID measures sized to retain the SWQDv on-site in accordance with regional requirements. There would be a less than significant impact on groundwater during operation. Water for probable future projects would likely also be minimal, and all projects would be subject to the same regional LID requirements. Nonetheless, given the historic impact development has had in the region, impacts to groundwater recharge and groundwater supplies are cumulatively significant. The LPA's incremental contribution to that impact, however, would not be cumulatively considerable.

Alteration of Drainage Patterns

Project construction or operation would not result in substantial drainage pattern alteration such that erosion or siltation, flooding, stormwater drainage system exceedance, additional polluted runoff, or impediment of flood flows would occur. As part of Project Feature PF-HWQ-1 (SWPPP Implementation per Construction General Permit and MS4 Permit), construction would comply with the Construction General Permit requirements, which include BMPs to control erosion and siltation, stabilize disturbed soils, and manage runoff to reduce peak flow velocities. During operation, increased impervious surfaces would have the potential to generate additional runoff; however, as part of Project Feature PF-HWQ-6 (LID BMPs per Regional Requirements), the LPA would retain the SWQDv on-site through LID measures that promote infiltration and manage flows consistent with regional requirements. Probable future projects in the area would also be required to comply with the same state and local regulatory framework. Probable future projects would also be required to comply with the same regulations and local ordinances, at a minimum. Therefore, cumulative impacts related to alteration of drainage patterns would be less than significant.

Release of Pollutants in Flood Zones, Tsunami Zones, or Seiche Zones

The LPA is outside of current seiche and tsunami potential inundation areas. A very small portion of the temporary footprint overlaps with the 100-year flood zone, which is an area that would be used during construction to remove a spur track. As part of Project Feature PF-HWQ-8 (City of Torrance Flood Zone Requirements), construction would comply with the City of Torrance's requirements for construction within flood hazard areas, which are designed to reduce potential run-ins with flood waters. In addition, Project Feature PF-HWQ-1 (SWPPP Implementation per Construction General Permit and MS4 Permit) provides that construction activities must incorporate BMPs to prevent the release of pollutants into surface waters during construction, including in the unlikely case of rare flooding events. None of the related projects are located within or adjacent to an existing flood zone or current seiche or tsunami area. Therefore, cumulative impacts related to the potential release of pollutants in flood hazard, tsunami, or seiche zones would be less than significant.

Conflict with a Water Quality Plan

Construction would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. A groundwater sustainability plan has not been developed for the groundwater basin. Construction of the LPA would be required to comply with beneficial uses, water quality objectives, and waste discharge requirements detailed in the RWQCB Basin Plan. Probable future projects would also be required to comply with the same regulations and local ordinances, at a minimum, and cumulative impacts would be less than significant.

Findings

For the reasons stated above and based on substantial evidence in the record as a whole, Metro finds that the LPA's incremental contribution to cumulatively significant impacts related to water quality and groundwater during construction and operation would not be cumulatively considerable. Metro also finds that the LPA, in combination with past, present and probable future projects, would not result in a significant cumulative impact related to alteration of drainage patterns, flooding, or conflicts with water quality control plans during construction or operation.

8.11. UTILITIES AND SERVICE SYSTEMS

Water Facilities

As described in Section 3.11, Utilities and Service Systems, of the Draft EIR, the West Basin's water supplies are anticipated to be reliable, and no shortfalls are expected from 2021 to 2025, even when assuming a driest five-year scenario. Development of the LPA and probable future projects could cumulatively increase demands on water services post 2025, thereby creating shortages. However, construction of the LPA would not require substantial consumption of potable water, with water use occurring primarily for dust control. This short-term use would require minimal water supplies when compared to regional supplies. During operations, the LPA does not include a significant long-term, permanent source of water use. Although some water use may be needed to clean stations or wash trains, this minimal water use would not interfere with the existing and planned capacity of water facilities. There is no potential for the LPA to interfere with regional water supply services. The LPA's incremental contribution to cumulatively significant water service impacts would not be cumulatively considerable during construction or operation.

Wastewater

Construction activities would generate minimal wastewater through the use of temporary worker restrooms, which would have no potential to necessitate the construction of new or expanded wastewater facilities. Wastewater treatment facilities would not be required to be relocated during construction of the LPA. During operations, the LPA does not include a significant long-term, permanent source of wastewater. Although some water use may be needed to clean stations or wash trains, this minimal water generation would not interfere with the existing and planned capacity of wastewater facilities. As part of Project Feature PF-US-1 (Utility Identification and Coordination) and PF-US-2 (Service Interruption Notification), Metro would coordinate with utility providers to confirm service connections, ensure service continuity, and notify users of any temporary interruptions. The LPA's incremental contribution to cumulatively significant wastewater impacts would be less than cumulatively considerable.

Stormwater Drainage

Development of the LPA, in combination with past, present, and probable future projects, could cumulatively increase demands on existing stormwater infrastructure in the RSA. As part of Project Feature PF-HWQ-1 (SWPPP Implementation per Construction General Permit and MS4 Permit), construction would incorporate BMPs consistent with regulatory requirements, and any new stormwater drainage facilities constructed at stations or along the alignment would comply with applicable state and local design standards. If new stormwater drainage facilities are needed at stations or along the alignment, they would be designed in compliance with applicable state and local requirements.

During operations, the LPA would increase impervious surface areas, resulting in a potential increase in stormwater runoff during operations. As part of Project Feature PF-HWQ-6 (LID BMPs per Regional Requirements), stormwater volumes would be retained on-site, and proposed station designs would incorporate landscaping to further support runoff management. Metro's Environmental Compliance and Sustainability Department would oversee ongoing compliance with stormwater drainage requirements.

For these reasons, the LPA's incremental contribution to cumulatively significant impacts on stormwater drainage facilities would not be cumulatively considerable during construction or operation.

Solid Waste

Construction of the LPA and probable future projects could cumulatively increase demands on solid waste facilities. Construction of the LPA would generate solid waste from discarded construction materials, including contaminated soil. However, the LPA would not generate a substantial amount of solid waste during construction that would result in the exceedance of remaining regional capacity. Additionally, the construction contractor would be subject to AB 939, which requires implementation of a Solid Waste Diversion Program and diversion of at least 50% of the solid waste generated during construction activities from landfills to recycling facilities.

During operation, the LPA would not include a direct source of solid waste. Indirectly, solid waste would be generated by transit users, but this would be collected and managed by Metro. Therefore, the LPA's incremental contribution to cumulatively significant impacts on solid waste facilities would not be cumulatively considerable during construction or operation.

Electric Power

While development of the LPA and past, present, and probable future projects would increase the demand for SCE services, neither construction nor operation of the LPA would require significant electricity. Construction of the LPA would use only minimal amounts of electricity, such as to power field offices, and would not require new or expanded electric power facilities. For operations, the LPA would require electricity to power the extension, but this would be a minimal demand in comparison to what SCE delivers to its entire service area. Metro has also installed photovoltaic systems and plans additional renewable energy generation to offset systemwide electricity consumption. Accordingly, the incremental contribution of the LPA to significant cumulative electric power impacts would not be cumulatively considerable.

Natural Gas and Oil Facilities

While development of the LPA and past, present, and probable future projects would increase the demand for SoCal Gas services, neither construction nor operations of the LPA would require significant natural gas. SoCal Gas has not identified a cumulative shortfall in its service area. Construction of the LPA would not require significant natural gas supplies and has no potential to require new or expanded natural gas facilities. The electrically powered transit line would not use natural gas for operations. Similarly, there are no publicly owned oil facilities in the RSA that would require relocation and no potential for the LPA to require new or expanded oil facilities, thereby contributing to a cumulative effect. Development of the LPA, in combination with past, present, and probable future projects, would not result in a cumulatively considerable impact on natural gas or oil facilities. Therefore, cumulative impacts would be less than significant.

Telecommunications Facilities

AT&T, Frontier Communications, and Spectrum provide telephone and telecommunication services within the RSA, and no cumulative shortfalls in service capacity have been identified. Construction activities would have no potential to necessitate the construction of new or expanded telecommunication facilities. Operations have no potential to interfere with telecommunication facilities, which would be entirely outside of the alignment. For past, present, and probable future projects, any necessary utility upgrades would be determined and implemented by the responsible service providers under their established procedures and requirements. Accordingly, development of the LPA, in combination with other projects, would not result in a cumulatively considerable impact on telecommunication facilities during construction or operation. Therefore, cumulative impacts would be less than significant.

Findings

For the reasons stated above and based on substantial evidence in the record as a whole, Metro finds that the LPA's incremental contribution to cumulatively significant impacts related to water facilities, wastewater, stormwater, solid waste, electric power, and natural gas during construction and operation would not be cumulatively considerable. Metro also finds that the LPA, in combination with past, present, and probable future projects, would not result in a significant cumulative impact related to oil or telecommunication facilities.

8.12. ENERGY

There is an existing cumulative impact related to energy resources. State, regional, and local agencies and jurisdictions have published a wide range of documents intended to reduce energy consumption and increase the use of renewable energy, in order to reduce pollution that contributes to global warming. The LPA, combined with past, present, and probable future projects, could contribute to the existing cumulative impact.

Construction of the LPA would require a one-time expenditure of diesel fuel and gasoline over the approximately six-year duration. However, the forecasted fuel consumption would represent tiny increases of less than 0.05% and less than 0.001% for diesel fuel and gasoline, respectively, relative to the forecasted on-road vehicle fueled consumption within the SCAB portion of Los Angeles County. These increases would not place an undue burden on existing petroleum-based transportation fuel reserves or supply within Los Angeles County. All equipment and vehicles that would be used in construction activities would comply with applicable CARB regulations, the Pavley and Low Carbon Fuel Standards, and the Corporate Average Fuel Economy Standards. The LPA would adhere to the provisions of the Metro Green Construction Policy to control and minimize emissions to the maximum extent feasible and would also be consistent with GHG-reduction plans.

Therefore, the incremental contribution of the LPA's construction activities to the existing cumulative energy impact would not be cumulatively considerable.

Regarding operational activities, the LPA would indirectly change regional energy consumption through changes in regional VMT. The LPA would reduce annual regional energy consumption and result in a net energy benefit. Operational electricity requirements would not place a strain on available SCE power supply.

Finding

For the reasons stated above and based on substantial evidence in the record as a whole, Metro finds that the LPA's incremental contribution to cumulatively significant impacts related to energy during construction and operation would not be cumulatively considerable.

8.13. CULTURAL RESOURCES

Development of the LPA in combination with other projects located in the adjacent area would increase the potential for impacts to historical and archaeological resources and could contribute to the loss of such resources in the region.

There are no historical resources located with the RSA, and therefore, there would be no impact related to historical resources. However, the LPA would have a potentially significant impact related to the disturbance of unknown archaeological resources or human remains during construction. Mitigation Measures MM-CUL-1 (Cultural Resources Identification Training), MM-CUL-2 (Cultural Resources Monitoring and Mitigation Plan), and MM-CUL-3 (Unanticipated Discovery of Human Remains) would be implemented, which would reduce the impact to less than significant. Probable future projects would be expected to comply with applicable federal, state, and local regulations to protect historic and archaeological resources, and would implement project-specific mitigation measures during construction. Operational activities would not have the potential to encounter archaeological resources or human remains, and there would be no impact. Therefore, the LPA, in combination with past, present, and probable future projects, would not result in a significant cumulative impact on historic and archaeological resources during construction or operation.

Finding

For the reasons stated above and based on substantial evidence in the record as a whole, with implementation of Mitigation Measures MM-CUL-1, MM-CUL-2, and MM-CUL-3, the LPA would not combine with past, present, and probable future projects to result in a significant cumulative impact on historic and archaeological resources during construction or operation. Thus, with respect to this cumulative impact, Metro adopts CEQA Finding 1, as identified in Section 3 above and in Section 15091, subdivision (a)(1) of the CEQA Guidelines.

8.14. TRIBAL CULTURAL RESOURCES

Development of the LPA, in combination with past, present, and probable future projects, would increase the potential for disturbance of tribal cultural resources in the region. The degree of impact from cumulative development depends on site-specific conditions and the nature of each project. No tribal cultural resources have been identified within the LPA RSA, but unknown resources could be encountered during ground disturbance. In that event, Metro would comply with applicable federal, state, and local guidelines, including PRC Sections 2108.3.2 and 5097.98 and Health and Safety Code Section 7050.5. Mitigation Measures MM-TCR-1 (Native American Monitoring), MM-TCR-2 (Unanticipated Discovery of Tribal Cultural Resource Objects [Non-Funerary/Non-Ceremonial]), and MM-TCR-3 (Unanticipated Discovery of Human Remains and Associated Funerary or Ceremonial Objects) would be implemented to address any discovery, which would reduce the impact to less than significant. Probable future projects in the area would similarly be required to comply with federal, state, and local regulations governing tribal cultural resources and implement appropriate mitigation measures, as needed. Accordingly, development of the LPA, in combination with past, present, and probable future projects, would not result in a cumulatively significant impact on tribal cultural

resources during construction. During operation, the LPA would not involve subsurface disturbance that could affect such resources, and no cumulative operational impacts would occur.

Finding

For the reasons stated above and based on substantial evidence in the record as a whole, with implementation of Mitigation Measures MM-TCR-1, MM-TCR-2, and MM-TCR-3, the LPA would not result in a cumulatively considerable impact related to cultural resources. Thus, with respect to this cumulative impact, Metro adopts CEQA Finding 1, as identified in Section 3 above and in Section 15091, subdivision (a)(1) of the CEQA Guidelines.

8.15. PUBLIC SERVICES

Fire and Police Protection

Construction of the LPA, in combination with past, present, and probable future projects, could increase demand for fire and police protection services within the RSA. Construction of the LPA would not result in direct physical impacts to fire and police protection facilities. While temporary lane closures could occur during construction, as part of Project Feature PF-T-1 (Construction Traffic Management Plan), Metro would coordinate with emergency service providers to maintain emergency access. There are planned roadway projects close to the Metro ROW that could be potentially disruptive to service if construction occurred concurrently, but given the shorter and more-intermittent duration of the nature of these types of roadway improvement projects, overlap of construction periods would be minimal, if at all. The probable future projects would implement their own measures to reduce impacts to emergency services by implementing detours and appropriate notification of agencies. Neither construction nor operation of the LPA would result in direct population growth that would necessitate new police facilities and police services or otherwise substantially impact police services. Indirect population growth as a result of and in combination with probable future projects in the region are anticipated to be consistent with the SCAG adopted growth projects and are accounted for within cities' plans. Accordingly, the LPA, in combination with past, present, and probable future projects, would not have cumulatively significant impacts related to fire and police protection during construction or operation.

Schools

Construction of the LPA, in combination with past, present, and probable future projects, would not result in a significant cumulative impact related to demand for school facilities. During construction, the LPA and other probable future projects could bring additional workers to the area. However, construction workers would be unlikely to relocate households or residences as a consequence of working on the LPA or other local projects; therefore, no significant demand for unpanned new school facilities would occur during construction and there would be no significant cumulative impact.

During operation, the LPA, combined with past, present, and probable future projects, could increase demand for schools by increasing the population in the area. However, the LPA would not directly increase the number of residents and, thus, would not directly increase demand for schools or necessitate new school facilities. Any indirect population growth as a result of and in combination with past, present, and probable future projects is expected to be consistent with the SCAG adopted growth projects and accounted for within cities' plans. Therefore, cumulative impacts to schools are expected to be less than significant. Moreover, the LPA's incremental contribution to any such impact would not be cumulatively considerable.

Parks and Recreational Facilities

Construction of the LPA, in combination with past, present, and probable future projects, would not result in a significant cumulative impact on parks. Cumulative construction could increase the local workforce, which could increase use of parks during construction. However, construction workers would not be expected to relocate household or permanent residences in connection with the LPA or other present and future projects under construction; therefore, no significant long-term demand on existing parks is anticipated during construction.

During operation, past, present, and probable future projects could increase demand for parks and recreational facilities by population growth. However, the LPA would not directly increase the number of residents and, therefore, would not directly increase the need for new parks and recreational facilities. Any indirect population growth as a result of the LPA, in combination with past, present and probable future projects in the region, is anticipated to be consistent with the SCAG regional growth projections, which account for population increases in planning for parks. Accordingly, cumulative impacts to parks and recreational facilities are expected to be less than significant, and, in any case, the incremental contribution of the LPA to any such cumulative impact would not be cumulatively considerable.

Libraries

There are no libraries within a quarter mile of the LPA. Regionally, past, present, and probable future projects could increase use of libraries during construction as a result of a larger workforce, but construction workers would not be expected to relocate households or permanent residences in connection with the LPA or other projects. Accordingly, no significant long-term demand for libraries is anticipated during construction.

During operation, the LPA would not directly increase the number of residents and thus would not directly increase demand for library facilities. Any indirect effects of the LPA, in combination with past, present, and probable future projects, are anticipated to be consistent with the SCAG adopted growth projects and accounted for within cities' plans, which already account for population increases in planning for libraries. Therefore, a significant cumulative impact is not expected. Moreover, the LPA's incremental contribution to any such impact would not be cumulatively considerable.

Findings

For the reasons stated above and based on substantial evidence in the record as a whole, Metro finds that the LPA's incremental contribution to cumulatively significant impacts related to schools, parks, and libraries during construction and operation would not be cumulatively considerable. Metro also finds that the LPA, in combination with past, present and probable future projects, would not result in a significant cumulative impact related to fire or police protection services during construction or operation.

9. FINDINGS FOR ALTERNATIVES

CEQA provides that “public agencies should not approve projects as proposed if there are feasible alternatives ... available which would substantially lessen the significant environmental effects of such projects[.]” (PRC Section 21002.) However, “in the event specific economic, social, or other conditions make infeasible such project alternatives ... , individual projects may be approved in spite of one or more significant effects thereof.” (*Ibid.*) As defined by CEQA, “feasible” means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, legal, and technological factors. (PRC Section 21061.1; CEQA Guidelines Section 15126.6(f)(1).)

In determining whether an alternative is “feasible” under CEQA, an agency may consider whether that alternative will promote the project’s objectives and goals. (*Sequoyah Hills Homeowners Assn. v. City of Oakland* (1993) 23 Cal.App.4th 704, 715; *California Native Plant Society v. City of Santa Cruz* (2009) 177 Cal.App.4th 957, 1001.) The feasibility determination also “encompasses ‘desirability’ to the extent that desirability is based on a reasonable balancing of the relevant economic, environmental, social, legal, and technological factors.” (*City of Del Mar v. City of San Diego* (1982) 133 Cal.App.3d 401, 417; *California Native Plant Society, supra*, at p. 1001.) Broad policy decisions come into play when determining whether alternatives are feasible, and “an alternative that ‘is impractical or undesirable from a policy standpoint’ may be rejected as infeasible.” (*Ibid.* [upholding agency’s reliance on policy considerations like “promoting transportation alternatives” and “access to ... open space for persons with disabilities” in making its infeasibility findings].)

In accordance with CEQA Guidelines Section 15126.6(a), a range of feasible alternatives was identified and evaluated in a manner intended to foster meaningful public participation and support informed decision making. A detailed description of the project alternatives is provided in Chapter 2, Project Description, and Chapter 4, Evaluation of Alternatives, of the Draft EIR.

9.1. NO PROJECT ALTERNATIVE

The No Project Alternative, required by CEQA Guidelines Section 15126.6(e)(2), assumes that the project would not be implemented. As part of the No Project Alternative, no additional light rail tracks or stations would be added south of the existing light rail terminus at the Redondo Beach (Marine) Station. The No Project Alternative is based on a review of local general plans, capital improvement programs, and regional transportation plans, including the SCAG 2020-2045 RTP/SCS and Metro’s 2020 Long-Range Transportation Plan (LRTP).

As described in Chapter 4, Evaluation of Alternatives, of the Draft EIR, the No Project Alternative would avoid all construction disruption and construction-related environmental impacts. However, the No Project Alternative would conflict with regional and local programs, plans, ordinances, and policies related to transportation, land use and planning, air quality, GHG emissions, and energy. It would also constrain opportunities for transit-oriented development and related economic investment in station areas, leaving adopted regional growth plans unsupported by major transit infrastructure. The No Project Alternative would also not achieve or address any of the project objectives or benefits since it would not provide light rail service in the South Bay, achieve the air quality and reduction in GHG emissions, avoid or minimize environmental impacts to the maximum extent, nor provide equitable development opportunities as proposed by the LPA. By failing to provide a transit solution, the No Project Alternative would exacerbate cumulative traffic, air quality, and GHG conditions by shifting growth-related travel demand onto already congested roadways.

Therefore, the No Project Alternative would not be consistent with the goals and objectives for the project. Thus, Metro adopts CEQA Finding 3, as identified in Section 3 above and in Section 15091, subdivision (a)(3) of the CEQA Guidelines.

9.2. HIGH-FREQUENCY BUS ALTERNATIVE

The High-Frequency Bus (HFB) Alternative would implement a rapid bus service instead of a light rail extension. There would be four bus stops between the existing Redondo Beach (Marine) Station and Torrance TC. Physical improvements would be limited to new signs at bus stops, as well as shelters with solar lighting, benches, and trash receptacles, as a minimum level of bus stop amenities. Where practical, the HFB Alternative may include curb extensions, elimination of street parking, or other improvements to the sidewalk area near new bus stops. The HFB Alternative would also require a transfer at the Redondo Beach (Marine) Station in order for riders to continue further, increasing travel time and potential delays. Travel times from end to end would be about 25 minutes, which is faster than local bus service (approximately one hour, with a transfer), but slower than the travel times expected from the LPA (approximately seven minutes). The HFB Alternative would create a duplication of service for Torrance Line 8.

As described in Chapter 4, Evaluation of Alternatives, of the Draft EIR, the HFB Alternative would reduce all significant impacts to a less than significant level, have the shortest construction period, and the lowest costs of all the alternatives, including the LPA. While the HFB Alternative would meet the objectives of the project to some degree, the objectives would be better met by the LPA, which would provide greater mobility benefits and VMT reductions. The HFB Alternative would offer less passenger capacity than the light rail alternatives and options. As traffic conditions worsen with projected population growth, the HFB Alternative may experience slower travel times and reduced reliability.

In addition, the HFB Alternative would not advance Metro's adopted regional transit expansion commitment or the SCAG RTP/SCS strategy of expanding high-capacity transit to meet climate and mobility goals to the degree that the LPA would. The HFB Alternative would not provide the same long-term capacity for projected ridership, limiting Metro's ability to reduce VMT, GHG emissions, and regional air pollutants relative to the LPA. The HFB Alternative would also provide fewer opportunities for equitable transit-oriented development near stations, reducing potential economic investment and housing opportunities compared to the LPA. Because the HFB Alternative would require transfers and provide longer travel times, it would be less attractive to riders, particularly transit-dependent riders who would disproportionately bear the burden of slower and less reliable service.

Given the limited environmental benefits of the HFB Alternative and its limited ability to achieve the project's goals and objectives, Metro adopts CEQA Finding 3, as identified in Section 3 above and in Section 15091, subdivision (a)(3) of the CEQA Guidelines.

9.3. ELEVATED/AT-GRADE ALIGNMENT

The Elevated/At-Grade Alignment, referred to as the Proposed Project in the Draft EIR, is similar to the LPA, except that it would have at-grade crossings at 170th and 182nd Streets (rather than the short below-grade trench segments proposed for the LPA).

As described in the 2025 Ridership Summary Report, the Elevated/At-Grade Alignment would have the same basic benefits as the LPA, which include an annual VMT reduction, increased ridership and travel time savings, direct access to other transit networks, and station areas. Although the Elevated/At-Grade Alignment would have a shorter construction schedule and lower capital cost compared to the LPA, it would result in significant and unavoidable noise impacts during operations due to the light rail crossing

gates and warning bells required for at-grade crossings. These impacts could not be reduced to less than significant levels with feasible mitigation. The at-grade light-rail and freight crossings would also require more coordination with the CPUC than the LPA, which has only freight at-grade crossings.

The Elevated/At-Grade Alignment would also result in a significant and unavoidable vibration damage impact during construction because it would require reconstruction of the existing Grant Avenue freight bridge—an impact that would not occur under the LPA. Even with implementation of mitigation measures, the Elevated/At-Grade Alignment would still result in a significant and unavoidable vibration damage impact to one structure during construction, as well as the temporary vibration annoyance impacts similar to those anticipated for the other light rail alternatives and options.

In sum, compared to the LPA, the Elevated/At-Grade Alignment would result in greater significant and unavoidable impacts without providing any additional long-term environmental benefits. Although the Elevated/At-Grade Alignment would have somewhat lower construction costs and a shorter duration than the LPA, these advantages are outweighed by the increased operational noise and construction vibration damage impacts, as well as the additional regulatory coordination associated with at-grade light rail crossings. No feasible mitigation measures are available to reduce the significant and unavoidable operational noise and construction vibration damage impacts to less than significant levels. Thus, Metro adopts CEQA Finding 3, as identified in Section 3 above and in Section 15091, subdivision (a)(3) of the CEQA Guidelines.

9.4. TRENCH OPTION

The Trench Option is similar to the LPA but would include a longer continuous below-grade trench between Inglewood Avenue and 170th Street, rather than the combination of elevated and trenched segments proposed for the LPA. Like the LPA, it would also include a short trench under 182nd Street to grade-separate the light rail crossing.

As described in the 2025 Ridership Summary Report, the Trench Option would achieve the same basic benefits as the LPA, including an annual VMT reduction, increased ridership and travel time savings, direct access to other transit networks, and opportunities for station area development. However, the Trench Option would require substantially longer and more complex construction, at considerably higher costs than the LPA. Unlike the LPA, the Trench Option would require deep excavations to avoid an underground storm drain near Inglewood Avenue and Manhattan Beach Boulevard, an area that includes shallow groundwater and known soil and groundwater contamination. As a result, the Trench Option would involve complex dewatering and groundwater management procedures to prevent migration or release of contaminated groundwater. Constructing a lengthy trench (approximately two miles) in close proximity to residential neighborhoods while maintaining active freight operations would also create logistical and engineering challenges.

Like the LPA, the Trench Option would avoid long-term noise impact at 170th Street by placing the light rail alignment below grade. By grade separating 170th Street and 182nd Street with trenches, the Trench Option and LPA would avoid delays to vehicles, including emergency vehicles, and enhance safety for pedestrians and cyclists along school routes. Unlike the LPA, the excavation required for the longer trench segment of the Trench Option would cause significant and unavoidable air quality impacts during construction, which could not be mitigated to less than significant levels. The more complex trench design would also increase community disruption during construction, including greater truck hauling, dust, and noise near sensitive residential uses.

In comparison to the LPA, the Trench Option would, therefore, achieve no additional long-term benefits while imposing higher costs, longer construction durations, and significant and unavoidable construction-related air quality impacts.

Accordingly, although the Trench Option would meet many project objectives, it would do so less effectively than the LPA and with greater adverse impacts. Metro, therefore, adopts CEQA Finding 3, as identified in Section 3 above and in Section 15091, subdivision (a)(3) of the CEQA Guidelines.

9.5. HAWTHORNE OPTION

The Hawthorne Option would start within the existing Metro ROW, then leave the Metro ROW to cross over streets and commercial properties before running parallel to Interstate 405 (I-405) within Caltrans ROW between Inglewood Avenue and Hawthorne Boulevard. From there, it would follow Hawthorne Boulevard (State Road 107) south between 162nd Street and 190th Street. Around 190th Street, the alignment returns to the Metro ROW, terminating at the Torrance TC. A station is proposed within the center of Hawthorne Boulevard (South Bay Galleria Station), south of Artesia Boulevard.

As described in the 2025 Ridership Summary Report, the Hawthorne Option would provide the highest number of annual project boardings and new riders of all the alternatives, including the LPA. The Hawthorne Option would not directly connect to the Redondo Beach TC, thereby not allowing for seamless connections between rail and bus. While the Hawthorne Option would provide a higher number of project boardings and new riders than the LPA, it provides lower VMT reductions and travel time savings than the LPA. It would also forego the improvements along the Metro ROW that are included in the LPA, such as quiet-zone-ready corridor improvements to eliminate existing freight horn noise, safety improvements from upgraded freight crossing infrastructure and trackwork, and new neighborhood paths where sidewalks are lacking today.

The Hawthorne Option would require additional permits and review by both Caltrans and the Federal Highway Administration (FHWA) due to the elevated structure encroaching into I-405 and Hawthorne Boulevard, both under the jurisdiction of Caltrans, adding an estimated two to four years to the project timeline. Construction would also temporarily reduce roadway capacity through lane closures, including closures to the I-405 on and off ramps, and would permanently reduce left turn-lanes and eliminate some on-site parking along Hawthorne Boulevard. These changes could worsen traffic congestion in an already heavily traveled corridor with 170 commercial properties, supporting approximately 350 businesses, located adjacent to the alignment on Hawthorne Boulevard. The 2023 Transportation Detail Report concluded that several intersections along Hawthorne Boulevard would experience deteriorated level of service as a result of the permanent roadway modifications required by this option. The alignment would also require relocation of major utilities, including an underground storm drain located in the roadway median, and raising overhead high-voltage transmission lines to accommodate the elevated structure. These factors increase both the cost and construction complexity and risk. Additionally, several commercial parcels would be affected, including permanent full acquisition of seven commercial parcels and permanent partial acquisition of five commercial parcels north of 190th Street.

Although the Hawthorne Option would achieve strong ridership and mobility benefits, it would do so at the expense of substantially greater construction costs, a longer project timeline, extensive utility relocations, and property acquisitions compared to the LPA. The Hawthorne Option would also introduce greater disruption to existing businesses and permanent traffic and parking constraints along Hawthorne Boulevard. By contrast, the LPA achieves comparable mobility benefits while avoiding these

heightened adverse effects and providing improvements along the Metro ROW that the Hawthorne Option lacks. Thus, Metro adopts CEQA Finding 3, as identified in Section 3 above and in Section 15091, subdivision (a)(3) of the CEQA Guidelines.

9.6. FINDINGS FOR THE ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA Guidelines Section 15126.6 requires that an “environmentally superior” alternative be identified. The environmentally superior alternative is the alternative that would be expected to generate the fewest adverse impacts, regardless of its ability to meet the project objectives. If the environmentally superior alternative is the No Project alternative, the EIR must also identify an environmentally superior alternative among the other alternatives.

As described in Chapter 4, Evaluation of Alternatives, in the Draft EIR, the HFB Alternative would be the environmentally superior alternative, as it would avoid all significant environmental impacts. However, while the HFB Alternative would minimize impacts, it would not realize the same level of benefits from VMT reduction, air quality improvements, GHG emissions reduction, energy savings, and equitable access. Accordingly, although the HFB Alternative is the environmentally superior alternative in terms of impact avoidance, the LPA is the superior alternative among those that feasibly meet the project objectives, because it provides the most effective balance of environmental protection, mobility improvements, and consistency with regional and local plans. Thus, with respect to the environmentally superior alternative, Metro adopts CEQA Finding 3, as identified in Section 3 above and in Section 15091, subdivision (a)(3) of the CEQA Guidelines.

10. FINDINGS FOR MITIGATION MEASURES

CEQA provides that “public agencies should not approve projects as proposed if there are ... feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects[.]” (PRC Section 21002.) However, “in the event specific economic, social, or other conditions make infeasible ... such mitigation measures, individual projects may be approved in spite of one or more significant effects thereof.” (*Ibid.*) As defined by CEQA, “feasible” means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, legal, and technological factors. (PRC Section 21061.1; CEQA Guidelines Section 15126.6(f)(1).)

In determining whether a mitigation measure is “feasible” under CEQA, an agency may consider whether that mitigation measure will promote the project’s objectives and goals. (*Sequoyah Hills Homeowners Assn., supra*, 23 Cal.App.4th at p. 715; *California Native Plant Society, supra*, 177 Cal.App.4th at p. 1001.) The feasibility determination also “encompasses ‘desirability’ to the extent that desirability is based on a reasonable balancing of the relevant economic, environmental, social, legal, and technological factors.” (*City of Del Mar, supra*, 133 Cal.App.3d at p. 417; *California Native Plant Society, supra*, at p. 1001.) Broad policy decisions come into play when determining whether mitigation measures are feasible. (See *Ibid.*)

The Metro Board has considered every mitigation measure recommended in the Draft EIR and Final EIR. Metro hereby binds itself to implement or, as appropriate, require implementation of these measures. The MMRP will be adopted concurrently with these Findings and will be effectuated through the process of constructing and implementing the LPA.

Regarding the project features, the Metro Board finds and affirms that these features are integral components of the LPA itself, not mitigation measures. They were included in the project description and evaluated in the Draft and Final EIR as part of the proposed project, rather than being imposed after the fact to reduce significant impacts. In approving the LPA, Metro commits to full implementation of the project features identified in the Draft and Final EIR.

Some comments on the Draft EIR suggested additional mitigation measures or modifications to the mitigation measures recommended in the Draft EIR. As shown in Chapter 4, Corrections and Additions, of the Final EIR, Metro added or revised project features and mitigation measures in response to comments. In response to other comments, Metro explained why suggested mitigation measures were not feasible or not superior to the mitigation measures already identified in the Draft EIR. The Metro Board agrees with the Final EIR in those instances when proposed mitigation measure revisions were not accepted, and hereby ratifies, adopts, and incorporates the Final EIR’s reasoning on these issues.

11. STATEMENT OF OVERRIDING CONSIDERATIONS

Pursuant to PRC Section 21081, subdivision (b) and CEQA Guidelines Section 15093, if an EIR demonstrates that a project will result in one or more significant and unavoidable environmental impacts, the lead agency may nonetheless approve the project if it determines that the project's economic, social, environmental, or other benefits outweigh those impacts. This determination is embodied in a Statement of Overriding Considerations.

CEQA requires that such a statement be supported by substantial evidence in the record and reflect the lead agency's balancing of the project's benefits against its environmental consequences. In making this determination, the agency exercises its discretion to weigh competing policy considerations, including statewide and regional objectives, local planning goals, and community needs. The statute expressly recognizes that public agencies may approve projects with unavoidable impacts where there are countervailing benefits, and the courts have confirmed that the responsibility for striking this balance rests squarely with the decision-making body.

As the lead agency for the project, the Metro Board has both the authority and the responsibility under CEQA to make this policy judgment. In adopting this Statement of Overriding Considerations, the Metro Board exercises its discretion to determine that the benefits of the LPA outweigh the project's significant and unavoidable impacts, and that approval of the project is, therefore, appropriate under CEQA.

11.1. SIGNIFICANT AND UNAVOIDABLE IMPACTS

The LPA would result in temporary significant and unavoidable impacts for noise and vibration during construction.

Additionally, as discussed in Section 5.2, if the corridor cities decline to pursue a quiet zone corridor establishment, routine freight horn noise at eight crossings in a residential area would continue, and the LPA would also result in a significant and unavoidable operational noise impact. This significant impact would be eliminated, however, if the corridor cities implement a quiet zone corridor as specified in Mitigation Measure MM-NOI-4. The LPA would not result in any other long-term significant and unavoidable impacts as part of project operations with implementation of mitigation measures.

Impact 3.6-4.1: Ambient Noise During Construction

The project would result in temporary and periodic increases in ambient noise levels due to construction activity that would exceed FTA standards. While Mitigation Measure MM-NOI-1 (Noise Control Plan) would be implemented as part of the LPA, which would include noise-reducing measures, there would still be temporary or periodic increases in ambient noise levels that exceed FTA construction impact criteria. There are no feasible mitigation measures to reduce construction noise levels below the FTA's threshold of significance. Therefore, the significant and unavoidable impact related to construction noise would remain.

Impact 3.6-4.1: Ambient Noise During Operation (Significant and Unavoidable Only if Corridor Cities Do Not Implement Quiet Zone)

The combination of relocated freight tracks and light rail noise would result in potentially significant noise impacts to 178 Category 2 clusters and 3 Category 3 clusters. Mitigation Measures MM-NOI-2 (Soundwalls) and MM-NOI-3 (Low Impact Frogs) would reduce light rail noise impacts, while Mitigation Measure MM-NOI-4 (Quiet Zone Establishment) would eliminate routine blowing of freight horns, thereby reducing the combined light rail and freight train noise to less than significant. **As found in Section 5.1, above, after implementation of Mitigation Measures MM-NOI-2, MM-NOI-3, and MM-**

NOI-4, the combination of light rail noise and freight track relocation noise from operation would result in noise levels below the FTA's criteria, and the impact would be less than significant. Implementation of MM-NOI-4 is within the jurisdiction of the corridor cities, which Metro finds can and should implement the measure.

However, establishment of a quiet zone corridor under MM-NOI-4 requires action by the corridor cities, which hold the authority to apply for quiet zone designation. The Metro Board finds that such action is both feasible and appropriate and that the Cities of Torrance, Redondo Beach, and Lawndale can and should pursue quiet zone corridor establishment to eliminate freight horn noise. **Nonetheless, for the purposes of this Statement of Overriding Considerations only, Metro has made a conservative assumption that MM-NOI-4 may not be implemented, solely because the decision rests with other jurisdictions.** In that event, the combined light rail and freight relocation noise would be significant and unavoidable.

Impact 3.6-4.3: Ground-Borne Vibration Annoyance During Construction

Construction of the LPA would result in significant annoyance vibration impacts, resulting from operation of construction equipment (e.g., vibratory roller and impact pile driver) near residential structures and sensitive land uses. Mitigation Measures MM-VIB-1 (Vibration Control Plan) and MM-VIB-2 (Construction Equipment Location) would reduce vibration impacts, but it would not be feasible to limit the use of all types of equipment, as some pieces of equipment cannot be modified or replaced. Therefore, the significant and unavoidable impact related to vibration annoyance during construction would remain.

11.2. OVERRIDING BENEFITS OF THE PROJECT

The Metro Board has carefully weighed the benefits of the LPA against its significant and unavoidable impacts identified above. As discussed in Section 11.1, these impacts consist of temporary construction-period noise and vibration (annoyance) impacts, as well as a potential operational noise impact that could occur if the corridor cities do not implement the quiet zone pursuant to Mitigation Measure MM-NOI-4. The Metro Board finds that, even assuming these impacts, the LPA would generate specific economic, social, environmental, and other benefits that outweigh the adverse impacts. Each benefit described below constitutes a separate and independent basis for approving the LPA, and any one of them, standing alone, would be sufficient to override the significant and unavoidable impacts. Considered together, these benefits provide compelling and overwhelming justification for approval of the LPA.

- > **Increased Transportation Mobility:** The South Bay currently lacks fast, frequent, and reliable transit connections to the rest of Los Angeles County, limiting access to jobs, services, and key destinations. The project addresses these challenges and would substantially expand access to opportunities for residents and workers throughout the South Bay and the greater Los Angeles region. Approximately 3.6 million boardings are expected each year, including approximately 1.5 million annual new riders to the Metro system. By extending the K Line south to Torrance, the project would also integrate two new bus transit centers into the existing regional rail and bus network and provide seamless connections to the LAX/Metro Transit Center located at LAX, as well as the broader regional system. These connections would significantly improve transit mobility for South Bay residents and strengthen the regional multimodal transportation network.
- > **Reduced Travel Times:** The project would provide a direct, one-seat ride from the Torrance TC to LAX in 19 minutes. This represents a significant travel time saving compared to existing conditions and would markedly improve connections between the South Bay, the airport, and the greater Los

Angeles area. By providing faster, more reliable service, the project would link many Equity Focus Communities to major employment and activity centers along the Metro C, K, and E Lines, thereby improving access to jobs, education, health care, and other essential services. These mobility benefits would enhance regional competitiveness and promote equitable access to opportunities.

- > **Environmental Benefits:** The project would divert vehicle trips from congested freeways and arterial streets, thereby reducing VMT. Reductions in VMT translate into reductions in air pollutants and GHG emissions. These benefits are consistent with, and help advance, regional and statewide policy commitments to address climate change and improve air quality, including implementation of SB 375, California's Scoping Plan under AB 32 and SB 32, and SCAG's RTP/SCS. By shifting drivers to transit, the project would help address climate change and reduce congestion, with anticipated reductions of approximately 14.9 million VMT per year and 1,833.58 MTCO₂e per year.
- > **Community Safety Improvements:** The project would introduce multiple new safety features for corridor communities. Relocation and improvement of the freight corridor would include enhanced freight crossings with upgraded infrastructure and installation of security barriers to prevent pedestrian trespassing into the active freight corridor. The project would also construct new neighborhood walking paths, providing safe and dedicated pedestrian routes in areas that currently lack continuous sidewalks. These improvements would enhance the safety of schoolchildren and other pedestrians, reduce conflicts between freight and passenger rail operations, and improve the quality of the public realm in adjacent communities.
- > **Economic Development and Job Creation:** The project would generate substantial economic benefits through both short-term construction employment and long-term economic growth. During construction, the project is expected to create 15,000 jobs (8,600 construction and 6,400 non-construction) in the Los Angeles region, including skilled trade and apprenticeship opportunities that support local workforce development and disadvantaged communities. Consistent with Metro's commitment to small business participation and disadvantaged business enterprises, the project would also create contracting opportunities for local firms. Over the long term, the project would help catalyze investment in station areas, thereby supporting new housing, commercial space, and transit-oriented development and stimulating sustained economic activity and expanding the local tax base. These benefits would extend beyond the immediate corridor and strengthen the region's overall economic vitality.
- > **Equity Benefits:** The project would provide particular benefits for Equity Focus Communities in the South Bay and South Los Angeles, where many residents are transit-dependent and face disproportionate transportation cost burdens. By offering a fast, reliable, and affordable connection to major employment and activity centers, the project would expand access to jobs, education, health care, and other essential services. The project would also reduce exposure to harmful air pollutants in these communities by shifting trips away from single-occupancy vehicles and reducing emissions in areas already burdened by poor air quality. By advancing Metro's adopted equity policies and state commitments to environmental justice, the project would meaningfully improve mobility, affordability, and health outcomes for historically underserved populations. Additionally, Metro has engaged in, and would continue to engage in, extensive public outreach to ensure that community perspectives are reflected in the LPA's development.
- > **Consistency with Regional and Local Planning Documents:** The project advances the region's collective commitments to mobility, equity, air quality, and climate goals. The project is identified as a priority investment in Metro's 2020 Long Range Transportation Plan and SCAG's 2020–2045

RTP/SCS and 2024–2050 RTP/SCS. Advancing the project directly implements these adopted plans, which establish the region’s strategy for reducing GHG emissions, supporting sustainable growth, and expanding high-capacity transit. At the local level, the project is consistent with the general plans of the corridor cities, which encourage transit. Failure to implement the project would frustrate these adopted plans and undermine the region’s ability to achieve its climate and sustainability goals.

Based on the foregoing findings, the Metro Board determines that the economic, social, and environmental benefits of the LPA outweigh the significant and unavoidable impacts identified in the Final EIR and the record of proceedings. In making this determination, the Metro Board has carefully balanced the benefits of the LPA against its unavoidable impacts and concludes that approval of the LPA is appropriate under CEQA. The Metro Board further finds that each one of the foregoing benefits, independent of the others, provides a sufficient basis to approve the LPA notwithstanding its unavoidable significant impacts.

ACRONYMS

ACM	Asbestos-Containing Material
ADL	Aerially deposited lead
ATCM	Airborne Toxic Control Measure
BACT	Best Available Control Technology
bgs	Below Ground Surface
BMP	Best Management Practice
CAAP	Climate Action and Adaptation Plan
CAAQS	California Ambient Air Quality Standards
CalGEM	California Geologic Energy Management Division
CALGreen Code	California Green Building Standards Code
CAMUTCD	California Manual on Uniform Traffic Control Devices
CARB	California Air Resource Board
CBC	California Building Code
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFGF	California Fish and Game Code
CFR	Code of Federal Regulations
CGS	California Geological Survey
CHRIS	California Historical Resources Information System
CO	Carbon Monoxide
CPTED	Crime Prevention through Environmental Design
CPUC	California Public Utilities Commission
CRMMP	Cultural Resources Monitoring and Mitigation Plan
CTMP	Construction Traffic Management Plan
CWA	Clean Water Act
CY	Cubic Yard
dBA	Decibels A
DTSC	Department of Toxic Substances Control
EIR	Environmental Impact Report
ESA	Environmental Site Assessment
FRA	Federal Railroad Administration
FTA	Federal Transit Administration
FTIP	Federal Transportation Improvement Program
FRA	Federal Railroad Administration
GHG	Greenhouse Gases
HFB	High-Frequency Bus
JWPCP	Joint Water Pollution Control Plant
kWh	Kilowatt-Hours
LACDPW	County of Los Angeles Department of Public Works
LAX	Los Angeles International Airport
LBP	Lead-Based Paint
LED	Light Emitting Diode
L _{eq}	Equivalent Continuous Sound Level
LID	Low Impact Development

LPA	Locally Preferred Alternative
L RTP	Long-Range Transportation Plan
MBTA	Migratory Bird Treaty Act
MDE	Maximum Design Earthquake
Metro	Los Angeles County Metropolitan Transportation Authority
Metro ROW	Metro-owned right-of-way
MJ	Megajoule
MM	Mitigation Measure
MMRP	Mitigation Monitoring and Reporting Program
MRDC	Metro Rail Design Criteria
MS4	Municipal Separate Storm Sewer System
MSAT	Mobile Source Air Toxics
MTCO _e	Metric tons of carbon dioxide equivalent
MWh	Megawatt-Hours
NAAQS	National Ambient Air Quality Standards
NOP	Notice of Preparation
NO _x	Nitrogen Oxides
NPDES	National Pollutant Discharge Elimination System
NTP	Notice to Proceed
O ₃	Ozone
ODE	Operating Design Earthquake
PCB	Polychlorinated Biphenyls
PF	Project Feature
PM _{2.5}	Particulate Matter Less than 2.5 Microns in Diameter
PM ₁₀	Particulate Matter Less than 10 Microns in Diameter
PRC	Public Resources Code
PRMMP	Paleontological Resources Monitoring and Mitigation Plan
RSA	Resource Study Area
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison
SOI	Secretary of the Interior
SSDC	Supplemental Seismic Design Criteria
SVP	Society of Vertebrate Paleontology
SWQDV	Stormwater Quality Design Volume
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TC	Transit Center
Torrance TC	Mary K. Giordano Regional Transit Center
TPSS	Traction Power Substation
TWW	Treated Wood Waste
USEPA	United States Environmental Protection Agency
VdB	Velocity Level Decibels

VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compounds
WDR	Waste Discharge Requirements

Findings of Fact and Statement of Overriding Considerations for Hawthorne Option

January 2026

C LINE (GREEN) EXTENSION TO TORRANCE



Metro

1. INTRODUCTION

1.1 OVERVIEW

This document presents the Findings of Fact required by the California Environmental Quality Act (CEQA) (Public Resources Code [PRC], 21000 et seq.) and the State CEQA Guidelines (14 Cal. Code. Regs., 15000 et seq.) for each of the significant environmental effects identified in the Final Environmental Impact Report (EIR) (SCH NO. 2021010269) prepared for the Los Angeles County Metropolitan Transportation Authority (Metro) C Line (Green) Extension to Torrance Project (Project). This document also includes the Statement of Overriding Considerations, which describes the reasons why the economic, social, technical, and other benefits of the project outweigh its significant and unavoidable impacts.

In this document, “the project” refers to the Hawthorne Option analyzed in the EIR. The project, including refinements in the Final EIR, is discussed in more detail in Section 2, and all alternatives analyzed in the Draft and Final EIRs are discussed in Section 9.

The Draft EIR analyzed the project as part of C Line operations with the northern terminus at the Los Angeles International Airport (LAX)/Metro Transit Center (the C-1 Operating Plan). In June 2023, following the release of the Draft EIR, the Metro Board of Directors (Metro Board) adopted a new K Line operating plan (the C-2 Operating Plan), under which the project would operate as a southern extension of the K Line from the existing Redondo Beach (Marine) Station to the Mary K. Giordano Regional Transit Center (Torrance TC).

For consistency with previously released documents, however, the project is still referred to as the C Line Extension to Torrance in the Final EIR and related materials. These Findings are based on the updated operational context reflected in the C-2 Operating Plan. While the revised operating plan results in updated ridership forecasts and associated travel benefits, these improvements do not alter the physical scope or operations characteristics of the project or result in any new or more severe environmental impacts.

1.2 DOCUMENT ORGANIZATION

The document is organized into the following sections:

- > Section 1 Introduction
- > Section 2 Project Description
- > Section 3 CEQA Statutory Framework and Procedural Requirements
- > Section 4 Findings for Environmental Impacts Found to be Significant and Unavoidable
- > Section 5 Findings for Environmental Impacts Found to Be Less than Significant with Mitigation
- > Section 6 Findings for Environmental Impacts Found to be Less Than Significant
- > Section 7 Findings for Environmental Resources Found Not to be Impacted
- > Section 8 Findings for Cumulative Impacts
- > Section 9 Findings for Alternatives
- > Section 10 Findings for Mitigation Measures
- > Section 11 Statement of Overriding Considerations

2. PROJECT DESCRIPTION

2.1. PROJECT LOCATION AND SETTING

Figure 2-1 shows the project's location within the Project Area. The light rail extension for the Hawthorne Option would start within the existing Metro right-of-way (ROW), leave the Metro ROW to parallel Interstate 405 (I-405) between Inglewood Avenue and Hawthorne Boulevard, and follow Hawthorne Boulevard south between 162nd Street and 190th Street. One station is proposed in this segment: South Bay Galleria Station south of Artesia Boulevard. Near 190th Street, the alignment would turn southeast to join the Metro ROW. South of 190th Street, the alignment would proceed to Torrance TC Station.

Figure 2-1. Hawthorne Option



Source: STV, 2022

2.2. PROJECT OBJECTIVES

The underlying purpose of the project is to provide high-capacity transit service in the South Bay. Metro has identified the following project objectives, which are included in Chapter 2 of both the Draft EIR and Final EIR:

- > Improve mobility within the South Bay and encourage mode shift by:
 - Introducing high-frequency transit service options from the current C Line terminus south to Torrance.
 - Creating direct connections between the regional transit network and local transit hubs for convenient transfers.
 - Providing an alternative mode of transportation for commuters traveling along congested arterials and I-405.
 - Providing first-last mile facilities to connect neighborhoods to station areas.
- > Reduce air pollution and greenhouse gas (GHG) emissions by making transit a more viable transportation choice.
- > Avoid and minimize environmental impacts on environmental resources to the maximum extent feasible.
- > Provide a cost-effective project.
- > Provide more equitable access to regional destinations by improving connections to the Metro regional rail system.

2.3. DESCRIPTION OF THE HAWTHORNE OPTION

As previously noted, following release of the Draft EIR, Metro adopted the C-2 Operating Plan for the Metro C and K Lines. Under this plan, the Project would operate as a southern extension of the K Line. This change does not otherwise alter the Project Description or physical or operational characteristics analyzed in the EIR. The project remains an approximately 4.5-mile extension of Metro light-rail service from the existing Redondo Beach (Marine) Station to the Torrance TC, with a new intermediate South Bay Galleria Station south of Artesia Boulevard.

South of 190th Street, BNSF and Metro share ownership of the freight corridor and BNSF has several spur tracks to serve adjacent businesses. Metro owns approximately 15 feet in width and would acquire or lease additional ROW from BNSF to accommodate two new light rail tracks between 190th Street and the Torrance TC Station, while ensuring BNSF can maintain freight operations and deliveries via spur lines.

The project's light rail tracks would be grade-separated from all roadways. Between the Redondo Beach (Marine) Station and 190th Street, the alignment would be entirely elevated.

The following stations would be constructed:

- > South Bay Galleria Station: The South Bay Galleria Station would be located in the median of Hawthorne Boulevard between Artesia Boulevard and 177th Street, with pedestrian pathways to Artesia Boulevard at the north end and new midblock crossings north of 177th Street at the south end.
- > Torrance TC Station: The Torrance TC Station would be located just west of Crenshaw Boulevard, west of the City of Torrance's transit center.

The light rail system components would adhere to the Metro Rail Design Criteria (MRDC) and would use a similar design as used on existing Metro light rail lines. The project would require an overhead contact system (OCS), six traction power substations (TPSS), and communications and signaling buildings.

The operating hours and schedules would be comparable to the other operating patterns of Metro's current rail lines. The proposed hours of operation are 4:00 a.m. to 1:00 a.m. On weekdays, trains would operate during early morning hours from 4:00 a.m. to 6:00 a.m. and late-night hours from 7:00 p.m. to 1:00 a.m. every 15 minutes. On weekdays, trains would operate every 5 minutes during peak travel hours, which are typically during commuting periods. Metro's implementation of the C-2 Operating Plan for the C and K Lines would not affect these operating conditions.

3. CEQA STATUTORY FRAMEWORK AND PROCEDURAL REQUIREMENTS

The following section summarizes the statutory framework governing the findings that a lead agency must make before approving a project under CEQA. These requirements establish the legal basis for Metro's findings and determinations in this document.

PRC Section 21081 and CEQA Guidelines Section 15091 require that:

- a. No public agency shall approve or carry out a project for which an EIR has been certified which identifies one or more significant effects on the environment that would occur if the project is approved or carried out unless the public agency makes one or more written findings for each of those significant effects, accompanied by a brief explanation of the rationale for each finding. The possible findings are:
 1. Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the Final EIR (**CEQA Finding 1**) (CEQA Guidelines Section 15091, subdivision (a)(1)).
 2. Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency (**CEQA Finding 2**) (CEQA Guidelines Section 15091, subdivision (a)(2)).
 3. Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the Final EIR (**CEQA Finding 3**) (CEQA Guidelines Section 15091, subdivision (a)(3)).
- b. The findings required by subdivision (a) shall be supported by substantial evidence in the record.

The finding in subdivision (a)(2) shall not be made if the agency making the finding has concurrent jurisdiction with another agency to deal with identified feasible mitigation measures or alternatives. The finding in subdivision (a)(3) shall describe the specific reasons for rejecting identified mitigation measures and project alternatives.
- c. When making the findings required in subdivision (a)(1), the agency shall also adopt a program for reporting on or monitoring the changes which it has either required in the project or made a condition of approval to avoid or substantially lessen significant environmental effects. These measures must be fully enforceable through permit conditions, agreements, or other measures.
- d. The public agency shall specify the location and custodian of the documents or other material which constitute the record of the proceedings upon which its decision is based.
- e. A statement made pursuant to Section 15093 does not substitute for the findings required by this section.

CEQA Guidelines Section 15382 defines a significant impact on the environment as "a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance." The Final EIR identified all potentially significant environmental effects resulting from the project.

CEQA Guidelines Section 15093(a) states that, “If the specific economic, legal, social, technological, or other benefits” of a proposed project “outweigh the unavoidable adverse environmental effects, the adverse environmental effects may be considered ‘acceptable.’” CEQA Guidelines Section 15093(b) requires for those significant impacts that cannot be avoided or substantially lessened, the lead agency must state in writing the specific reasons to support its action based on the Final EIR and/or other information in the record. The statement of overriding considerations shall be supported by substantial evidence in the record. The findings provided in this document are based on substantial evidence in the entire record. The references set forth in these findings to certain pages or sections of the environmental documents for the project are for ease of reference and are not intended to provide an exhaustive list of the evidence relied upon for these findings. These findings do not attempt to describe the full analysis of each environmental impact contained in the Draft EIR, Final EIR, Errata, and additional documents in the record for the project. These findings hereby incorporate by reference and adopt the discussion and analysis in the Draft EIR, Final EIR, Errata, and their appendices, and additional documents in the record for the project. In making these findings, the determinations and conclusions of the Final EIR relating to environmental impacts are hereby ratified, adopted, and incorporated in these findings. In the event these findings inadvertently omit or inaccurately reflect facts stated in the Final EIR due to a clerical error, such statements are nevertheless hereby adopted and incorporated in the findings below by reference, and the language set forth in the Final EIR shall control.

PRC Section 21081.6 also requires public agencies to adopt a mitigation monitoring and reporting program (MMRP) for assessing and ensuring the implementation of proposed mitigation measures. Pursuant to PRC Section 21081.6, public agencies are required to provide that the measures to mitigate or avoid significant effects on the environment are fully enforceable through permit conditions, agreements, or other measures. The MMRP is published on the Metro project website at www.metro.net/clineext.

3.1. RECORD OF PROCEEDINGS

For purposes of CEQA and the findings set herein, the record of proceedings for Metro’s decision on the project consists of: (a) matters of common knowledge to Metro, including, but not limited to, Federal, State, and local laws and regulations; and (b) the following documents which are in the custody of Metro, One Gateway Plaza, Records Management, MS-99-PL-5, Los Angeles, CA 90012:

- > Notice of Preparation (NOP) and other public notices issued by Metro in conjunction with the project
- > The Draft EIR dated January 2023 including all associated appendices and documents that were incorporated by reference
- > All testimony, documentary evidence, and all correspondence submitted in response to the project during the scoping meetings or by agencies or members of the public during the public comment period on the Draft EIR, and responses to those comments (Chapter 5, Responses to Comments, of the Final EIR)
- > The Final EIR dated September 2025 including all associated appendices and documents that were incorporated by reference
- > The Final EIR Errata dated January 2026, including all associated appendices
- > The MMRP

- > All findings and resolutions adopted by Metro in connection with the project, and all documents cited or referred to therein
- > All final technical reports and addenda, studies, memoranda, maps, correspondence, and all planning documents prepared by Metro or the consultants relating to the project
- > All documents submitted to Metro by agencies or members of the public in connection with the development of the project
- > All actions of Metro with respect to the project
- > Any other materials required by PRC Section 21167.6(e) to be in the record of proceedings.

3.2. ABSENCE OF SIGNIFICANT NEW INFORMATION REQUIRING RECIRCULATION

The Metro Board finds that recirculation of the EIR is not required under PRC 21092.1 and CEQA Guidelines section 15088.5. Under CEQA Guidelines section 15088.5, a lead agency must recirculate an EIR prior to certification only when significant new information is added to the document after public review. Significant information includes information showing that the project will result in new or substantially more severe significant environmental impacts, or that new feasible mitigation measures or alternatives considerably different than those identified in the EIR are available to clearly lessen significant impacts and the agency declines to adopt them.

Metro has reviewed and considered all information developed since publication of the Draft and Final EIRs, including technical memoranda, updated ridership forecasts, revised VMT calculations, implementation of the C and K Line C-2 Operating Plan, and other supplemental analyses prepared during the administrative review projects. None of this information alters the fundamental characteristics of the Hawthorne Option, changes the conclusions regarding the nature or severity of environmental impacts, or identifies new feasible mitigation measures or alternatives substantially different than those presented in the EIR that Metro declines to adopt. Rather, this information clarifies, amplifies, and provides minor updates to the analyses presented in the Draft and Final EIRs.

Accordingly, the Metro Board finds that no “significant new information,” as defined in CEQA Guidelines section 15088.5, has been added to the EIR or the record of proceedings, and recirculation of the EIR is therefore not required.

4. FINDINGS FOR ENVIRONMENTAL IMPACTS FOUND TO BE SIGNIFICANT AND UNAVOIDABLE

This section discusses the impacts found to remain significant, even with implementation of all feasible mitigation measures. These findings are based on the analyses in Chapters 3 and 4 of the Draft EIR and in Chapters 3 and 4 of the Final EIR, as well as relevant technical reports and responses to comments.

4.1. NOISE AND VIBRATION

During construction, the project would have significant and unavoidable temporary noise and vibration impacts with respect to the following significance thresholds:

- > Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? (Impact 3.6-4.1)
- > Would the project result in generation of excessive ground-borne vibration levels? (Impact 3.6-4.3)

Impacts

Impact 3.6-4.1: Ambient Noise During Construction

The Hawthorne Option would require at-grade construction and elevated guideway construction. Construction activity at station areas would be dependent on the profile of the station (at-grade or elevated). Construction noise levels at staging areas would be similar to noise levels generated by at-grade construction and would primarily involve the movement of equipment to and from the project site. At-grade construction would be the loudest phases with a 1-hour equivalent continuous sound level (L_{eq}) of 91.2 A-weighted decibels (dBA) at 50 feet for typical construction. Elevated guideway work would generate a 1-hour L_{eq} of approximately 90.9 dBA. Noise levels during construction would exceed the 1-hour L_{eq} Federal Transit Administration (FTA) standards of 90 dBA during the day and 80 dBA at night for residential uses for all types of construction. Mitigation Measure MM-NOI-1 (Noise Control Plan) would be implemented, which would require the contractor to prepare a detailed, site-specific Noise Control Plan prior to initiating any localized construction activities and to implement the plan during the construction activities. The contractor would be required to conduct continuous noise monitoring and implement corrective actions to bring noise levels to below the FTA noise thresholds when the thresholds are exceeded. Impact equipment is to be minimized or replaced with quieter alternatives. As the Hawthorne Option is located within a major arterial, project construction would be minimized during weekday AM and PM peak traffic hours. Nighttime or weekend construction may be required at times to avoid congested freeways and surface streets, or due to the nature of certain construction processes. Nighttime work must comply with local ordinances or obtain necessary variances demonstrating mitigation. However, in some instances the FTA construction impact criteria may still be exceeded, and the significant impact during construction would remain.

Impact 3.6-4.3: Ground-Borne Vibration During Construction

Ground-borne vibration caused by the Hawthorne Option's construction could cause annoyance-related impacts to vibration-sensitive receptors, which include residences, hotels, and other locations where people sleep. Annoyance due to vibration would be limited only to the periods when the vibration-generating equipment is operating in close proximity to residences, which may be limited to only a few hours at a time, after which the equipment would move on to another area of construction. Nevertheless, vibration generated by construction activities would exceed the annoyance threshold and

would be potentially significant. Mitigation Measure MM-VIB-1 (Vibration Control Plan) would require the contractor to prepare a Vibration Control Plan, conduct monitoring to demonstrate compliance with the vibration limits, and use alternative construction methods to reduce vibration impacts, as feasible. Mitigation Measure MM-VIB-2 (Construction Equipment Location) would require that operation of vibratory rollers within 26 feet of a building structure would be in static mode only, that the use of vibratory pile drivers not occur within 22 feet of a building, and use of alternative pile driving techniques, when feasible. With implementation of the foregoing mitigation measures, the Hawthorne Option would have a less than significant impact during construction related to *damage*. However, it would not be feasible to limit the use of all types of equipment, as some pieces of equipment cannot be modified or replaced, and a significant and unavoidable impact related to vibration *annoyance* during construction would remain.

References in the Draft and Final EIR

- > Section 3.6, Noise and Vibration, Subsections 3.6-4.1.1, 3.6-4.1.2, and 3.6-4.3.1 of the Draft EIR
- > Chapter 4, Corrections and Additions, of the Final EIR
- > Chapter 5, Responses to Comments, Subsection 5.2-5, Main Topic Response MR-5: Vibration Impact Types and Impact Thresholds, of the Final EIR

Mitigation Measures

MM-NOI-1: Noise Control Plan

- > Metro's contractor shall develop a Noise Control Plan demonstrating how the FTA 1-hour L_{eq} noise criteria would be achieved during construction. The Noise Control Plan shall be prepared by a board-certified acoustical engineer. The FTA 1-hour L_{eq} construction noise standards are as follows: Residential daytime standard of 90 dBA L_{eq} and nighttime standard of 80 dBA L_{eq} , and Commercial and Industrial daytime standard of 100 dBA L_{eq} and nighttime standard of 100 dBA L_{eq} . The Noise Control Plan shall be designed to follow Metro requirements, and shall include measurements of existing noise, a list of the major pieces of construction equipment that would be used, predictions of the noise levels at the closest noise-sensitive receivers (residences, hotels, schools, churches, temples, and similar facilities), and noise mitigation measures to be implemented to achieve compliance with applicable noise thresholds. The Noise Control Plans must be approved by Metro prior to initiating noise-generating construction activities. The contractor shall conduct continuous noise monitoring to demonstrate compliance with the FTA 1-hour L_{eq} noise limits. If the FTA 1-hour L_{eq} criteria are exceeded, the contractor shall implement alternative construction measures to reduce construction noise as much as feasible. The contractor shall establish a public information and complaint system. The contractor shall respond to and provide corrective action for complaints filed within a time period of 24 hours. In addition, Metro shall comply with local noise ordinances when applicable, including by obtaining a variance(s) from the applicable local jurisdiction when nighttime work is required. Noise-reducing methods that may be implemented by the contractor include:
 - > Construction activities shall be limited to daytime hours, except when nighttime work is necessary due to utility coordination, safety considerations, traffic minimization, or other conditions requiring a nighttime variance. In such cases, the contractor shall obtain a variance from the applicable jurisdiction and demonstrate that noise control measures will maintain noise levels below FTA and local standards.

- > Where construction occurs near noise-sensitive land uses, specialty equipment with enclosed engines, acoustically attenuating shields, and/or high-performance mufflers may be used.
- > Limit unnecessary idling of equipment.
- > Install temporary/movable noise barriers or noise-control curtains, where feasible and as required by the Noise Control Plan.
- > Reroute construction-related truck traffic away from local residential streets and/or sensitive receivers.
- > Limit impact pile driving where feasible and effective.
- > Use electric instead of diesel-powered equipment and hydraulic instead of pneumatic tools where feasible.
- > Minimize the use of impact devices such as jackhammers and hoe rams, using concrete crushers and pavement saws instead.
- > Limit certain construction activities to daytime hours, when feasible

MM-VIB-1: Vibration Control Plan

Prior to construction, the contractor would prepare a Vibration Control Plan demonstrating how the FTA building damage risk criteria and the FTA vibration annoyance criteria would be achieved. The Vibration Control Plan must be approved by Metro prior to initiating vibration-generating construction activities and include the requirement that the contractor, in coordination with Metro and the City of Torrance Public Works Department, shall notify nearby receptors, including businesses near Del Amo Bridge, of pile-driving activities at least 72 hours in advance. The Vibration Control Plan would include a list of the major pieces of construction equipment that would be used, and the predictions of the vibration levels are the closest sensitive receivers. The contractor would conduct vibration monitoring to demonstrate compliance with the vibration limits. Where the construction cannot be performed to meet the vibration criteria, the contractor would investigate alternative means and methods of construction measures to reduce vibration levels as much as feasible.

MM-VIB-2: Construction Equipment Location

To address potential building damage, the following measures would be implemented.

- > Where a vibratory roller would be operated within 26 feet of a building structure, the vibratory roller shall be operated in static mode only.
- > Where pile driving is needed, the use of vibratory pile driving would be limited to being no closer than 22 feet of the nearest sensitive structure. In areas adjacent to sensitive structures where the distance cannot be limited to 22 feet or greater, pile driving will use alternative technology such as CIDH.
- > Limit the location of impact pile driving to the extent feasible.

Findings

Impact 3.6-4.1: Ambient Noise During Construction

Mitigation Measure MM-NOI-1 would be implemented, which will reduce construction noise levels. However, in some instances the FTA construction impact criteria may still be exceeded. There are no additional feasible mitigation measures that could be implemented to further reduce construction noise

levels. Metro has considered sound proofing homes as a potential measure to mitigate construction noise. This approach is not considered feasible or appropriate. Although CEQA allows adoption of mitigation measures of uncertain efficacy, the measure must still be capable of achieving some portion of its intended result. An acoustic retrofitting program, however, would depend entirely on the voluntary cooperation of property owners and tenants—parties outside Metro’s jurisdiction and control. As a result, the effectiveness of the measure would remain speculative. Even if Metro could identify and analyze specific retrofit techniques (such as window replacement or façade sealing), their actual implementation would hinge on the willingness of numerous private third parties, leaving Metro with no assurance that any meaningful reduction in interior noise levels would be achieved. For this reason alone, acoustic retrofitting is not considered a feasible mitigation measure. In addition, acoustic retrofitting would not effectively address exterior noise levels at the source. As retrofitting requires windows to be closed to be effective, a retrofit program could impair interior ventilation. Implementing a retrofitting program would require extensive coordination with property owners and tenants, contractors, and city building departments that may need to issue permits, adding substantial time to the project’s implementation, as the retrofits would need to be installed prior to construction. Furthermore, retrofit measures may introduce secondary impacts, including noise and dust, and would be physically invasive. The costs and effort to undertake retrofitting at a broad scale would be burdensome relative to the temporary nature of the impact. Thus, Metro adopts CEQA Findings 1 and 3, as identified in Section 3 above and in Section 15091, subdivisions (a)(1) and (a)(3) of the CEQA Guidelines.

Impact 3.6-4.3: Ground-Borne Vibration During Construction

Implementation of Mitigation Measures MM-VIB-1 and MM-VIB-2 would reduce the potential for vibration annoyance impacts during construction. Even with implementation of the foregoing mitigation measures, the Hawthorne Option would have a significant and unavoidable impact related to vibration *annoyance* during construction. Thus, Metro adopts CEQA Findings 1 and 3, as identified in Section 3 above and in Section 15091, subdivisions (a)(1) and (a)(3) of the CEQA Guidelines. For construction ground-borne-vibration-related *damage* impacts, Metro adopts CEQA Finding 2, as identified in Section 3 above and in Section 15091, subdivision (a)(b) of the CEQA Guidelines.

Metro finds that the operational vibration impacts of the Hawthorne Option would be less than significant; no mitigation is required. (Draft EIR, p. 3.6-96.)

5. FINDINGS FOR ENVIRONMENTAL IMPACTS FOUND TO BE LESS THAN SIGNIFICANT WITH MITIGATION

This section discusses the impacts found to be significant, which can be reduced to less than significant levels through implementation of mitigation measures. Notable project features and mitigation measures pertinent to the summaries of potential impacts discussed herein are included in this document. Project features include components of the project design, such as best management practices (BMP) and other design commitments. They are part of the project itself, and are not mitigation measures. They are listed here, because they provide evidence supporting the impact conclusions prior to consideration of mitigation. Mitigation measures, by contrast, are imposed to reduce or avoid significant impacts. All project features and mitigation measures established by the Draft EIR and Final EIR are provided in and made enforceable by the MMRP.

5.1. AESTHETICS

The project would have a less than significant impact with mitigation related to aesthetics with respect to the following significance thresholds:

- > Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area, or create new shade or shadows that would substantially affect outdoor recreation facilities or other public areas? (Impact 3.3-4.4)

Impact

Impact 3.3-4.4: Create New Source of Substantial Light/Glare During Construction

Construction activities are not anticipated to result in a substantial source of light or glare. However, if nighttime construction is required, residential uses could be affected if light spills over to the residences or if lighting is not shielded to limit glare at these residences. Therefore, there would be a significant impact related to light or glare during construction. Mitigation Measure MM-AES-1 (Construction Lighting) would be implemented to ensure that construction lighting would be shielded and directed downward and away from adjacent residential and commercial areas. With implementation of MM-AES-1, the impact would be less than significant.

References in the Draft and Final EIR

- > Section 3.3, Aesthetics, Subsection 3.3-4.4.1 of the Draft EIR

Mitigation Measures

MM-AES-1: Construction Lighting

During nighttime construction activities lighting, including “down lighting,” shall be directed toward the interior of the construction staging area and shall be shielded so that it would not spill over into adjacent light-sensitive areas.

Finding

Impact 3.3-4.4: Create New Source of Substantial Light/Glare During Construction

Implementation of MM-AES-1 would reduce the potential for introducing a new light glare or shadows generated by project construction to a less than significant level. Thus, Metro adopts CEQA Finding 1, as identified in Section 3 above and in Section 15091, subdivision (a)(1) of the CEQA Guidelines.

5.2. NOISE AND VIBRATION

Operation of the project would have a less than significant permanent impact with mitigation related to noise and vibration with respect to the following significance threshold:

- > Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? (Impact 3.6-4.1)

Impact

Impact 3.6-4.1: Ambient Noise During Operation

Sensitive uses would be exposed to a combination of noise sources, including light rail train pass-by noise, TPSS noise, special trackwork noise, and wheel squeal. Mitigation Measures MM-NOI-2 (Soundwalls) and MM-NOI-3 (Low Impact Frogs) would be implemented, which would reduce noise via installation of soundwalls at identified impacted receptors and low impact frogs at crossovers which were determined to contribute to noise impacts. Mitigation Measure MM-NOI-5 (Wheel Squeal Noise Monitoring) would eliminate wheel squeal noise that could potentially occur at the two curves along the alignment with a radius of less than 1,000 feet.

With implementation of Mitigation Measures MM-NOI-2, MM-NOI-3, and MM-NOI-5, operational noise levels would be reduced to below the FTA's criteria for all sensitive receptors along the alignment, and the impact would be less than significant.

In the event that local jurisdictions choose not to apply for a quiet zone, Mitigation Measure MM-NOI-4 would not be implemented to reduce freight horn noise, and the impact would remain significant and unavoidable. However, CEQA Guidelines Section 15091(a)(2) expressly provides that where another agency has the authority and responsibility to implement a mitigation measure, the lead agency may find that the other agency can and should adopt the measure. Metro, therefore, finds that Mitigation Measure MM-NOI-4 is within the responsibility and jurisdiction of the corridor cities (City of Torrance, City of Redondo Beach, and City of Lawndale), and that those cities can and should implement the measure. All necessary safety upgrades to the freight crossings needed to implement a by-right quiet zone would be made as part of the project.

References in the Draft and Final EIR

- > Section 3.6, Noise and Vibration, Subsection 3.6-4.3.2 of the Draft EIR
- > Chapter 4, Corrections and Additions, of the Final EIR
- > Chapter 5, Responses to Comments, Subsections MR-5.2-2, Major Topic Response MR-2: Operational Noise Analysis Methodology and Impact Thresholds; Major Topic Response MR-5.2-3, Operational Noise Project Features and Mitigation Measures, of the Final EIR

Mitigation Measures

MM-NOI-2: Soundwalls

Where feasible, soundwalls shall be placed at the edge of the near light rail track with appropriate setback distance from the tracks or at the edge of elevated structures to reduce noise related to light rail vehicles as required to meet FTA criteria. Height, length, and need for absorptive noise-reducing materials will be finalized during final design as necessary to reduce noise from light rail trains to below

the FTA moderate impact criteria, as feasible. Materials, color, landscaping, and/or other aesthetic treatments would also be integrated into the design of the soundwall to minimize dominance and scale.

MM-NOI-3: Low Impact Frogs

Low impact frogs (crossing point of two rails) shall be installed to reduce crossover impact noise where necessary to reduce noise from light rail trains to below the FTA moderate impact criteria. Locations shall be verified during final design as necessary to reduce noise from light rail trains to below the FTA moderate impact criteria

MM-NOI-5: Wheel Squeal Noise Monitoring

Metro shall conduct wheel squeal noise monitoring prior to the start of revenue operations to determine if wheel squeal is occurring at the listed curves with a radius less than 1,000 feet located near sensitive receptors. If wheel squeal occurs, Metro shall use wayside rail lubrication as necessary to ensure wheel squeal does not occur and to reduce noise from light rail trains to below the FTA moderate impact criteria.

- > Curve between Santa Fe Avenue and Inglewood Avenue
- > Curve between 161st Street and 163rd Street

Finding

Impact 3.6-4.1: Ambient Noise During Operation

Mitigation Measures MM-NOI-2 and MM-NOI-3 would reduce light rail transit noise impacts to less than significant. Mitigation Measure MM-NOI-5 would reduce wheel squeal to less than significant. With implementation of MM-NOI-2, MM-NOI-3, and MM-NOI-5, the impact would be less than significant.

5.3. BIOLOGICAL RESOURCES

The project would have a less than significant impact with mitigation related to biological resources with respect to the following significance thresholds:

- > Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service? (Impact 3.7-4.1)
- > Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? (Impact 3.7-4.5)

Impacts

Impact 3.7-4.1: Adverse Effects on Special-Status Species During Construction

The southern tarplant is known to occur within the City of Torrance Open Space Preserve adjacent to the Torrance TC. Specifically, suitable habitat for southern tarplant is present along the maintenance and emergency access path located partially within the established Open Space Preserve on its perimeter. The project's maintenance and emergency access path would occupy approximately 7,471 square feet of the 87,036-square-foot Preserve. Direct impacts to southern tarplant would include loss of approximately 7,471 square feet of habitat and potential mortality of individual plants within the project footprint. Potential indirect impacts could include soil and contaminant runoff during the wet

season, dust during the dry season, especially during excavations, and the introduction of non-native or invasive species that could degrade habitat and outcompete southern tarplant for resources.

Impacts to southern tarplant would be less than significant with implementation of MM-BIO-1 (General Protection Measures to Avoid and Minimize Impacts on Sensitive Biological Resources) and MM-BIO-4 (Pre-Construction Rare Plant Survey), which would require the delineation of work limits and buffers, a pre-construction rare plant survey prior to ground disturbance, and on-site monitoring by a qualified botanist. In addition, MM-BIO-5 (Off-Site Mitigation for Southern Tarplant Habitat) would require Metro to coordinate with the City of Torrance and the California Department of Fish and Wildlife (CDFW) to identify and evaluate suitable off-site mitigation sites for southern tarplant habitat, with the goal of establishing, preserving, and managing such habitat in perpetuity at a minimum 3:1 replacement ratio or higher if required by CDFW. If the City of Torrance elects to relocate and re-establish the entire preserve, Metro may fulfill its compensatory mitigation obligation under MM-BIO-5 by funding and implementing a proportional share of the new preserve area under an agreement that includes long-term maintenance provisions and performance standards consistent with the requirements set forth in that mitigation measure. If the City does not proceed with relocation, Metro would implement independent off-site mitigation meeting the same performance standards, including securing appropriate land rights, implementing habitat enhancement measures, conducting long-term monitoring, and establishing an endowment or other funding mechanism. Construction impacts on southern tarplant would be reduced to a less than significant level with implementation of the foregoing mitigation measures.

Direct impacts to special-status bird species are not likely to occur as moderate to high quality suitable habitat was not identified within the resource study area (RSA). However, potential direct impacts to breeding birds protected under the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (CFGF) Sections 3500 through 3705 may occur if construction related to the demolition of the bridges or if vegetation and tree removal occurs within the nesting bird season (defined herein as February 1 through September 15). Potential direct impacts could include the destruction of occupied nests and associated loss of young, as well as loss of suitable nesting substrate. Potential indirect impacts to breeding birds during the nesting bird season may include construction-related noise and light disturbance, the degradation of habitat related to dust settlement, nest abandonment, and an increase in opportunistic predators. Bridge demolition may also impact special-status bat species, specifically, Yuma myotis. Potential direct impacts resulting from the bridge demolition may include a loss of roosting habitat and/or direct mortalities. Potential indirect impacts may include construction-related noise, vibration, and light disturbance; all of which could lead to colony/roost abandonment.

Potential impacts to breeding birds would be less than significant through implementation of Mitigation Measure MM-BIO-2 (Nesting Bird Season Restrictions and Pre-Construction Surveys), which would require a pre-construction nesting bird survey during the nesting bird season, work/construction buffers around active nests, and the monitoring of nesting activity by qualified biologists. Impacts to special-status bat species would be less than significant through implementation of Mitigation Measure MM-BIO-3 (Roosting Bat Restrictions and Survey Requirements), which would require a bat roost habitat assessment and subsequent consultation with CDFW and preparation of a mitigation plan if presence is detected.

Impact 3.7-4.1: Adverse Effects on Special-Status Species During Operations

Maintenance activities along the alignment could result in both temporary direct and indirect impacts to bird species protected under the MBTA and CFGF if trees and vegetation that have potential to support

nesting birds are removed or disturbed during the nesting bird season. Potential direct impacts may subsequently cause nest abandonment (and thus loss of young), nest failure, or direct mortality of individuals. However, Metro routine maintenance during operation does not typically disturb vegetation or trees that support nesting birds.

In addition, if the City of Torrance does not proceed with relocation of the Open Space Preserve adjacent to the Torrance TC, project-related maintenance activities could result in indirect impacts to southern tarplant individuals and habitat within the Preserve. These impacts could occur from oil and fluid run-off associated with project's surface parking lot and use of the maintenance and emergency egress path, which could degrade habitat and soil quality and cause die-off of southern tarplant individuals, including the seed bank. However, such impacts are not expected because the project's parking lot would be impervious and designed with BMPs to retain stormwater on-site. These features and BMPs would also apply to the project's maintenance and emergency egress path.

If the City of Torrance does not relocate the Preserve, Metro would implement stand-alone off-site mitigation consistent with Mitigation Measure MM-BIO-5 to offset the affected portion of southern tarplant habitat. Implementation of MM-BIO-1 would further avoid or minimize degradation of habitat and soil quality, thereby preventing substantial adverse effects on southern tarplant during operation. Therefore, with implementation of MM-BIO-1 and MM-BIO-5, operation of the project would result in a less than significant impact to southern tarplant.

Impact 3.7-4.5: Conflicts with Local Policies or Ordinances Protecting Biological Resources During Construction

Construction of the Hawthorne Option would have potential to conflict with local policies or ordinances protecting biological resources. The Open Space Preserve established for southern tarplant protection is located immediately adjacent to the project footprint (specifically, the surface parking lot) and the project's maintenance and emergency egress path would occupy approximately 7,471 square feet of the 87,036-square-foot Preserve. This encroachment would conflict with the Preserve's open space and habitat objectives and, therefore, would represent a significant impact before mitigation.

Implementation of MM-BIO-5 (Off-Site Mitigation for Southern Tarplant Habitat) would reduce this impact to a less than significant level through either (1) participation in and funding of the City's relocation and re-establishment of the Preserve under an agreement that meets the mitigation measure's performance standards, or (2) implementation of an independent off-site mitigation preserve meeting the same performance standards, including long-term management and funding provisions. MM-BIO-1 (General Protection Measures to Avoid and Minimize Impacts on Sensitive Biological Resources) would also be implemented to avoid and minimize temporary construction-related effects within the Preserve. Thus, with implementation of MM-BIO-1 and MM-BIO-5, potential conflicts with local policies or ordinances protecting biological resources, specifically impacts to the established Open Space Preserve, would be reduced to less than significant.

Impact 3.7-4.5: Conflicts with Local Policies or Ordinances Protecting Biological Resources During Operation

The project's maintenance and emergency egress path near the Torrance TC Station would be located partially within the existing City of Torrance Open Space Preserve for southern tarplant. Use of the maintenance and emergency egress path within the Preserve would represent a potential conflict with the Preserve's open space and habitat objectives, which would constitute a significant impact before mitigation. Prior to project operation, this impact would be mitigated via Mitigation Measure MM-BIO-5 (Off-Site Mitigation for Southern Tarplant) through either (1) Metro's participation in and funding of the

City's relocation and re-establishment of the Preserve under an agreement that meets the mitigation measure's performance standards, or (2) implementation of an independent off-site mitigation project meeting the same performance standards, including long-term management and funding provisions. Because MM-BIO-5 would be implemented during construction, the required mitigation would be in place before operation begins. If the City does not relocate the Preserve, implementation of MM-BIO-1 (General Protection Measures to Avoid and Minimize Impacts on Sensitive Biological Resources) together with MM-BIO-5, would ensure operational impacts related to conflicts with local policies or ordinances protecting biological resources are reduced to a less than significant level. Thus, with implementation of MM-BIO-1 and MM-BIO-5, potential operational conflicts with local policies or ordinances protecting biological resources, specifically impacts to the established Open Space Preserve, would be less than significant.

References in the Draft and Final EIR

- > Section 3.7, Biological Resources, Subsections 3.7-4.1.1 and 3.7-4.1.2 of the Draft EIR
- > Chapter 4, Corrections and Additions, of the Final EIR

Mitigation Measures

MM-BIO-1: General Protection Measures to Avoid and Minimize Impacts on Sensitive Biological Resources

Prior to the initiation of construction activities, construction work limits shall be defined and marked (i.e., by caution tape, temporary fencing, etc.). All temporary fencing or other markers must be clearly visible to construction personnel.

Prior to and during construction, a qualified Biologist, selected by Metro, shall confirm that the outer perimeter of the construction work limits, fencing, and erosion control measures are properly installed and shall monitor compliance with these measures within and adjacent to the Open Space Preserve. No native vegetation removal or grading shall occur within any remaining areas of the Open Space Preserve.

Fenced impact limits shall include erosion control measures to minimize erosion and siltation during initial vegetation clearing/removal and construction through the use of silt fencing, siltation basins, gravel bags, or other controls necessary to stabilize the soil in cleared or graded areas. Erosion control measures would be installed prior to the onset of vegetation clearing/removal. These measures would be maintained in good repair until the completion of construction. Vegetation clearing/removal during routine maintenance shall also include similar erosion control measures. Specific work areas within the Torrance TC Station site adjacent to portions of the Open Space Preserve that remain in place, if the City of Torrance does not relocate the Preserve to a different site prior to construction, shall include specific erosion and run-off control measures necessary to ensure no contaminants enter the fenced impact limits of the Open Space Preserve and consequently degrade any remaining habitat for the southern tarplant. These erosion and run-off control measures shall be implemented long-term per Regional Water Quality Control Board requirements to ensure the continued protection of the Open Space Preserve and quality of habitat within. These measures are in addition to, and not in lieu of, the compensatory mitigation requirements of MM-BIO-5, which shall be implemented prior to any ground-disturbing activities within the Southern Tarplant Open Space Preserve.

MM-BIO-2: Nesting Bird Season Restrictions and Pre-Construction Surveys

The clearance of vegetation or demolition of nesting substrate (i.e., bridge features) during construction shall occur outside of the nesting bird season (nesting bird season defined herein as February 1 through

September 15), if feasible. If vegetation removal and/or demolition outside this time period is not feasible, the following additional measures shall be employed to avoid impacts to nesting birds protected under the MBTA and CFGC.

A pre-construction nesting bird survey shall be conducted by a qualified biologist (i.e., a biologist familiar and experienced with the identification and life histories of wildlife and plant species in southern California) within 72 hours, or as determined by the qualified biologist, prior to the start of construction activities to determine whether active nests are present within or directly adjacent to the construction zone. Nests found shall be recorded.

If construction activities must occur within 150 feet of an active nest of any passerine bird or within 300 feet of an active nest of any raptor, a qualified biologist shall monitor the nest on a bi-weekly (twice a week) basis, or at a frequency necessary to determine potential project impacts, and the construction activity shall be postponed until the biologist determines that the nest is no longer active.

If the recommended nest avoidance zone is not feasible, the qualified biologist shall provide justification on a case-by-case basis if a buffer reduction is possible, taking into consideration the location of work and type of activity, distance of nest from work area, surrounding vegetation, and line-of-sight between the nest and work areas, tolerance of species to disturbance, and observations of the nesting bird's reaction to construction activities (including light, noise, dust, and human presence). If the biologist determines nesting activities may fail as a result of work activities, work activities shall be modified or shall temporarily cease (except access along established roadways) within the recommended no-disturbance buffer until the biologist determines the adults and young are no longer reliant on the nest site.

Buffers shall be delineated (by or under the supervision of a qualified biologist) on-site with bright flagging, for easy identification by staff and the construction team. The perimeter of the buffer (150 feet to 300 feet depending on the species) shall be flagged so as not to draw predator attention to the direct location of the nest itself and flagging will be minimized where feasible. The on-site construction supervisor and operator staff shall be notified of the nest and the buffer limits to ensure it is maintained.

The indirect impacts of night-time construction lighting on nesting birds outside the construction limits shall be reduced by shielding or directing construction lighting to avoid light encroachment into adjacent habitats.

A summary of pre-construction surveys, monitoring efforts, and any no-disturbance buffers that were installed shall be documented in a report by the qualified biologist at the conclusion of each nesting season.

MM-BIO-3: Roosting Bat Restrictions and Survey Requirements

Prior to any construction disturbance on or near bridges, a bat roost habitat assessment shall be performed by a qualified biologist (i.e., a biologist familiar with bat identification and ecology in southern California) at each location in order to identify both potential day time and nighttime roosting activity and maternity roosts, for bat species with potential to occur. The bat roost habitat assessment shall be conducted during the spring/summer months between April 1 through August 31 to most effectively identify maternity roost activity. Signs indicating active use by bat species may include guano, urine staining, and audible vocalizations; and shall be recorded upon observation for inclusion in a summary report.

If active maternity roosts are identified, consultation shall occur with CDFW and a bat mitigation plan shall be prepared in advance of construction that shall include measures to avoid, minimize, and mitigate project impacts to bat species per conversations with, and recommendations from, CDFW. The bat mitigation plan may include bat exclusion measures to be implemented outside the California maternity season (the maternity season is defined as April 1 through August 31 in southern California) in order to prevent potential direct impacts to individuals. During the maternity season, a recommended buffer shall be implemented around any active maternity roosts, and no project related activities shall occur within the buffer until a biologist has determined that the roost is no longer in use. In addition, the bat mitigation plan shall require the replacement of lost habitat associated with demolition of the bridges and shall include mitigation addressing loss of roosts; this replacement should be on site when feasible and off site only when on site replacement is not feasible. The mitigation plan shall include required monitoring of mitigation to ensure the success of the proposed mitigation measures.

MM-BIO-4: Pre-Construction Rare Plant Survey

Prior to construction, if the Open Space Preserve has not been fully relocated and portions of the Preserve remain, suitable habitat in the portion of the RSA immediately adjacent to the Open Space Preserve shall be visually surveyed on foot by a qualified botanist (i.e., a botanist familiar with southern tarplant identification) in order to identify potential southern tarplant presence. Surveys should be conducted during the appropriate blooming period for optimal identification (defined as May – November).

If individuals are detected, individuals shall be flagged, and this area shall be clearly marked for avoidance through visible signage and fencing. A buffer zone shall be established of at least 50 feet from the outermost perimeter of the population in order to sufficiently eliminate potential disturbance to the plants from human activity and any other potential sources of disturbance including trampling, erosion, and dust. No vegetation removal, grading, or other earthwork shall occur within areas designated for avoidance. These avoidance requirements apply to southern tarplant individuals outside the permanent impact footprint of the project within the Open Space Preserve. Impacts to individuals within the permanent project footprint shall instead be addressed through the compensatory mitigation requirements of MM-BIO-5.

A qualified botanist shall perform bi-weekly (twice per week) site visits, or at a frequency necessary to ensure protection of any remaining areas of the Open Space Preserve, during all construction activities occurring immediately adjacent to any remaining areas of the Open Space Preserve to ensure construction activities remain within the designated, and delineated, approved construction area; and that construction fencing, and other boundary demarcations remain in the appropriate condition.

MM-BIO-5: Off-Site Mitigation for Southern Tarplant Habitat

Prior to construction, Metro shall coordinate with the City of Torrance and CDFW to identify and evaluate one or more suitable off-site mitigation sites for southern tarplant habitat. The goal of this effort is to mitigate the permanent loss of southern tarplant habitat through the establishment, preservation, and long-term management of suitable off-site mitigation habitat.

Metro shall ensure that mitigation occurs at a minimum 3:1 ratio for habitat area, or at a higher ratio if required by CDFW. A site-specific biological assessment, prepared by a qualified botanist (i.e., a botanist familiar with identification, survey, and management of southern tarplant), shall demonstrate that the selected mitigation site(s) have appropriate soil, hydrology, and ecological conditions to support self-sustaining, long-term tarplant populations.

It is Metro's understanding that the City of Torrance is currently evaluating the relocation and re-establishment of the entire Open Space Preserve to the Elm Water Yard in the City of Torrance. If the City elects to proceed with that relocation, Metro may satisfy its mitigation obligation by entering into an agreement with the City to fund and implement a proportional share of the new preserve area. This agreement must include provisions for a non-wasting endowment or other long-term funding mechanism sufficient to cover Metro's proportional share of perpetual management costs and must include performance standards equivalent or greater than those described in this mitigation measure for Metro's proportional share.

If the City of Torrance opts not to relocate and re-establish the Open Space Preserve, Metro shall implement an independent off-site mitigation project that achieves the same performance standards for habitat value and long-term viability, including securing a conservation easement, deed restriction, or other legally enforceable land protection instrument; implementing habitat enhancement measures; conducting long-term monitoring, and establishing a non-wasting endowment or other funding mechanism sufficient to cover Metro's proportional share of perpetual management costs. Metro shall make a reasonable, documented effort to implement the off-site mitigation within the City of Torrance.

If no appropriate off-site mitigation site can be identified within the City of Torrance, Metro shall identify and evaluate one or more suitable sites outside the City, such as an existing preserve that includes the same species of southern tarplant, that achieve the same habitat value and long-term viability standards as determined by a qualified botanist.

A qualified botanist shall also prepare a Southern Tarplant Translocation/Enhancement Plan in consultation with CDFW that includes feasible and achievable performance standards. The plan shall include, but is not limited to, methods and sourcing guidelines for seed collection (to occur for a minimum of two years); BMPs for planting and invasive species control; monitoring protocols, and a schedule of implementation activities. The Translocation Plan shall be finalized prior to any ground-disturbing activities that could affect the Southern Tarplant Open Space Preserve.

If, after a reasonable and documented effort, no suitable off-site mitigation site can be identified or implemented within or outside the City of Torrance, Metro shall consult with CDFW to identify an alternative mitigation strategy that achieves equivalent biological value and long-term viability. This may include payment of an in-lieu fee to a CDFW-approved land management entity, provided that the entity commits to establishing, preserving, and managing southern tarplant habitat in perpetuity at a minimum ratio of 3:1 or higher, consistent with the performance standards described above.

Findings

Impact 3.7-4.1: Adverse Effects on Special-Status Species During Construction

Implementation of Mitigation Measures MM-BIO-1, MM-BIO-2, MM-BIO-3, MM-BIO-4, and MM-BIO-5 would reduce the impact on special-status species generated by project construction to a less than significant level. Thus, Metro adopts CEQA Finding 1, as identified in Section 3 above and in Section 15091, subdivision (a)(1) of the CEQA Guidelines.

Impact 3.7-4.1: Adverse Effects on Special-Status Species During Operations

Implementation of Mitigation Measures MM-BIO-1 and MM-BIO-5 would reduce the impact on special-status species generated by project operation to a less than significant level. Thus, Metro adopts CEQA Finding 1, as identified in Section 3 above and in Section 15091, subdivision (a)(1) of the CEQA Guidelines.

Impact 3.7-4.1: Conflicts with Local Policies or Ordinances Protecting Biological Resources During Construction

Implementation of Mitigation Measures MM-BIO-1 and MM-BIO-5 would ensure that construction of the project would not conflict with the Open Space Preserved established by the City of Torrance for southern tarplant. Thus, Metro adopts CEQA Finding 1, as identified in Section 3 above and in Section 15091, subdivision (a)(1) of the CEQA Guidelines.

Impact 3.7-4.1: Conflicts with Local Policies or Ordinances Protecting Biological Resources During Operation

Implementation of Mitigation Measures MM-BIO-1 and MM-BIO-5 would be implemented prior to operation of the project, which would ensure that operation of the project does not conflict with the Open Space Preserve. Thus, Metro adopts CEQA Finding 1, as identified in Section 3 above and in Section 15091, subdivision (a)(1) of the CEQA Guidelines.

5.4. GEOLOGY, SOILS, AND PALEONTOLOGICAL RESOURCES

The project would have a less than significant impact with mitigation related to geology, soils, and paleontological resources with respect to the following significance thresholds:

- > Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? (Impact 3.8-4.9)

Impact

Impact 3.8-4.9: Destroy A Paleontological/Geologic Feature During Construction

The northern section of the resource study area for the Hawthorne Option is underlain by an older Quaternary alluvium geologic unit (Qoa) that has high paleontological sensitivity. (See Draft EIR, Figure 3.8-7, Paleontological Sensitivity Map.) Grading and excavation activities within this formation could cause potentially significant impacts to paleontological resources, should they be encountered and destroyed without intervention. For these locations, Mitigation Measure MM-GEO-1 (Engage a Qualified Paleontological Resources Specialist) would be implemented, which would require hiring a qualified paleontologist to monitor grading and excavation within highly sensitive geologic formations (or direct subsurface microfossil testing when subsurface soil observation is not possible). In the event of a discovery, MM-GEO-1 would require temporary halting of activities, examination of the discovery, and documentation and treatment of finds, as determined by the qualified paleontologist. Therefore, with implementation of MM-GEO-1, impacts would be reduced to less than significant.

References in the Draft and Final EIR

- > Section 3.8, Geology, Soils, and Paleontological Resources, Subsection 3.8-4.9.1 of the Draft EIR
- > Chapter 4, Corrections and Additions, of the Final EIR

Mitigation Measures

MM-GEO-1: Engage a Qualified Paleontological Resources Specialist

Grading and excavation equating to 1,000 cubic yards or more at depths of 13 feet or greater within highly sensitive Qoa geologic formation shall require monitoring by a qualified paleontologist, including the following measures:

- > Prior to beginning any work that requires paleontological monitoring:

- Metro shall retain the services of a qualified paleontologist meeting the standards of the Society of Vertebrate Paleontology (SVP) to compose a Paleontological Resources Monitoring and Mitigation Plan (PRMMP) identifying the steps to be taken in the event of the inadvertent discovery of paleontological resources.
 - A preconstruction meeting will be held that includes the qualified paleontologist, Construction Manager and/or Grading Contractor, and other appropriate personnel so the qualified paleontologist can make comments and/or suggestions concerning the monitoring program to the Construction Manager and/or Grading Contractor.
 - The qualified paleontologist will (at that meeting or subsequently) submit to the Project Manager a copy of the site/grading plan (reduced to 11 x 17 inches) that identifies areas to be monitored as well as areas that may require delineation of grading limits.
 - The qualified paleontologist will also coordinate with the Project Manager on the construction schedule to identify when and where monitoring is to begin and to specify the start date for monitoring.
- > The qualified paleontologist will document monitoring activity on a standardized form. A record of daily activity will be sent to Metro and the Project Manager each month.
- > The qualified paleontologist will be present initially during all earth-moving activities. After 50 percent of the excavations are complete within the unit, if no significant fossils have been recovered, the level of monitoring may be reduced or suspended entirely at the qualified paleontologist's discretion and in consultation with Metro.
- > At locations where sensitive subsurface soils cannot be observed during ground disturbing activities, such as driving of piles, a subsurface investigation to test for the presence or absence of microfossils should be implemented under the direction of a qualified paleontologist following SVP guidelines. Prior to the start of ground disturbance, mechanical coring, or other methods determined appropriate by the paleontologist, will be used to collect a test sample of 600 lbs. (0.4 cubic yards) to be wet screened. In the event fossil remains are identified, two standard samples of 6,000 lbs. each (4.0 cubic yards) shall be collected for processing following SVP guidelines for microfossil salvage.
- > Discoveries
- Discovery Process – In the event of a discovery, and when requested by the qualified paleontologist, the Project Manager will be contacted and will divert, direct, or temporarily halt ground-disturbing activities in the area of discovery to allow for preliminary evaluation of potentially significant paleontological resources. The paleontologist will also immediately notify Metro of such findings at the time of discovery.
 - Determination of Significance – The significance of the discovered resources will be determined by the paleontologist in consultation with the Project Manager and Metro, who must concur with the evaluation before grading activities will be allowed to resume.
 - Documentation and Treatment of Finds – Based on the scientific value and/or uniqueness of the find, the qualified paleontologist may record the find and allow work to continue, or recommend salvage and recovery of the fossil. If treatment and salvage are required, recommendations will be consistent with SVP 2015 guidelines and currently accepted scientific

practice. Work in the affected area may resume once the fossil has been assessed and/or salvaged and a paleontological monitor is present.

- > Notification of Completion – The paleontologist will notify Metro in writing of the end date of monitoring.
- > Handling and Curation of Significant Paleontological Specimens and Letter of Acceptance – The paleontologist will ensure that all significant fossils collected are appropriately prepared and permanently curated with an appropriate institution, and that a letter of acceptance from the curation institution has been submitted to Metro.
- > Final Results Reports (Monitoring and Research Design and Recovery Program) – Prior to completion of the Proposed Project, two copies of the Final Results Report (even if no significant resources were found) and/or evaluation report, if applicable, which describe the results, analysis, and conclusions of the Paleontological Monitoring Program (with appropriate graphics) will be submitted to Metro for approval.

Finding

Impact 3.8-4.9: Destroy A Paleontological/Geologic Feature During Construction

Implementation of Mitigation Measure MM-GEO-1 would reduce the impact to unique paleontological resources generated by project construction to a less than significant level. Thus, Metro adopts CEQA Finding 1, as identified in Section 3 above and in Section 15091, subdivision (a)(1) of the CEQA Guidelines.

5.5. CULTURAL RESOURCES

The project would have a less than significant impact with mitigation related to cultural resources with respect to the following significance thresholds:

- > Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5? (Impact 3.13-4.2)

Impacts

Impact 3.13-4.2: Adverse Change to Archaeological Resources During Construction

Project construction is not likely to impact any known archaeological resources. The records search of the California Historical Resources Information System (CHRIS) identified one previously recorded prehistoric site, P-19-000100, within the RSA. P-19-000100 is a prehistoric archaeological resource, represented by only two stones, that was recorded as one of a series of small prehistoric campsites in Torrance by F.H. Racer in 1939; however, the context related to the exact location of the resource and means of discovery are not fully known. It is possible that unknown archaeological resources lay buried throughout the RSA and could be impacted by project construction. Construction of the Hawthorne Option has the potential to disturb or destroy a significant unknown archaeological resource.

Mitigation Measure MM-CUL-1 (Cultural Resources Identification Training) would be implemented, which would require construction personnel to be trained in the identification of archaeological resources. Mitigation Measure MM-CUL-2 (Cultural Resources Monitoring and Mitigation Plan) would also be implemented, which would establish procedures to stop work in the event of an unanticipated discovery and ensure that discovered resources would be avoided or treated in accordance with a treatment plan developed in consultation with Metro. With implementation of Mitigation Measures MM-CUL-1 and MM-CUL-2, the impact would be reduced to less than significant.

In addition, three historical built environment resources are located in the Hawthorne Option RSA: Moda Itala (APN 4075-012-019), Frank's Furniture (APN 4075-007-008; 4075-007-007), and The Lighting Express Carwash (APN 4081-028-032). The visual qualities of the new, permanent infrastructure and the temporary noise and vibration associated with construction would not alter the three historical resources or their immediate surroundings in a manner that would materially impair them; therefore, the Hawthorne Option will have a less than significant impact on historical resources. (Draft EIR, pp. 3.13-39 to 3.13-41.)

References in the Draft and Final EIR

- > Section 3.13, Cultural Resources, Subsections 3.13-4.2.1 and 3.13-4.3.1 of the Draft EIR
- > Chapter 4, Corrections and Additions, of the Final EIR

Mitigation Measures

MM-CUL-1: Cultural Resources Identification Training

Prior to the issuance of notice to proceed with construction, all construction personnel involved in ground-disturbing activities shall be provided with appropriate cultural resources training. The training shall instruct the personnel regarding the legal framework protecting cultural resources, typical kinds of cultural resources that may be found during construction, artifacts that would be considered potentially significant, and proper procedures and notifications if cultural resources and/or are inadvertently discovered. The training shall be prepared by a Secretary of the Interior (SOI) professionally qualified archaeologist, in consultation with interested Native American tribes consulting under Assembly Bill (AB) 52, who shall provide information on resources of interest to Native American tribes and include cultural resources and artifacts that would be considered potentially significant to ensure operator recognition of these materials during construction.

MM-CUL-2: Cultural Resources Monitoring and Mitigation Plan

Prior to the issuance of notice to proceed with construction, the construction contractor shall prepare, and Metro shall review and approve, a CRMMP. The CRMMP shall be prepared in consultation with a Secretary of the Interior-qualified archaeologist and interested Native American tribes consulting under AB 52.

At a minimum, the CRMMP shall:

- > Identify the areas where archaeological and Native American monitoring will occur, and describe monitoring methods and reporting requirements.
- > Establish the protocol to follow in the event of an unanticipated discovery, requiring that, if an archaeological deposit is identified, the construction contractor shall stop construction within 50 feet of the exposed resource until a Secretary of Interior professionally qualified archaeologist can evaluate the find (see 36 CFR 800.11.1 and California Code of Regulations [CCR], Title 14, Section 15064.5[f]). If the resource is determined to be a historical resource (as defined in PRC Section 21084.1) or a unique archaeological resource (as defined in PRC Section 21083.2[g]), the CRMMP shall require:
 - Avoidance of the resource, where feasible, through project redesign, preservation in place, capping or other methods consistent with Title 14, Section 15126.4(b)(3).
 - Where avoidance is not feasible, as determined by Metro, in light of factors such as the nature of the find, project design, costs, and other considerations, data recovery shall be implemented

through excavation and documentation consistent with the Secretary of Interior's Standards for Archaeology and Historic Preservation (48 Fed. Res. 44716) and the State Office of Historic Preservation Standards.

- > Define performance standards requiring all data recovery efforts to obtain information necessary to address important research questions, that all recovered be cleaned, catalogued, and curated at a qualified repository that meets federal and state curation standards, and that a comprehensive technical report be prepared and filed with the South Central Coastal Information Center of the CHRIS.
- > Incorporate tribal consultation with Native American tribes consulting under AB 52.
- > Provide documentation and reporting protocols for submitting monitoring logs during construction and a final report documenting all findings to be submitted to Metro, consulting tribes, and CHRIS.

The CRMMP shall be implemented throughout all ground-disturbing activities in previously undisturbed areas or areas of deep excavation below the depth of prior disturbance (generally assumed to be 5 feet unless site-specific studies show a greater or lesser depth of prior disturbance), or as otherwise required by section 7050.5 of the Health and Safety Code or Section 5097.98 of the Public Resources Code.

MM-CUL-3: Unanticipated Discovery of Human Remains

Archaeological and Native American monitoring (see MM-CUL-1 and MM-TCR-1) shall be required during all ground-disturbing activities in areas of excavation extending below the depth of prior disturbances, as defined in MM-CUL-2, and in areas adjacent to known cemeteries or other locations where the potential for encountering human remains is elevated, including El Nido Park (located between the Kingsdale Avenue and 186th Street cross section to 182nd Street) and the Pacific Crest Cemetery (2701 182nd Street). Archaeological monitoring shall be conducted in accordance with the Project CRMMP required by MM-CUL-2, which establishes monitoring methods, evaluation procedures, treatment, standards, and reporting requirements. If human remains and/or associated funerary objects are encountered, then work shall be halted within 50 feet of the find and California Health and Safety Code Section 5097.98 and PRC Section 5097.98 shall be followed, including immediate notification of the County Coroner and consultation with the Most Likely Descendent identified by the Native American Heritage Commissions.

Findings

Impact 3.13-4.2: Adverse Change to Archaeological Resources During Construction

Implementation of Mitigation Measures MM-CUL-1 and MM-CUL-2 would reduce the impact on archeological resources generated by project construction to a less than significant level. Thus, Metro adopts CEQA Finding 1, as identified in Section 3 above and in Section 15091, subdivision (a)(1) of the CEQA Guidelines.

5.6. TRIBAL CULTURAL RESOURCES

The project would have a less than significant impact with mitigation related to tribal cultural resources with respect to the following significance thresholds:

- > Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is listed or eligible for listing in the California Register of

Historical Resources, or in a local register of historical resources as defined in PRC Section 5020.1(k)? (Impact 3.14-4.1)

- > Would the project cause a substantial adverse change in the significance of a Tribal Cultural Resource, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe? (Impact 3.14-4.2)

Impacts

Impact 3.14-4.1: Substantial Adverse Change in The Significance of a Tribal Cultural Resource During Construction

Despite prior disturbances, the excavations associated with the project have the potential to adversely impact a significant tribal cultural resource. Thus, Mitigation Measure MM-TCR-1 (Native American Monitoring) would require retention of a Native American Monitor from, or approved by, consulting tribes under AB 52. Mitigation Measure MM-TCR-2 (Unanticipated Discovery of Tribal Cultural Resource Objects [Non-Funerary/Non-Ceremonial]), would establish procedures to stop work and determine treatment in consultation with the Native American monitor in the event of the discovery of non-funerary/non-ceremonial objects of Native American origin. Mitigation Measure MM-TCR-3 (Unanticipated Discovery of Human Remains and Associated Funerary or Ceremonial Objects), would establish procedures to stop work and determine treatment in consultation with the Native American monitor in the event of the discovery of funerary/ceremonial objects of Native American Origin. Therefore, with implementation of Mitigation Measures MM-TCR-1, MM-TCR-2, and MM-TCR-3, the impact would be reduced to less than significant.

Impact 3.14-4.2: Substantial Adverse Change in The Significance of a Tribal Cultural Resource Determined by a Lead Agency During Construction

No resources have been determined by Metro, in its discretion and supported by substantial evidence, to be significant tribal cultural resources within the RSA. However, excavations associated with construction have the potential to disturb and destroy an unknown significant tribal cultural resource. This disturbance of significant tribal cultural resources could result in a significant impact. Thus, Mitigation Measures MM-TCR-1, MM-TCR-2, and MM-TCR-3 would be implemented. With implementation of Mitigation Measures MM-TCR-1, MM-TCR-2, and MM-TCR-3, the impact would be reduced to less than significant.

References in the Draft and Final EIR

- > Section 3.14, Tribal Cultural Resources, Subsections 3.14-4.1.1 and 3.14-4.2.1 of the Draft EIR
- > Chapter 4, Corrections and Additions, of the Final EIR

Mitigation Measures

MM-TCR-1: Native American Monitoring

Prior to the issuance of notice to proceed with construction, Metro shall document retention of a Native American Monitor from, or approved by, consulting tribes under AB 52.

Native American monitoring shall be required during all excavation that extends below the depth of prior disturbance, as defined in MM-CUL-2, and in any areas identified through the cultural resources search or tribal consultation as having higher potential for intact tribal cultural resources. Native American monitoring shall be conducted in coordination with archaeological monitoring required under MM-CUL-3 and consistent with the CRMMP prepared under MM-CUL-2.

If, after a good-faith effort, a qualified Native American monitor is not available at the time ground-disturbing activities are scheduled, construction may proceed with archaeological monitoring in accordance with MM-CUL-3, provided that consultation with the tribes continues regarding treatment of any tribal cultural resources identified. For the purposes of this measure, a good-faith effort shall consist of documented outreach to consulting tribes regarding the construction schedule, made at least 15 working days in advance of the ground-disturbance start date, with at least one follow-up attempt by phone or email if no response is received.

The Native American Monitor shall prepare monitoring documentation describing the relevant ground-disturbing activities, the type of construction activities performed, locations of ground-disturbing activities, locations of monitoring, soil types, and any cultural or tribal resources identified, including but not necessarily limited to, Native American cultural and historical artifacts, remains, places of significance, etc., as well as any discovered Native American (ancestral) human remains and burial goods. The documentation shall be prepared in accordance with the CRMMP and provided to Metro. Metro shall make the documentation available to consulting tribes upon request.

Native American monitoring may conclude when Metro determines, in consultation with the project archaeologist and consulting tribes, that all ground-disturbing activities with the potential to affect tribal cultural resources have been completed.

MM-TCR-2: Unanticipated Discovery of Tribal Cultural Resource Objects (Non-Funerary/Non-Ceremonial)

In the event that potential cultural material is discovered during ground-disturbing activities, all construction activities in the immediate vicinity of the discovery shall cease (i.e., not less than the surrounding 50 feet). The discovery shall be evaluated promptly by the archaeological and Native American monitors in accordance with the CRMMP required by MM-CUL-2. If the find is determined to be a tribal cultural resource under PRC Section 21074, Metro, in consultation with the monitors and consulting tribes under AB 52, shall determine appropriate treatment consistent with the protocols and performance standards set forth in MM-CUL-2. Preservation in place, including avoidance or protective measures such as capping, shall be the preferred treatment. If preservation in place is not feasible, mitigation shall be implemented through data recovery and documentation in accordance with the SOI's Standards and CEQA Guidelines Section 15126.4(b), with tribal consultation to ensure culturally appropriate treatment.

MM-TCR-3: Unanticipated Discovery of Human Remains and Associated Funerary or Ceremonial Objects

Native American human remains are defined in PRC 5097.98 (d)(1) as an inhumation or cremation, and in any state of decomposition or skeletal completeness. Funerary objects, called associated grave goods in PRC Section 5097.98, are also to be treated according to this statute.

In the event that human remains or associated funerary objects are encountered during ground-disturbing activities, construction shall halt within 50 feet of the find. The discovery shall be addressed in accordance with the CRMMP required by MM-CUL-2 and the protocols set forth in MM-CUL-3.

Consistent with California Health and Safety Code Section 7050.5, the County Coroner shall be notified immediately. If the remains are determined to be Native American, the Native American Heritage Commission shall be contacted, and consultation shall occur with the Most Likely Descendant identified by the Commission, pursuant to PRC Section 5097.98.

Native American human remains and associated funerary or ceremonial objects shall be treated together as a single burial unit under PRC Section 5097.98(d), with preservation in place as the preferred treatment.

If preservation in place is not feasible, the Most Likely Descendant, in consultation with Metro, shall determine culturally appropriate treatment in accordance with PRC Section 5097.98(d)(2). Any discovery of human remains/burial goods shall be kept confidential to prevent further disturbance.

Findings

Impact 3.14-4.1: Substantial Adverse Change in The Significance of a Tribal Cultural Resource During Construction

Implementation of Mitigation Measures MM-TCR-1, MM-TCR-2, and MM-TCR-3 would reduce the impact on tribal cultural resources from project construction to a less than significant level. Thus, Metro adopts CEQA Finding 1, as identified in Section 3 above and in Section 15091, subdivision (a)(1) of the CEQA Guidelines.

Impact 3.14-4.2: Substantial Adverse Change in The Significance of a Tribal Cultural Resource Determined by a Lead Agency During Construction

Implementation of Mitigation Measures MM-TCR-1, MM-TCR-2, and MM-TCR-3 would reduce the impact from project construction on unique tribal cultural resources as determined by a lead agency to a less than significant level. Thus, Metro adopts CEQA Finding 1, as identified in Section 3 above and in Section 15091, subdivision (a)(1) of the CEQA Guidelines.

5.7 LAND USE

The project would have a less than significant impact with mitigation related to land use with respect to the following significance threshold:

- > Would the project physically divide an established community (Impact 3.2-4.1)

Impacts

Impact 3.2-4.1: Physical Division of an Established Community During Construction

For construction areas along the corridor, impacts may include potential traffic disruptions and delays, as construction necessitates temporary lane and intersection closures. As part of the Hawthorne Option, pursuant to PF-T-1, a CTMP would be implemented to maintain connectivity across and along Hawthorne Boulevard during construction (see Section 3.1, Transportation). Vehicular and pedestrian access across Hawthorne Boulevard would generally be maintained by phasing construction in such a way that does not close multiple parallel roads or sidewalks at the same time. While parallel roads and their intersections are typically close enough that automobiles can easily detour to a parallel road to gain access across Hawthorne Boulevard, in locations where pedestrian crossings are more than 1,000 feet apart, construction of the Hawthorne Option may pose a barrier to pedestrian access across the roadway. This could divide the community for the duration of construction at some locations for several months, resulting in a significant impact during construction with regard to dividing a physically established community. However, with the implementation of Mitigation Measure MM-LU-1,

Temporary Crossings (See Section 3.2-5), detours around closures, including temporary crosswalks where closed intersections do not have alternate crossings within 1,000 feet, the Hawthorne Option would have a less than significant impact with mitigation during construction.

References in the Draft and Final EIR

- > Section 3.2, Land Use, Subsections 3.2-4.1.1 of the Draft EIR
- > Chapter 4, Corrections and Additions, of the Final EIR

Mitigation Measures

MM-LU-1 – Temporary Crossings

Where construction requires the closure of crosswalks or other pedestrian roadway crossings and an alternate crossing route does not exist within 1,000 feet of the closed crossing, the contractor shall provide a temporary alternate crossing nearby. These temporary crossings shall be identified in the CTMPs for the Cities of Lawndale, Redondo Beach, and Torrance, described in Project Feature T-1, which would be completed prior to the issuance of a building permit for the Hawthorne Option and the initiation of major roadway work. The plan shall identify the placement of temporary pedestrian crossings to ensure safe pedestrian crossings near all closed roadway crossings where an alternate crossing is not available within 1,000 feet.

Findings

Impact 3.2-4.1 Physical Division of an Established Community During Construction

Implementation of Mitigation Measures MM-LU-1 would reduce the impact related to physical division of an established community during construction to a less than significant level. Thus, Metro adopts CEQA Finding 1, as identified in Section 3 above and in Section 15091, subdivision (a)(1) of the CEQA Guidelines. Findings for Environmental Impacts Found to be Less Than Significant

This section discusses the impacts found to be less than significant, and no mitigation is required.

5.7. TRANSPORTATION

The project would have a less than significant impact related to transportation with respect to the following significance thresholds:

- > Will the project conflict with a program, plan ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities? (Impact 3.1-4.1)
- > Will the project conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b) [increase in VMT]? (Impact 3.1-4.2)
- > Will the project substantially increase hazards due to a geometric design feature or incompatible uses? (Impact 3.1-4.3)
- > Will the project result in inadequate emergency access? (Impact 3.1-4.4)

Impacts

Impact 3.1-4.1: Conflict with Plans During Construction

Given the temporary nature of construction, it is not expected that construction of the Hawthorne Option would preclude any programs, plan ordinances, or policies addressing the circulation system. Construction will temporarily reduce travel lanes on Hawthorne Boulevard progressively in segments

along the alignment. Additionally, there could be short-term closures of freeway shoulder and/or travel lanes and select ramps on I-405. Although these activities would temporarily reduce travel efficiency, alternate routes are available through the area on parallel major roadways. As part of Project Feature PF-T-1 (Construction Traffic Management Plan), prior to the initiation of localized project construction activities, construction traffic management plans (CTMPs) would be prepared. The CTMPs will specify street closure information, detour plans, haul routes, and staging plans and will include provisions for maintaining safe access or alternate routes of travel for all road users and transit. PF-T-1 reflects standard construction practice for Metro projects and provides part of the substantial evidence supporting the conclusion that the project would not conflict with a program, plan, or policy addressing the circulation system during construction. Therefore, a less than significant impact would occur.

Impact 3.1-4.1: Conflict with Plans During Operations

The project introduces a new transit option consistent with several local jurisdictions' transportation policy objectives, provides new bicycling and walking infrastructure along the Metro ROW, and offers an alternative to driving that is anticipated to reduce vehicle trips.

As described in the 2025 Ridership Summary Report, available on the Metro website, Metro has updated the operational scenario for the project alignment options to reflect the C-2 Operating Plan. This change affects only how Metro designates and operates its service lines and does not alter the options' physical features, alignment, station locations, construction methods, or operational characteristics relevant to environmental impacts (e.g., train frequency, electrical demand, or service hours). Ridership modeling under the C-2 Operating Plan shows improved connectivity within the regional rail network, resulting in higher projected ridership and associated travel benefits. Therefore, the conclusions of the environmental analysis remain valid, and the Hawthorne Option would continue to have a less than significant impact.

As described in Section 3.2 above, per CEQA Guidelines, § 15088.5(a), recirculation of an EIR is required only when "significant new information" is added to the EIR or the record, such as information showing that the project would result in new or substantially more severe significant environmental impacts, or that a feasible alternative or mitigation measure considerably different from those previously analyzed would substantially reduce one or more significant impacts are available but the project proponent declines to adopt it. The updates reflected in the C-2 Operating Plan do not trigger any of these conditions. Rather, the revised operating plan clarifies and updates the operational assumptions analyzed in the Draft EIR without changing the project's physical characteristics, environmental setting, or mitigation commitments. (See Memorandum re: Vehicle Miles Traveled Correction to the C Line (Green) Extension to Torrance Project, October 2025). Accordingly, the new information does not constitute significant new information within the meaning of CEQA Guidelines section 15088.5, and recirculation of the EIR is not required.

Impact 3.1-4.2: Induce Vehicle Miles Traveled During Construction

Due to the temporary nature of construction traffic associated with the project, a substantial increase in vehicle miles traveled (VMT) would not be anticipated to result from construction. Given the temporary nature of construction industry jobs, the relatively large regional construction industry, and the total number of construction workers needed during any construction phase, it is likely that the labor force from within the region would be sufficient to complete the majority of project construction without a substantial influx of new workers and their families and would not result in a substantial increase in VMT. Therefore, construction of the project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3 and there would be a less than significant impact.

Impact 3.1-4.2: Induce Vehicle Miles Traveled During Operations

Per CEQA Guidelines Section 15064.3(b), transportation projects that reduce or have no impact on VMT should be presumed to cause a less than significant transportation impact. As a non-automobile modal option, the project is expected to result in either a positive or neutral effect on VMT, resulting in consistency with CEQA Guidelines Section 15064.3(b). Thus, project operation would result in a less than significant impact.

Impact 3.1-4.3: Increase Hazards Due to Geometric Design During Construction

Project construction would occur in stages that would temporarily reduce travel lanes on Hawthorne Boulevard in segments along the alignment. Lane reductions must maintain minimum dimensions and geometry based on roadway type, maximum design vehicle size, and other factors defined in engineering standards. Construction worksites would be fenced, and lane closures and associated lane tapers, temporary advance warning signs, detour signs, etc., would be implemented in accordance with the Part 6 (Temporary Traffic Control) of the California Manual on Uniform Traffic Control Devices (CAMUTCD) to ensure that no significant geometric design hazards are introduced during the construction period. As elements such as columns are constructed, the potential for visibility obstructions for road users could be introduced. As part of Project Feature PF-T-1, CTMPs would be prepared in compliance with the CAMUTCD. The CTMPs would provide for safe separation of road users from construction activities, ensure visibility of pedestrians and at marked or signalized crossings meets engineering standards, and if necessary, detour vehicles, pedestrians, and/or bicyclists along a safer route, minimizing inconvenience to the extent practical. PF-T-1 reflects standard construction practice for Metro projects and provides part of the substantial evidence supporting the conclusion that construction of the Hawthorne Option would not substantially increase hazards due to a geometric design feature or incompatible uses. Accordingly, a less than significant impact would occur.

Impact 3.1-4.3: Increase Hazards Due to Geometric Design During Operations

The elevated light rail structure would primarily be located within Caltrans ROW along the I-405 and the median of Hawthorne Boulevard and would be designed to maintain adequate site distance and signal visibility consistent with CAMUTCD standards, with roadway geometry and traffic signal reconfigured as needed where the structure could otherwise affect visibility. Pedestrian safety would be maintained or improved through the use of predominantly signalized crossings along this corridor, including the signalization of select previously unsignalized intersections and a proposed mid-block pedestrian crossing at the south end of the South Bay Galleria Station. Where columns are located near crossings or turn movement, adequate median width, column setbacks, protected turn phases, and signal timing modifications would prevent conflicts and preserve visibility. Thus, project operation would not substantially increase hazards due to a geometric design feature or incompatible uses, and a less than significant impact would occur.

Impact 3.1-4.4: Inadequate Emergency Access During Construction

Project construction would occur in various phases, which would have different effects on the street system. Any temporary full or partial street closures during construction would, by necessity, increase traffic volumes on the detour routes, which could increase traffic congestion on those routes. However, the alignment is located in an established urban area that is well-served by the surrounding roadway network, and multiple routes exist parallel to the affected streets. Emergency vehicle drivers normally have a variety of options for avoiding traffic such as using sirens to clear a path of travel, driving in the lanes of opposing traffic or center turn lanes, and bypassing signals and stopped traffic. As part of Project Feature PF-T-1, CTMP would be prepared to maintain access in and around the project

construction areas and component sites throughout all construction activities. PF-T-1 reflects standard construction practice for Metro projects and provides part of the substantial evidence supporting the conclusion that adequate emergency access would be maintained. Therefore, there would be a less than significant impact.

Impact 3.1-4.4: Inadequate Emergency Access During Operations

The Hawthorne Option fully grade-separates the light rail and generally maintains the existing road network below. At the intersection of Hawthorne Boulevard and 180th Street, the center median would be permanently closed, limiting direct access to 180th Street (east) or into the shopping plaza on the west. However, the intersection at 179th Street would remain with a new traffic signal, which is approximately 200 feet to the north, and 182nd Street which is approximately 630 feet to the south, ensuring that access to 180th Street (east) and the shopping plaza on the west is maintained. Therefore, there would be a less than significant impact.

References in the Draft and Final EIR

- > Section 3.1, Transportation, Subsections 3.1-4.1, 3.1-4.2, 3.1-4.3, and 3.1-4.4 of the Draft EIR
- > Chapter 4, Corrections and Additions, of the Final EIR

Project Features

PF-T-1. Construction Traffic Management Plan

The MRDC requires that contractors develop a CTMP prior to the initiation of localized construction activities. Per Metro standard practice, this CTMP (inclusive of street closure information, detour plans, haul routes, and a staging plan) shall be prepared and submitted to the Cities of Lawndale, Redondo Beach, and Torrance for review. For the Hawthorne Option, it would also be submitted to Caltrans. Caltrans would also review selected areas of the project, such as bridge construction over Hawthorne Boulevard. The CTMPs shall be based on the nature and timing of the specific construction activities at each of the construction sites. This coordination will ensure construction activities of the concurrent related projects and associated hauling activities are managed in collaboration with one another and the project. The CTMPs may be updated during construction to reflect evolving conditions and site-specific needs. The CTMPs will include, but not be limited to, the following elements, as appropriate:

- > As traffic lane, parking lane, sidewalk closures and full road closures are anticipated, worksite traffic control plans, approved by the local jurisdictions and Caltrans, shall be developed and implemented to route vehicular traffic, bicyclists, and pedestrians around any such closures.
- > As partial and full street closures are anticipated at various locations during portions of the Project construction, detour plans, approved by the local jurisdictions, shall be developed and implemented to route vehicular traffic, pedestrians and bicyclists to alternative routes during these periods, including maintaining access for these modes across Hawthorne Boulevard during construction.
- > Ensure that vehicle and pedestrian access will remain available from at least one entry and egress point for properties in proximity to the project and component sites during construction with access to businesses maintained during normal business hours; nighttime closures may be possible and accordingly arranged with property owners.
- > Coordinate with the city and emergency service providers to ensure emergency access is provided to the project and component sites and neighboring land uses. Emergency access points will be marked accordingly in consultation with local fire departments, as applicable.

- > Provide off-site truck staging in a legal area furnished by the construction truck contractor.
- > Schedule deliveries and pick-ups of construction materials during non-peak travel periods to the extent possible and coordinate to reduce the potential of trucks waiting to load or unload for protracted periods.

Mitigation Measures

The impacts under the thresholds above will be less than significant, and mitigation measures are not required.

Findings

For the reasons stated above, Metro finds that these transportation impacts will be less than significant.

5.8. LAND USE AND PLANNING

The project would have a less than significant impact related to land use and planning with respect to the following significance thresholds:

- > Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect? (Impact 3.2-4.2)

Impacts

Impact 3.2-4.1: Divide an Established Community During Operations

The Hawthorne Option would be elevated parallel to I-405 and continuing down the median of Hawthorne Boulevard, therefore there would not be conflicts between street and light rail crossings. While there would be changes to the current roadway configuration along Hawthorne Boulevard to support the elevated guideway, this would not impede access to either side of the community. The main changes to the roadway configuration along Hawthorne Boulevard would involve a reconfiguration of the intersections to relocate the left turn lanes and the reduction of parking within the median due to a conflict with the elevated structure columns. The existing lane configuration would remain as is for both northbound and southbound traffic, but traffic would be shifted a few feet to the east in the approach to the proposed South Bay Galleria Station to provide pedestrian access to the station. There would be new midblock crossings to provide pedestrian access to the proposed South Bay Galleria Station from the south side of the station in addition to the existing crosswalk at Artesia Boulevard. Additionally, several intersections would be signalized along Hawthorne Boulevard. These changes would not impede access within the community. Other project elements including stations, TPSS sites, and crossing equipment would not impede access. Thus, project operation would not divide an established community and less than significant impact would occur.

Impact 3.2-4.2: Conflict with Land Use Policy During Construction

Construction activities would be temporary and would not directly conflict with applicable regional and local land use plans, policies, and regulations adopted for the purpose of avoiding or mitigating an environmental effect. Further, the project would comply with all applicable regulations and local ordinances governing construction activities to the extent feasible. Therefore, construction of the Hawthorne Option would have a less than significant impact.

Impact 3.2-4.2: Conflict with Land Use Policy During Operations

The Hawthorne Option would not change the existing land use setting or conflict with the described plans and policies during operation. The City of Torrance's Hawthorne Boulevard Corridor Specific Plan acknowledges and supports transit service that enhances mobility in the corridor and serves as a convenient alternative to automobile travel. The City of Lawndale's Hawthorne Boulevard Corridor Specific plan seeks to ensure that the improvement to existing facilities is coordinated with future population and employment growth and provides a balanced mix of transportation. Both of these goals are consistent with light rail transit service. The addition of a station at the South Bay Galleria is consistent with the City of Redondo Beach's General Plan which seeks to integrate public transit facilities on the South Bay Galleria site and ensure that they are accessible by automobile, bicycle, and walking from peripheral residential neighborhoods. Thus, the Hawthorne Option would have a less than significant impact.

References in the Draft and Final EIR

- > Section 3.2, Land Use and Planning, Subsection 3.2-4.2 of the Draft EIR
- > Chapter 4, Corrections and Additions, of the Final EIR

Project Features

None

Mitigation Measures

The impacts under the thresholds above would be less than significant, and mitigation measures are not required.

Findings

For the reasons stated above, Metro finds that these land use impacts would be less than significant.

5.9. AESTHETICS

The project would have a less than significant impact related to aesthetics with respect to the following significance thresholds:

- > In non-urbanized areas, would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality? (Impact 3.3-4.3)
- > Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area, or create new shade or shadows that would substantially affect outdoor recreation facilities or other public areas? (Impact 3.3-4.4)

Impacts

Impact 3.3-4.3: Degrade Existing Visual Character During Construction

Construction activities would include the addition of construction equipment, vehicles, signs, staging, and personnel within the RSA. Construction activities would result in site disturbances, partial or full demolition of existing structures, use and movement of heavy construction equipment, import and export of materials, and removal of vegetation, use of erosion devices, and installation of piles, columns, and piers. Construction would also require the temporary use of staging and laydown areas, and

installation of temporary lighting and fencing. Overall, construction would represent a temporary change in the visual quality and character of the RSA, similar to other construction projects in the city. However, the existing visual quality is low to moderately low throughout the entire RSA and construction activities would not substantially degrade the visual quality of the immediate area.

As part of Project Feature PF-AES-1 (Local Zoning Ordinances), Metro will verify that construction activities occurring outside of the Metro and public ROWs comply with applicable zoning regulations within the Cities of Hawthorne, Lawndale, Redondo Beach, and Torrance throughout the duration of construction. PF-AES-1 reflects standard practice for Metro projects and provides part of the substantial evidence supporting the conclusion that the project would not conflict with applicable general plan policies or local codes governing scenic quality. Because construction would not substantially change the primarily urban views in the RSA, impacts during construction would be less than significant.

Impact 3.3-4.3: Degrade Existing Visual Character During Operations

Overall, project operation would represent a visual change as compared to existing conditions. The alignment is located in a primarily urbanized area within a commercial corridor. Viewers in the RSA, such as pedestrians, residents, commuters, and patrons and employees of commercial businesses, would have a low to moderate sensitivity to this visual change. There are three historic buildings within the RSA of the Hawthorne Option that represent significant visual resources, including Moda Italia, Frank's Furniture, and Lightning Express Carwash. The Hawthorne Option has the potential to block pedestrian and motorist's views of the historic buildings within this portion of the RSA from certain vantage points. However, because the Hawthorne Option consists of an elevated alignment, views of the buildings' historical features would still be visible from the ground-level where the historical features are visually prominent. As such, the Hawthorne Option would not significantly impact the views or visual character of these historic resources. As part of Project Feature PF-AES-1 (Local Zoning Ordinances), all project components located on properties outside of the existing Metro and public ROWs would adhere to local zoning ordinances. As part of PF-AES-2 (Metro Design Standards), project components, including track guideway, auxiliary facilities, and stations, would be designed in accordance with Metro established design standards and consistent with Metro's Art Program Policy. Landscaping and operational lighting would also be provided, consistent with these standards. Together, PF-AES-1 and PF-AES-2 reflect Metro's standard commitments and provide part of the substantial evidence supporting the conclusion that the project would be consistent with the local policies regarding visual character and scenic quality. Therefore, the Hawthorne Option would be consistent with zoning requirements and other regulations governing scenic quality, and the potential impact would be less than significant.

Impact 3.3-4.4: Create New Source of Substantial Light/Glare During Operation

The project is within an urbanized area with various sources of existing nighttime lighting. During operation, new light sources would include security lighting and point sources of lighting at the new stations that would contribute to the overall ambient nighttime lighting conditions in the RSA. However, the lighting would be comparable to existing lighting for the existing Redondo Beach (Marine) Station. As part of Project Feature PF-AES-2 (Metro Design Standards), all lighting would be designed consistent with Metro's established standards, including requirements that address operational lighting, and would also comply with applicable lighting regulations verified during the permitting process. PF-AES-2 reflects Metro's standard design commitments and provides part of the substantial evidence supporting the conclusion that the increase in light generated by the project would not adversely affect day or nighttime views in the area.

During operation, the Hawthorne Option would operate in an elevated structure. Supporting columns would be required in order to support the elevated structures, OCS, and station platform. The elevated South Bay Galleria Station would be located in the median of Hawthorne Boulevard approximately halfway between Artesia Boulevard and 177th Street, featuring a center platform. The shade and shadow pattern created by the elevated structures and station would change throughout the day and seasonally. An adverse shadow impact could occur when new shadows substantially affect existing outdoor recreation facilities, such as parks, playgrounds, or similar. Although there are several outdoor recreational facilities present within the RSA, none are located near the Hawthorne Option or close enough to be shaded substantially. The nearest outdoor recreation facility is Columbia Park, located approximately 405 feet east/northeast of the proposed elevated structure, between 186th and 190th Street. There is also intervening development between the proposed elevated structure and the park. As such, due to the location of the Hawthorne Option, the potential for an adverse shadow impact is limited.

Accordingly, the Hawthorne Option would have a less than significant impact related to light and glare, as well as shading and shadows during operation.

References in the Draft and Final EIR

- > Section 3.3, Aesthetics, Subsections 3.3-4.3 and 3.3-4.4.2 of the Draft EIR
- > Chapter 4, Corrections and Additions, of the Final EIR

Project Features

PF-AES-1. Local Zoning Ordinances

All project components located on properties outside of existing Metro ROW and public ROW would adhere to local zoning ordinances.

PF-AES-2. Metro Design Standards

All project components, including, but not limited to track guideway, auxiliary facilities, and station (public and ancillary) facilities will be designed per the MRDC and consistent with the objectives of the Metro Art Program Policy, Metro's Transit Service Policies & Standards, Systemwide Station Design Standards Policy, and Standard/Directive Drawings, or equivalent. Landscaping and operational lighting will also be installed consistent with these design standards.

Mitigation Measures

The impacts under the thresholds above would be less than significant, and mitigation measures are not required.

Findings

For the reasons stated above, Metro finds that these aesthetics impacts would be less than significant.

5.10. AIR QUALITY

The project would have a less than significant impact related to air quality with respect to the following significance thresholds:

- > Would the project conflict with or obstruct implementation of the applicable air quality plan?
(Impact 3.4-4.1)

- > Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard? (Impact 3.4-4.2)
- > Would the project expose sensitive receptors to substantial pollutant concentrations? (Impact 3.4-4.3)
- > Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people? (Impact 3.4-4.4)

Impacts

Impact 3.4-4.1: Conflict with Air Quality Plans During Construction

Maximum daily emissions during construction of the Hawthorne Option would be below applicable South Coast Air Quality Management District (SCAQMD) mass daily thresholds screening levels.

As part of Project Feature PF-AQ-1 (Metro Green Construction Policy Compliance), construction would adhere to Metro's Green Construction Policy for off-road equipment, generators, and on-road trucks. As part of Project Feature PF-AQ-2 (SCAQMD Rule 403 Compliance), construction would implement BMPs identified in SCAQMD Rule 403 to control and minimize fugitive dust. As part of Project Feature PF-AQ-3 (Metro Moving Beyond Sustainability Strategic Plan Compliance), construction would follow Metro's sustainability commitments, including renewable diesel requirements and opportunities to decarbonize fuel sources at construction sites. These project features reflect Metro's standard policies and practices and provide part of the substantial evidence supporting the conclusion that daily construction emissions would remain below applicable thresholds.

In addition, all heavy-duty trucks would comply with California Air Resources Board (CARB) Airborne Toxic Control Measure (ATCM) 2485—which limits the idling of vehicles to no more than five minutes in any particular location to reduce diesel emissions—and the Truck and Bus Regulation. Compliance with these requirements provide further evidence that maximum daily regional and localized emissions would remain below the applicable mass daily thresholds developed by the SCAQMD.

Construction would not introduce new growth in population or housing to the RSA. The project is programmed in the Southern California Association of Governments (SCAG) Connect SoCal 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) as a financially constrained project under the listing "Green Line South Bay Extension" (RTP ID 1TR1001), meaning that its implementation has been accounted for in the federally approved transportation conformity determinations for those planning documents.

Therefore, construction of the project would result in a less than significant impact related to air quality plan consistency.

Impact 3.4-4.1: Conflict with Air Quality Plans During Operations

The Hawthorne Option would reduce on-road VMT associated with increased transit ridership, offsetting approximately 42,951 VMT relative to 2042 without project conditions on a daily basis through the displacement of passenger vehicle trips. The expansion of high-quality transit infrastructure and reduction of VMT that would occur with implementation of the project are key objectives of the SCAG RTP/SCS and would have a beneficial effect on air quality.

Project operations would not introduce new permanent growth in population or housing to the South Coast Air Basin (SCAB) or SCAG region. The extension of the light rail corridor would result in a marginal

increase in regional electricity demand but would not require the expansion of Southern California Edison (SCE) capacity or substantial changes to its existing electrical infrastructure. The project is programmed in the financially constrained projects list in the Connect SoCal 2020–2045 RTP/SCS. Long-term operation of the project beginning in 2031 would not compromise the validity of the growth projections incorporated into the 2016 Air Quality Management Plan (AQMP) or the Connect SoCal 2020–2045 RTP/SCS. Therefore, operation of the project would result in a less than significant impact related to air quality plan consistency.

It should be noted that since the release of the Draft EIR, SCAG has released and adopted its 2024-2050 RTP/SCS, Connect SoCal 2024. The guiding policies, strategies, and regional planning assumptions in Connect SoCal 2024 are materially similar to those in the prior 2020-2045 RTP/SCS and continue to support development of high-capacity transit infrastructure, such as the project. (See Memorandum re: Regional Transportation Plan/Sustainable Communities Strategies Comparison, October 2025). Therefore, the project remains consistent with the RTP/SCS, including Connect SoCal 2024’s emphasis on expanding transit, reducing VMT, and supporting compact, infill development.

Impact 3.4-4.2: Cumulative Net Increase of Criteria Pollutants During Construction

The RSA is currently designated as nonattainment for the National Ambient Air Quality Standards (NAAQS) for ozone (O₃), and particulate matter less than 2.5 microns in diameter (PM_{2.5}) and is designated nonattainment for the California Ambient Air Quality Standards (CAAQS) for O₃, particulate matter less than 10 microns in diameter (PM₁₀), and PM_{2.5}. CEQA requires that projects demonstrate that they will not generate emissions in excess of the air quality significance thresholds for O₃ precursors (volatile organic compounds [VOC] and NO_x) and PM₁₀ and PM_{2.5} to substantiate that they would not adversely contribute to the attainment of the air quality standards. Construction would not generate emissions in excess of any applicable SCAQMD regional-scale mass daily threshold established for the purpose of screening projects with less than significant air quality impacts. These emissions would also be considered less than significant at the cumulative level. Therefore, construction would result in a less than significant impact related to a cumulatively considerable net increase in emissions of O₃ precursors or particulate matter.

With respect to SCAG’s adoption of its 2024-2050 RTP/SCS, Connect SoCal 2024, the travel demand modeling and growth forecasts used in the Draft EIR to reflect incremental population and employment growth in the study area and surrounding region remain valid for evaluating cumulative impacts. The differences between Connect SoCal 2024 and the Connect SoCal 2020-2045 RTP/SCS are not substantial enough to alter the environmental conclusions of the Draft EIR. Accordingly, an updated analysis using Connect SoCal 2024 as the basis for cumulative conditions is not required, as the results and findings would not be substantially different than what is presented in the Draft EIR.

Impact 3.4-4.2: Cumulative Net Increase of Criteria Pollutants During Operations

Operation of the Hawthorne Option would not introduce a substantial permanent source of emissions to the RSA and would provide air quality benefits by replacing passenger vehicle trips with transit ridership. With a VMT reduction of 42,951 under the C-2 Operating Plan, the Hawthorne Option would reduce air pollutant emissions as shown in Table 1.

Table 1. Hawthorne Option Operations Emissions Analysis – 2042

	Criteria Pollutants					
	VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}

Daily Reduction in Emissions (lbs./day)	-0.6	-2.1	-53.4	-0.2	-5.7	-1.2

VOC = volatile organic compounds; NO_x = nitrous oxides; CO = carbon monoxide; SO_x = sulfur oxides; PM₁₀ = respirable particulate matter; PM_{2.5} = fine particulate matter

This would indirectly decrease regional emissions of O₃ precursors and particulate matter. Therefore, operation of the project would not result in a cumulatively considerable increase in nonattainment pollutant or precursor emissions, and this impact would be less than significant.

SCAG's adoption of the 2024-2050 RTP/SCS after the release of the Draft EIR does not alter the conclusions of the transportation cumulative impact analysis. Connect SoCal 2024 carries forward similar growth forecasts, land use patterns, and transportation priorities as the 2020-2045 RTP/SCS on which the EIR was based. (See Memorandum re: Regional Transportation Plan/Sustainable Communities Strategies Comparison, October 2025). Accordingly, the project remains consistent with applicable regional plans, and no new or more severe impacts would occur.

Impact 3.4-4.3: Pollutant Concentrations During Construction

As shown in Table 3.4-23 of the Draft EIR, the maximum daily emissions that would be generated by on-site sources during construction of the Hawthorne Option would not exceed the SCAQMD's localized significance threshold screening values during any individual phase or combination of activities. Therefore, construction of the Hawthorne Option would result in a less than significant impact related to criteria pollutant concentrations at nearby sensitive receptor locations. As part of Project Feature PF-AQ-1 (Metro Green Construction Policy Compliance), all heavy-duty off-road equipment would be required to comply with the provisions of the Metro Green Construction Policy, which includes that engines meet Tier 4 emissions standards and use Level 3-equivalent diesel particulate filters, where feasible. Based on the requirements, maximum daily emissions of NO_x, carbon monoxide (CO), PM₁₀, and PM_{2.5} generated at construction sites would remain below the applicable corresponding SCAQMD Localized Significance Threshold screening values for all individual and combined activities analyzed. PF-AQ-1 also requires that all diesel-fueled off-road equipment would be required to have engines meeting Tier 4 emissions standards, which would substantially reduce emissions of diesel particulate matter and other toxic gases. Additionally, all off-road equipment would be required to limit idling to no more than five minutes to minimize excess emissions and would be maintained in accordance with the optimal manufacturer specifications. Other construction BMPs would limit diesel particulate emissions from on-road trucks near construction sites. These features reflect Metro's standard construction policies and provide part of the substantial evidence supporting the conclusion that pollutant concentrations would remain below localized thresholds.

Therefore, construction of the Hawthorne Option would result in a less than significant impact regarding elevated concentrations of criteria pollutants and the occurrence of substantial toxic air contaminant concentrations at nearby sensitive receptor locations.

Impact 3.4-4.3: Pollutant Concentrations During Operations

No direct source of air pollutant emissions along the Hawthorne Option alignment would occur as the light rail cars, stations, and systems and signals would be electrically powered and connected to the electrical grid. Minor stationary sources would be associated with the use of landscaping equipment and sanitation service vehicle trips at station facilities. Operations would not involve a facility where a significant number of vehicles would dwell at nearby intersections.

Project operation would reduce daily regional VMT by approximately 42,951 miles relative to the 2042 without project conditions, thereby decreasing daily mobile source air toxics (MSAT) emissions throughout the RSA.

Regarding CO hot-spots, although the SCAB is designated as a maintenance area for CO, it is no longer a pollutant of concern in the region. As indicated in the CARB EMFAC model, CO emission rates would be substantially less in the future when the project opens, compared to 2003 when CO attainment was demonstrated in the AQMP. Therefore, there is no potential for CO emissions to result in an exceedance of air quality standards.

Although light rail operations would generate small amounts of dust due to braking friction and resuspended particulates, these emissions would not result in a substantial increase in localized PM concentrations along the alignment near residential receptors. Additionally, the proposed soundwalls would serve as a physical barrier between adjacent residences and uses and would reduce dust dispersion and deposition into the surrounding communities.

Therefore, operations would result in a less than significant impact related to criteria pollutant concentrations, toxic air contaminants, and CO hot-spots.

Impact 3.4-4.4: Adverse Other Emissions During Construction

Construction activities would not generate a substantial source of construction odors or visible dust plumes. Construction would result in temporary exhaust fumes through gasoline- or diesel-powered equipment and asphalt paving. Such emissions would occur intermittently, and associated odors would dissipate rapidly within the immediate vicinity of the work area. As part of Project Feature PF-AQ-1 (Metro Green Construction Policy Compliance), construction would follow Metro's Green Construction Policy, including use of BMPs to address emissions from construction equipment, and would comply with SCAQMD Rule 402 (Nuisance) regarding odors and dust. PF-AQ-1 reflects Metro's standard construction policy and provides part of the substantial evidence supporting the conclusion that construction activities would not result in nuisance odors or visible dust plumes.

Therefore, construction of the Hawthorne Option would result in a less than significant impact related to public nuisance for odors or visible dust plumes.

Impact 3.4-4.4: Adverse Other Emissions During Operations

Operations would not involve a substantial source of odorous or particulate emissions that could cause public nuisances. Any unpleasant odors from transit operations would be subject to management under the odor complaint tracking system mandated by SCAQMD Rule 402 (Nuisance), which prevents nuisance odor conditions. With regards to the experience of future transit riders, Metro's heavy and light rail cars use high-efficiency air filters rated at MERV-8 or higher that recirculate air every two to four minutes. The onboard filtration systems would prevent the occurrence of persistent odors affecting future transit riders. As a result, operation of the project would have a minor, if any, impact with respect to odors. Therefore, the Hawthorne Option would result in a less than significant impact related to operational odors.

References in the Draft and Final EIR

- > Section 3.4 Air Quality, Subsections 3.4-4-1, 3.4-4.2, 3.4-4.3, 3.4-4.4 of the Draft EIR
- > Chapter 4, Corrections and Additions, of the Final EIR

Project Features

PF-AQ-1. Metro Green Construction Policy Compliance

Following construction equipment requirements, construction BMPs and implementation strategies for all construction projects performed on Metro properties or rights-of-way.

- > Construction equipment shall incorporate, where feasible, emissions-reducing technology such as hybrid drives and specific fuel economy standards.
- > Maintain equipment according to manufacturer specifications.
- > Idling of construction equipment and heavy-duty trucks shall be restricted to a maximum of five minutes when not in use (certain exceptions apply based on CARB exemptions).
- > All off-road diesel-powered construction equipment greater than 50 horsepower (hp) shall meet Tier-4 off-road emission standards at a minimum.
- > All on-road heavy-duty trucks with a gross vehicle weight rating greater than or equal to 14,000 pounds must have engines meeting U.S. 2010 on-road emission standards.
- > Where applicable and feasible, work with local jurisdictions to improve traffic flow by signal synchronization during construction activities.
- > Use electric power in lieu of diesel power where available.
- > Generators: every effort shall be made to utilize grid-based electric power at any construction site, where feasible. Where access to the power grid is not available, on-site generators must:
 - Meet a 0.01 gram per brake-horsepower-hour (g/bhp-hr) standard for PM; or,
 - Be equipped with Best Available Control Technology (BACT) for PM emissions reductions.
- > Inspections: Metro shall conduct inspections of construction sites and affected off-road and on-road equipment and generator as well as compliance with air quality rules.
- > Records: Prior to Notice to Proceed (NTP) to commence construction and to be verified afterwards consistent with project contract requirements and through enforcement provisions above, the Contractor shall submit to Metro the following information for all construction equipment to be used on Metro properties or rights-of-way:
 - A certified statement that all construction equipment used conform to the requirements specified above;
 - A list of all the equipment and vehicles (i.e., off-road equipment, include the CARB-issued Equipment Identification Number) to be used;
 - A copy of each Contractor's certified U.S. Environmental Protection Agency (USEPA) rating and applicable paperwork issued either by CARB, the SCAQMD, and any other jurisdiction that has oversight over the equipment.

PF-AQ-2. SCAQMD Rule 403 Compliance

Construction of the project would implement the following BMPs in compliance with SCAQMD Rule 403 – Fugitive Dust:

- > **Backfilling:** Backfill material stabilization when actively handling or inactive and stabilize soil at completion of activity.
- > **Clearing/Grubbing:** Maintain stability of soil through watering of site prior to, during, and after all clearing/grubbing activities.
- > **Cut and Fill:** Pre-water soils prior to cut and fill activities using water trucks; stabilize soil during and after activities.
- > **Debris Hauling:** All trucks hauling dirt, sand, soil, or other loose materials are to be tarped with a fabric cover and maintain a freeboard height of 12 inches.
- > **Demolition Activities:** Prohibit demolition activities when wind speeds exceed 25 mph; apply water to disturbed soils after demolition is completed or at the end of each day of cleanup.
- > **Disturbed Soil:** Stabilize disturbed soil throughout the construction site by limiting vehicular traffic and disturbance on soil where possible and applying water or a stabilizing agent in sufficient quantities to prevent the generation of visible dust plumes (Rule 401 – Visible Emissions).
- > **Disturbed Surface Areas:** Apply dust suppression in sufficient quantity and frequency to maintain a stabilized surface; apply water at three-hour intervals to at least 80% of the un-stabilized area.
- > **Earth-Moving Activities:** Pre-apply water to depth of proposed cuts and reapply as necessary to maintain soils in a damp condition and to ensure that visible dust plumes do not exceed 100 feet in any direction.
- > **Importing/Exporting of Bulk Materials:** Stabilize material with tarps or other suitable enclosures on trucks while loading/unloading to reduce fugitive dust emissions and maintain at least six inches of freeboard on haul vehicle; provide water during loading/unloading to prevent dust plumes.
- > **Staging Areas and Unpaved Roads:** Stabilize surface areas and limit vehicle speeds to 15 miles per hour.
- > **Stockpiles/Bulk Material Handling:** Stabilize stockpiled materials with intermittent watering and limit stockpiles to eight feet in height within 100 yards of off-site occupied buildings.
- > **Trenching:** Stabilize surface soils with pre-watering where trencher or excavator and support equipment will operate; wash mud and soils from equipment at completion of activities.

PF-AQ-3. Metro Moving Beyond Sustainability Strategic Plan Compliance

Construction and operation of the project will adhere to the commitments established by the Metro Moving Beyond Sustainability Strategic Plan 2020, including, but not limited to the application of renewable diesel requirements for contractors and identify opportunities to decarbonize fuel sources at construction sites.

PF-AQ-4. Metro Rail Design Guidelines

The project will be designed in accordance with the MRDC and the Metro Systemwide Station Design Standards Policy, which includes the installation of high-efficiency light emitting diode (LED) lighting in all fixtures to reduce electricity consumption.

Mitigation Measures

The impacts under the thresholds above would be less than significant, and mitigation measures are not required.

Findings

For the reasons stated above, Metro finds that these air quality impacts would be less than significant.

5.11. GREENHOUSE GAS EMISSIONS

The project would have a less than significant impact related to GHG emissions with respect to the following significance thresholds:

- > Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment? (Impact 3.5-4.1)
- > Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs? (Impact 3.5-4.2)

Impacts

Impact 3.5-4.1: Generate Greenhouse Gas Emissions During Construction

The amortized construction emissions over a 30-year operational project lifetime would be approximately 459.9 MTCO₂e.¹ Construction-related GHG emissions under the Hawthorne Option would be offset by the reductions in regional vehicle travel emissions within 10 years of operations. The magnitude of temporary construction-phase GHG emissions would not be sufficient to impede or delay the region's effort. Therefore, construction of the Hawthorne Option would not conflict with any relevant plan for reducing GHG emissions and would result in a less than significant impact during construction.

Impact 3.5-4.1: Generate Greenhouse Gas Emissions During Operations

Implementation of the Hawthorne Option under the C-2 Operating Plan would decrease regional on-road VMT by 42,951 daily miles through transportation mode shift, with an annual net GHG-emissions reduction of 1,871.18 MTCO₂e in 2042 due to displaced on-road vehicle trips. Long-term operation of the project would advance state, regional, and local initiatives to reduce GHG emissions by providing alternative modes of transportation and creating an efficient, well-connected public transit network to serve surrounding communities. The project is consistent with CARB plans and policies to reduce GHG emissions from passenger vehicles by providing alternative transportation modes for both local and regional trips. Implementation of the project and other planned transportation and transit improvements in the region are critical to achieving the Senate Bill (SB) 375 regional per capita targets for light duty vehicles. Therefore, implementation of the Hawthorne Option would result in a less than significant impact related to the generation of GHG emissions.

Impact 3.5-4.2: Conflict With Emission Reduction Plans During Construction

Construction of the Hawthorne Option would temporarily generate GHG emissions associated with off-road equipment and on-road vehicle activities, and following completion of the light rail transit corridor, sources involved in construction activities would no longer produce emissions associated with the project. The cumulative nature of GHG emissions implicitly precludes the potential for short-term

¹ See Memorandum re: Vehicle Miles Traveled Correction to the C Line (Green) Extension to Torrance Project, October 2025.

emissions generated during construction to interfere with long-term GHG-emission-reduction targets established by state, regional, and local planning documentation. In accordance with SCAQMD guidance, the GHG emissions that would be generated during construction were amortized over a 30-year operational lifetime and considered in conjunction with the long-term operational effects of the project. Therefore, the Hawthorne Option is consistent with the SCAG RTP/SCS, and would result in a less than significant impact related to regional GHG reductions.

Impact 3.5-4.2: Conflict With Emission Reduction Plans During Construction

Implementation of the Hawthorne Option would directly contribute to the statewide efforts to reduce light-duty automobile VMT, inducing a daily displacement of approximately 42,951 light-duty vehicle miles. The project would provide an expansion of light rail transit service that would directly increase transit capacity, which would support the SCAG RTP/SCS' goal of improved accessibility and mobility relative to the future (2042) baseline condition. By enhancing connectivity to the regional transit network, the project would result in environmental benefits and would accommodate further strategies to reduce emissions at the community level. The project supports transportation efforts to reduce VMT and achieve GHG-emission-reduction targets outlined in the CARB Climate Change Scoping Plan and the SCAG Connect SoCal 2020–2045 RTP/SCS. By default, Metro will prioritize and ensure consistency with its own 2019 Climate Action and Adaptation Plan (CAAP) and 2020 Moving Beyond Sustainability Strategic Plan for all projects being implemented. At the local level, the Hawthorne Option would also comply with each corridor city's GHG-reduction plan to the extent feasible. Therefore, the project would result in a less than significant impact related to GHG plan and policy conflicts.

Since the release of the Draft EIR, SCAG has released and adopted its 2024-2050 RTP/SCS, Connect SoCal 2024. The guiding policies, strategies, and regional planning assumptions in Connect SoCal 2024 are materially similar to those in the prior 2020-2045 RTP/SCS and continue to support development of high-capacity transit infrastructure, such as the project. Therefore, the Hawthorne Option remains consistent with the RTP/SCS, including Connect SoCal 2024's emphasis on expanding transit, reducing VMT, and supporting compact, infill development.

References in the Draft and Final EIR

- > Section 3.5 Greenhouse Gas Emissions, Subsections 3.5-4.1 and 3.5-4.2 of the Draft EIR
- > Chapter 4, Corrections and Additions, of the Final EIR

Project Features

None

Mitigation Measures

The impacts under the thresholds above would be less than significant, and mitigation measures are not required.

Findings

For the reasons stated above, Metro finds that these GHG impacts would be less than significant.

5.12. GEOLOGY, SOILS, AND PALEONTOLOGICAL RESOURCES

The project would have a less than significant impact related to geology and soils with respect to the following significance thresholds:

- > Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking? (Impact 3.8-4.2)
- > Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction? (Impact 3.8-4-3)
- > Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides? (Impact 3.8-4.4)
- > Would the project result in substantial soil erosion or the loss of topsoil? (Impact 3.8-4.5)
- > Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse? (Impact 3.8-4.6)
- > Would the project be located on expansive soil, as defined in Section 1803.5.3 of the California Building Code¹, creating substantial direct or indirect risks to life or property? (Impact 3.8-4.7)

Impacts

Impact 3.8-4.2: Exposure to Strong Seismic Ground Shaking During Construction

Faults, such as the Palos Verdes and Newport-Inglewood Faults, which are the closest to the RSA are capable of producing earthquakes with magnitudes up to 7.7 and high ground accelerations.. The construction of the Hawthorne Option would involve the presence of construction workers at the site, thus increasing the potential risk of loss, injury, or death during a strong seismic event. However, given the intermittent and temporary nature of construction work and the relative rarity of strong seismic events in the region, the occurrence of strong seismic ground shaking during construction is unlikely. Therefore, construction of the Hawthorne Option would have a less than significant impact related to risk of loss, injury, or death involving strong seismic ground shaking.

Impact 3.8-4.2: Exposure to Strong Seismic Ground Shaking During Operations

The Hawthorne Option would be designed to accommodate the high seismic ground motion and associated consequences (such as liquefaction-induced vertical settlements/lateral spreading, if present). The structures would be designed to perform in accordance with the MRDC maximum design earthquake (MDE) and operating design earthquake (ODE) thresholds. As part of PF-GEO-1 (Metro Geotechnical Design Standards), site-specific geotechnical investigations would be performed in accordance with MRDC Section 5.6. The results of these investigations would be incorporated into the project's final design to address seismic demands and provide appropriate engineering solutions. Also, the project would comply with the latest applicable local and state building codes and regulations. PF-GEO-1 reflects Metro's established design standards and provides part of the substantial evidence supporting the conclusion that the project will be designed to withstand strong seismic ground shaking. Therefore, there would be a less than significant impact related to the risk of loss, injury, or death involving strong seismic ground shaking for the Hawthorne Option during operations.

Impact 3.8-4.3: Liquefaction During Construction

The Hawthorne Option is not located within a liquefaction zone mapped by the California Geological Survey (CGS). However, shallow groundwater was recorded in the northern area of the project footprint based on the existing geotechnical data. Based on review of the historically highest groundwater levels at the site, the groundwater depth will be 30 feet below ground surface (bgs) or deeper. As part of

Project Feature PF-GEO-1 (Metro Geotechnical Design Standards), site-specific geotechnical investigations would be performed during final design to verify the potential for liquefaction and to incorporate appropriate design enhancements, if needed, to address identified conditions. PF-GEO-1 reflects Metro's established design requirements and provides part of the substantial evidence supporting the conclusion that the Hawthorne Option would be designed to accommodate any liquefaction risk. Given the intermittent and temporary nature of construction work and the relative rarity of seismic events, the occurrence of seismic ground shaking resulting in liquefaction during construction of the project is unlikely. Therefore, risk of loss, injury, or death involving seismic-related ground failure, including liquefaction, as a result of the construction of the Hawthorne Option is less than significant.

Impact 3.8-4.3: Liquefaction During Operations

The Hawthorne Option would not involve any type of operational activities that would result in seismic-related ground failure, including liquefaction, during operation. As part of Project Feature PF-GEO-1 (Metro Geotechnical Design Standards), the Hawthorne Option would be designed and constructed to meet Metro's seismic design criteria, incorporating site-specific geotechnical investigations and engineering measures to ensure structures are seismically resistant and capable of withstanding liquefaction and its effects during operation. PF-GEO-1 reflects Metro's established design standards and provides part of the substantial evidence supporting the conclusion that the project would be seismically resilient. Therefore, the Hawthorne Option would have a less than significant impact related to seismic related failures, including liquefaction during operation.

Impact 3.8-4.4: Landslides During Construction

The RSA is located in a relatively low relief area, and the nearest CGS-mapped landslide zone is over 1.5 miles west and south. Therefore, there is no mapped landslide potential for the Hawthorne Option. However, construction activities for embankments and retaining walls have the potential to temporarily destabilize the soils surrounding the RSA and could result in seismically induced slope failures. As part of Project Feature PF-GEO-1 (Metro Geotechnical Design Standards), any permanent unretained and retained sloped areas within the RSA would be evaluated for geotechnical global stability under both static and seismic loading events in accordance with the MRDC. PF-GEO-1 reflects Metro's established design requirements and provides part of the substantial evidence supporting the conclusion that slopes would be designed and constructed to meet applicable stability standards. Given the intermittent and temporary nature of construction work and the relative rarity of seismic events, the occurrence of seismic ground shaking resulting in slope failure during construction of the project is unlikely. Therefore, the risk of loss, injury, or death due to landslides or seismically induced slope failures as a result of construction of the Hawthorne Option would be less than significant.

Impact 3.8-4.4: Landslides During Operations

The Hawthorne Option would not involve any operational activities that could directly or indirectly cause substantial adverse effects related to the risk of loss, injury, or death involving landslides. As part of Project Feature PF-GEO-1 (Metro Geotechnical Design Standards), slope stability analyses for the operational configuration of the Hawthorne Option would be conducted and would account for all potential loading cases, including light train loads and earth pressures. PF-GEO-1 reflects Metro's established design requirements and provides part of the substantial evidence supporting the conclusion that slopes and associated structures would be designed and constructed to maintain stability during operation. Therefore, the risk of loss, injury, or death involving landslides or seismically

induced slope failures as a result of the operation of the Hawthorne Option would be less than significant.

Impact 3.8-4.5: Soil Erosion During Construction

Based on previous geotechnical data in the vicinity of the RSA, the surficial soils mainly consist of cohesionless coarse-grained soils that can be susceptible to erosion. Construction activities would disturb topsoil and, therefore, could result in topsoil erosion. As part of Project Features PF-GEO-1 (Metro Geotechnical Design Standards), site-specific investigations would inform design and construction methods that account for soil stability. In addition, PF-HWQ-1 (Stormwater Pollution Prevention Plan [SWPPP] Implementation per Construction General Permit and MS4 Permit), provides for development and implementation of a SWPPP, including BMPs for soil stabilization and sediment control, consistent with applicable permit requirements. These project features reflect Metro's established design and construction practices and provide part of the substantial evidence supporting the conclusion that erosion control measures would be in place throughout construction. Therefore, substantial soil erosion and loss of topsoil for the Hawthorne Option as a result of construction would be less than significant.

Impact 3.8-4.6: Unstable Geologic Units or Soils During Construction

The Hawthorne Option is not located within a CGS-mapped liquefaction zone. The project footprint is generally in a relatively low relief area, and the nearest CGS-mapped landslide zone is over 1.5 miles west and south. Based on prior studies and existing geotechnical data, there is a low potential for subsidence and naturally occurring collapsible soils within the project area. Therefore, the Hawthorne Option is not located on a geologic unit or soil that is unstable or would become unstable as a result of the project, and resulting impacts associated with unstable soils and their consequences are considered minimal. However, deep excavations for piles could encounter unconsolidated or water-saturated soils. Existing geotechnical investigations indicate that shallow groundwater was recorded in the northern portion of the project footprint. As part of PF-GEO-1 (Metro Geotechnical Design Standards), site-specific geotechnical investigations would be conducted during final design to assess the subsurface conditions and current groundwater depth. In accordance with PF-GEO-1, the results of these investigations would be incorporated into project design and construction, including evaluation of risks, such as landslides, lateral spreading, subsidence, liquefaction, and collapse, and use of appropriate engineering measures, such as deep foundations and ground improvements where necessary. PF-GEO-1 reflects Metro's established design standards and provides part of the substantial evidence supporting the conclusion that the Hawthorne Option would be designed to address any unstable soil conditions identified. Given the intermittent and temporary nature of construction work and the relative rarity of seismic events, the occurrence of seismic ground shaking resulting in liquefaction, lateral spreading, landslides, or seismically induced slope failures during construction of the project is unlikely. In addition, there is no evidence of groundwater pumping within or around the project footprint that could cause ground subsidence, although this would be confirmed and evaluated during the final design phase. Therefore, the construction impacts for Hawthorne Option would be less than significant on unstable soils as a result of landslides, lateral spreading, subsidence, liquefaction, or collapse.

Impact 3.8-4.6: Unstable Geologic Units or Soils During Operations

The project would not involve any activities during operation that could directly cause landslides, lateral spreading, subsidence, liquefaction, or collapse. As part of Project Feature PF-GEO-1 (Metro Geotechnical Design Standards), site-specific geotechnical investigations would be conducted during final design to evaluate conditions such as slope stability, subsidence potential, liquefaction

susceptibility, and soil collapse. The findings of those investigations would be incorporated into the project's design and construction, with appropriate engineering measures applied where necessary to ensure long-term stability. PF-GEO-1 reflects Metro's established design requirements and provides part of the substantial evidence supporting the conclusion that the project will be designed and constructed to operate safely under expected geologic conditions. Therefore, landslides, lateral spreading, subsidence, liquefaction, or collapse would result in operational impacts for the Hawthorne Option that are less than significant.

Impact 3.8-4.7: Expansive Soils During Construction

Based on available geotechnical data from previous geotechnical investigations in the vicinity of the RSA, the upper approximately 10 feet of soils along the entire alignment consists mainly of cohesionless coarse-grained soils. These coarse-grained soils have low expansion potential. However, deeper excavations could encounter fine-grained soil with higher expansive potential. As part of Project Feature PF-GEO-1 (Metro Geotechnical Design Standards), site-specific geotechnical investigations would be performed during final design to verify the presence of expansive soils, if any, and determine appropriate engineering responses as necessary. This could include measures such as removal and replacement of expansive soils or stabilization through lime or cement treatment, which would be incorporated into project construction as standard engineering practices. PF-GEO-1 reflects Metro's established design requirements and provides part of the substantial evidence supporting the conclusion that construction would be designed to address any expansive soils encountered. Therefore, the risk to life or property due to expansive soils during construction of the Hawthorne Option is less than significant.

Impact 3.8-4.7: Expansive Soils During Operations

Operation of the project would not be adversely affected by expansive soils. As part of Project Feature PF-GEO-1 (Metro Geotechnical Design Standards), the project would be underlain by non-expansive engineered soil fills and/or treated on-site fill soils, and would be designed in compliance with MRDC and the latest state and local building codes. PF-GEO-1 reflects Metro's established design requirements and provides part of the substantial evidence supporting the conclusion that the project will be designed to address expansive soil conditions. Therefore, the Hawthorne Option would result in less than significant impact as a result of operational activities.

References in the Draft and Final EIR

- > Section 3.8, Geology, Soils, and Paleontological Resources, Subsections 3.8-4.2, 3.8-4.3, 3.8-4.4, 3.8-4.5.1, 3.8-4.6, and 3.8-4.7 of the Draft EIR
- > Chapter 4, Corrections and Additions, of the Final EIR
- > Chapter 5, Responses to Comments, Subsection 5.2-13 Major-Topic Response MR-13: Soil Stability and Sinkholes, of the Final EIR

Project Features

PF-GEO-1. Metro Geotechnical Design Standards

Prior to construction, Metro will complete soil investigations, including examination of any potential sinkholes by the geotechnical engineer of record, to inform site-specific design and construction measures.

The project shall be designed and constructed per the MRDC. Key compliance sections of the MRDC relative to geology and soils are Section 5.3, Section 5.4, Section 5.6, and MRDC Section 5 Appendix, Metro Supplemental Seismic Design Criteria (SSDC). Section 5.6 of the MRDC provides detailed requirements for planning and conducting a geotechnical investigation, geotechnical design methodologies, and reporting. In accordance with the MRDC, geotechnical report recommendations shall be incorporated into the project plans and specifications. These recommendations shall be a product of final design and shall address potential subsurface hazards. In addition, Caltrans and the California Building Code (CBC) have independent design criteria for bridges, aerial structures and building structures, which shall be followed.

As noted in Section 3.8-1.2, SSDC outlined in the MRDC Section 5 appendix (Metro, 2017) recommends the seismic stability and potential permanent deformation of sloping ground or embankments supporting aerial guideway and bridges along the project be investigated. Investigations should include evaluation of the potential for ground liquefaction and related deformations. The evaluations and associated analyses shall be displacement-based leading to the determinations of potential lateral deformations of slopes or embankments and ground settlement. It is recommended that the total settlement and lateral ground deformations under ODE seismic events shall not be allowed to exceed two inches to allow for track re-leveling or re-alignment. Larger deformations may be allowed for MDE events on a case-by-case basis on approval by Metro.

The MRDC section also provides details on how the stability analysis of the slopes and embankments is to be performed. Two options are provided: (1) seismic coefficient approach for pseudo-static case or (2) slope displacement method. If the factor of safety is less than 1.1, then slope performance shall be evaluated using Method (2) where displacements are computed using Newmark time-history analyses.

Metro SSDC outlined in the MRDC Section 5 appendix provides guidance for liquefaction studies. If potentially liquefiable soils are identified along the project, liquefaction susceptibility shall be determined using the procedures documented in the American Association of State Highway and Transportation Officials-California Load and Resistance Factor Design Bridge Design Specifications. The liquefaction potential assessment should consider the impact of the following effects where liquefaction is judged to occur:

- > Loss of strength of liquefied layers (post liquefaction residual strength)
- > Flow failures, slope deformations
- > Post liquefaction ground settlement

According to the SSDC, the displacement performance of slopes and embankments underlain by liquefied soils may be evaluated in a similar manner to non-liquefiable cases, except residual strengths of liquefied soils are used in analyses. The post-liquefaction settlement of liquefied soil layers may be determined using procedures documented by Tokimatsu and Seed (1987). The bridge and elevated rail structures located in liquefaction sites should be analyzed for non-liquefiable and liquefiable soil configurations. For the liquefiable condition, residual strengths of liquefied soil layers are used for lateral and axial deep foundation response analyses. For those sites where liquefaction related permanent lateral ground displacements are determined to occur, the effects on pile performance shall be evaluated. Down drag forces on piles due to post liquefaction settlement shall also be evaluated. If the above impact assessments yield unacceptable performance of the structures, appropriate measures shall be incorporated into the design.

As outlined in the MRDC Section 5.6, the geotechnical investigation should evaluate impacts related to potential settlement due to lowering of the groundwater table or excavation instability due to draining of perched groundwater during construction activities. Specific topics to be considered in the geotechnical investigation include the following:

- > Selection of appropriate construction methodology that minimizes permanent changes to sub-surface drainage conditions or groundwater pressures.
- > Installation of dewatering wells outside trench walls, sump pumps within the trench, deep secant pile walls to minimize excavation base instability, heaving of soils on the upgradient side of the trench, fluidization, and erosion.
- > Identification of zones of relatively high permeability strata with high potential to excessive groundwater influx and recommend construction methodology and design technologies such as keying secant pile walls into lower permeability strata.

Mitigation Measures

The impacts under the thresholds above would be less than significant, and mitigation measures are not required.

Findings

For the reasons stated above, Metro finds that these impacts related to geology and soils would be less than significant.

5.13. HAZARDS AND HAZARDOUS MATERIALS

The project would have a less than significant impact related to hazards and hazardous materials with respect to the following significance thresholds:

- > Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? (Impact 3.9-4.1)
- > Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? (Impact 3.9-4.2)
- > Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? (Impact 3.9-4.3)
- > Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? (Impact 3.9-4.4)
- > Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? (Impact 3.9-4.7)

Impacts

Impact 3.9-4.1: Hazardous Materials Transport During Construction

Construction equipment may inadvertently drip small quantities of hazardous materials (e.g., fuel oil and grease) and contaminate soil. Excavation and demolition of existing bridges would require the removal, transport, and disposal of soil and bridge materials that have potentially been contaminated by various contaminants of concern. As part of PF-HHM-1 (Handling, Storage, and Transport of Hazardous

Materials and Wastes), hazardous materials management plans detailing BMPs consistent with federal and state regulations for transport, storage, and use, and cleanup. As part of Project Feature PF-HHM-2 (Demolition Plans), demolition plans would be prepared detailing the procedures for asbestos-containing materials (ACM), lead-based paint (LBP), polychlorinated biphenyls (PCB), treated wood waste (TWW), and universal waste encountered during demolition activities in accordance with federal and state regulations. As part of Project Feature PF-HHM-3 (Property Acquisition Phase II Site Investigation), Phase II site investigations, including testing for aerially deposited lead (ADL) pursuant to ASTM International standards, would be performed to determine the presence of hazardous materials in soil on sites to be acquired, with necessary corrective action completed under agency oversight in compliance with federal and state regulations.

Contaminated groundwater from off-site sources could be encountered where pile foundations are installed for elevated structures. As part of Project Feature PF-HHM-4 (Soil, Soil Vapor, and Groundwater Management Plans), soil and soil vapor management plans would be developed consistent with Metro and regulatory requirements. Contaminated soil, if any, would be disposed of at a permitted landfill per the specifications of Department of Toxic Substances Control (DTSC) or Regional Water Quality Control Board (RWQCB) or other agencies overseeing project construction. As part of Project Feature PF-HHM-5 (Disposal of Groundwater), Metro would consult with the RWQCB to comply with all discharge permits, including the National Pollutant Discharge Elimination System (NPDES) permit, if contaminated groundwater is encountered. These project features provide part of the substantial evidence supporting the conclusion that hazardous materials would be handled in compliance with applicable federal, state, and local regulations. Therefore, impacts related to the transport, storage, use, or disposal of hazardous materials during construction would be less than significant.

Impact 3.9-4.1: Hazardous Materials Transport During Operations

Operation of the project would involve the occasional use, storage, and disposal of hazardous materials that could include limited quantities of maintenance vehicle fuels, oils, transmission fluids, paints, solvents, cleaners, and pesticides. The light rail transit vehicles are to be electrically powered and, therefore, would not use hazardous materials, such as diesel or natural gas, as fuel. The project would not generate significant amounts of hazardous materials that would require routine transport, use, or dispose of hazardous materials or create conditions involving the release of hazardous materials into the environment. As part of Project Feature PF-HHM-1 (Handling, Storage, and Transport of Hazardous Materials and Wastes), Metro would prepare and follow a hazardous materials management plan consistent with applicable regulatory requirements, including BMPs for transport, storage, use, and cleanup. PF-HHM-1 reflects Metro's established operational requirements and provides part of the substantial evidence supporting the conclusion that hazardous materials associated with project operation would be managed in compliance with applicable regulations. Therefore, the Hawthorne Option would result in a less than significant impact related to routine transport, use, and disposal of hazardous materials during operation.

Impact 3.9-4.2: Release of Hazardous Materials into Environment During Construction

Oil and gas pipelines are located adjacent to the project corridor, and oil refineries are located near the southern end. Oil or gas could be released through spills during construction or rupture of a pipeline during construction, and such releases could pose potential fire and explosion hazards. At this phase of design, Metro has obtained as-built drawings from utility owners and developed preliminary plans for relocation or protect-in-place. To the greatest extent possible, pipelines and utilities would be protected in place during construction of the project, following all applicable safety regulations and utility owner

standards regarding necessary clearances. Consistent with the MRDC, Metro would continue to coordinate with utility owners in future phases of design and present preliminary relocation concepts for affected facilities. Prior to and during construction, Metro and its contractors would follow established utility protection protocols and construction techniques and procedures to prevent accidental damage to underground utilities. As part of Project Feature PF-US-1 (Utility Identification and Coordination), all oil and gas pipelines within the Metro ROW would be identified and marked on-site in coordination with the utility owners prior to ground-disturbing activities. Metro would conduct additional surveys and potholing as needed to verify the relocation plans, which would avoid any conflicts with pipelines during construction. Utility agreements would be finalized to ensure the designs are prepared by third-party utility owners, and the final design layouts would be confirmed or adjusted as needed based on field verification conducted prior to construction. Anticipated levels of ground-borne vibration during construction are below the levels at which damage to underground utilities could occur.

The construction of the elevated alignment would require piles with vertical subsurface disturbance. Drilling for deep foundations that involve substantial subsurface disturbance may inadvertently release the gas to the environment and public. There is one plugged and abandoned dry well hole within 200 feet of the Hawthorne Option, but the likelihood that the dry hole would lead to hazardous gas emissions are low, given the nature of the well. As part of PF-HHM-6 (Oil and Gas Wells), oil wells (including abandoned or suspected wells) within 200 feet of the alignment would be identified, inspected, and addressed in accordance with California Geologic Energy Management Division (CalGEM) standards and in coordination with the well owners.

Pile foundations for aerial structures could encounter potentially contaminated groundwater. As part of PF-HHM-4 (Soil, Soil Vapor, and Groundwater Management Plans) and PF-HHM-5 (Disposal of Groundwater), contaminated groundwater would be managed and disposed of in consultation with the RWQCB and in compliance with all applicable permits.

Other buried utilities could be disturbed during construction activities. Disturbance to the dry utilities could result in temporary interruptions of service, but would not cause the release of hazardous materials into the environment. Wet utilities, such as sewer lines or domestic water lines, if damaged, could release gray or black water and cause localized subsurface contamination. As part of PF-US-1, the contractor would coordinate with utility owners prior to construction and verify the location of existing utilities to avoid these conditions.

Together, these project features reflect Metro's established design and construction practices and provide part of the substantial evidence supporting the conclusion that utility-related hazards, including the potential release of hazardous materials during construction, would be effectively managed. Therefore, the impact would be less than significant.

Impact 3.9-4.2: Release of Hazardous Materials into Environment During Operations

Operation of the project would involve the occasional use and storage of routine detergents and cleansers for vehicle maintenance activities. There would also be potential for small quantities of fuels, oils, and transmission fluids to drip or spill from Metro support vehicles. Because only limited quantities of these materials would be stored and used on the project site, the potential for exposure of individuals to hazardous materials would be minimal. The project would not involve the use or storage of chemicals that have the potential to result in an off-site upset or accidental event.

Impact 3.9-4.3: Hazardous Materials Within Quarter-Mile of Schools During Construction

Several schools are located within one-quarter mile of the Hawthorne Option, including RK Lloyd Continuation High School, Centinela Valley Independent Study School, Environmental Charter High School, and the William Green Elementary School.

Demolition of older structures could release ACMs. As part of Project Feature PF-HHM-2 (Demolition Plans), demolition activities would be carried out under demolition plans specifying the procedures for ACMs, LBP, PCB, TWW, and universal waste, consistent with federal and state regulations. Excavation of soils within the RSA that may be contaminated with VOCs would be subject to proper handling and disposal requirements. The hazardous waste and hazardous materials plan prepared as part of PF-HHM-1 would address the handling and transport of hazardous materials in compliance with applicable regulations, including SCAQMD Rule 1166. In addition, as part of Project Feature PF-AQ-1 (Metro Green Construction Policy Compliance), construction would comply with Metro's Green Construction Policy, including provisions for emissions controls and fugitive dust suppression.

Commercially available hazardous materials such as gasoline, brake fluids, coolants, and paints would also be used during construction. Standard equipment maintenance and good housekeeping practices would limit the potential for release. Any release of such substances, if it were to occur, would be localized and unlikely to pose a risk to nearby schools. Given the limited scale of these materials and the project components enacted as part of PF-HHM-1, PF-HHM-2, and PF-AQ-1, construction would not pose a risk to nearby schools.

Accordingly, construction of the Hawthorne Option would result in a less than significant impact related to the potential to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of a school.

Impact 3.9-4.4: Hazardous Material Sites During Construction

Table 3.9-3 and Table 3.9-2 (sites 1 and 4) of the Draft EIR lists recognized environmental condition (REC) sites within the Hawthorne Option RSA that may have potential subsurface contamination that could be implicated by the proposed construction. Construction activities such as grading, or any other ground-disturbing activities could encounter contaminants or interfere with ongoing remediation efforts. Construction at sites with existing contamination could also result in the generation of additional waste materials and could expose workers to hazardous materials.

Project-related effects of hazardous-waste-containing chemical compounds would generally be limited to areas where the RECs have been identified or unanticipated contamination at unknown releases. The individuals most at-risk would be construction workers, or others in the immediate vicinity during excavation, transportation, or storage of hazardous wastes, or during demolition and construction. The exposure pathways through which these individuals could be exposed include inhalation, ingestion, or dermal contact.

The contractor would be required to implement federal and state handling and disposal regulations. As part of Project Feature PF-HHM-1 (Handling, Storage, and Transport of Hazardous Materials and Wastes), contractors would prepare and follow a hazardous materials management plan consistent with applicable federal and state requirements. As part of PF-HHM-4 (Soil, Soil Vapor, and Groundwater Management Plans), construction management plans would be prepared to address the handling of contaminated materials if encountered, consistent with applicable regulatory requirements and standard BMPs. As part of PF-HHM-3 (Property Acquisition Phase II Site Investigation), Phase II site investigations would be completed prior to construction for the sites identified in Table 3.9-2 of the

Draft EIR, and the results would inform construction management plans for spoils in areas identified as contaminated. Additionally, as part of Project Feature PF-HHM-5 (Disposal of Groundwater), contaminated groundwater would be managed in consultation with regulatory agencies and in compliance with applicable permits. These project features reflect Metro's standard practices and contractor specifications and provide part of the substantial evidence supporting the conclusion that construction activities would comply with federal and state handling and disposal regulations for hazardous materials. Therefore, the Hawthorne Option would have a less than significant impact related to hazardous material sites during construction.

Impact 3.9-4.7: Interfere With Emergency Response Plans During Construction

As part of Project Feature PF-T-1 (Construction Traffic Management Plan), the contractor would prepare a CTMP addressing emergency access during construction. The CTMP would include street closure information, detour plans, haul routes, and a staging plan based on the nature and timing of specific construction activities at each of the construction sites. As PF-T-1 is a standard requirement of Metro projects, construction would be planned and coordinated to maintain emergency access and avoid conflicts with adopted emergency response or evacuation plans. Therefore, construction of the Hawthorne Option would result in a less than significant impact related to impairment of an adopted emergency response plan or emergency evacuation route.

Impact 3.9-4.7: Interfere With Emergency Response Plans During Operations

The light rail would be fully grade-separated from all roadways and, therefore, would not create closures of any crossings during operations. Therefore, operation of the Hawthorne Option would result in a less than significant impact to emergency response and evacuation plans.

References in the Draft and Final EIR

- > Section 3.9, Hazardous Materials, Subsections 3.9-4.1, 3.9-4.2, 3.9-4.3, 3.9-4.4 and 3.9-4.7 of the Draft EIR
- > Chapter 4, Corrections and Additions, of the Final EIR
- > Chapter 5, Responses to Comments, Subsection 5.2-7, Major Topic Response MR-7: Utility Relocation and Hazardous Materials Safety, of the Final EIR

Project Features

PF-HHM-1. Handling, Storage, and Transport of Hazardous Materials and Wastes

Prior to the start of construction, the contractor would provide Metro with a hazardous waste and hazardous materials management plan, such as a plan defined in Title 19 CCR, or a Spill Prevention, Control, and Countermeasure Plan. The plan will be completed to Metro contractor specifications and will comply with the State Water Resources Control Board (SWRCB) Construction Clean Water Act (CWA) Section 402 General Permit conditions and requirements for transport, labeling, containment, cover, and storage of hazardous materials during construction and operation. The plan will identify the responsible parties and outline procedures for hazardous waste and hazardous materials handling, storage, and transport. The excavation and transport of soils contaminated by heavy metals (e.g., lead) would be managed according to SCAQMD Rule 1466 (Control of Particulate Emissions from Soils with Toxic Air Contaminants) and SCAQMD Rule 1166 (VOC emissions from Decontamination of Soil). The plan would also prescribe BMPs to follow to prevent hazardous material releases and for cleanup of any hazardous material releases that may occur. The transportation of hazardous materials and waste shall be conducted in accordance with the applicable regulations codified in 49 CFR Parts 101, 106, 107, and

171 to 180, including, but not limited to, those related to packaging, pre-transportation functions, transportation functions, and functions not subject to the requirements of the federal Hazardous Materials Regulations.

Additionally, the contractor would comply with applicable federal and state regulations regarding hazardous material handling and storage practices, such as the Resource Conservation and Recovery Act, Comprehensive Environmental Response, Compensation, and Liability Act, the Hazardous Materials Release Response Plans and Inventory Law, and the Hazardous Waste Control Act.

PF-HHM-2. Demolition Plans

Prior to the start of construction, the contractor would prepare demolition plans for the safe dismantling and removal of roadways, building components, and debris. The demolition plans would also include plans for testing and abatement procedures for asbestos-containing materials, lead-based paint, and polychlorinated biphenyls, as well as handling and disposal of treated wood waste, such as creosote and arsenic-treated railroad ties, and universal waste in accordance with federal and state regulations, including the 1994 Federal Occupational Exposure to Asbestos Standards, SCAQMD Rule 1403 (Asbestos Emissions from Demolition/Renovation Activities), Title 22 CCR Division 4.5 (Hazardous Waste), the U.S. Department of Housing and Urban Development Lead- Based Paint Guidelines, and Title 40 of the Code of Federal Regulations Part 761.

PF-HHM-3. Property Acquisition Phase II Site Investigation

Consistent with Metro's standards, a Phase II site investigation would be conducted during the preliminary engineering phase on sites that would be acquired/utilized for the project to determine whether the suspected contamination had resulted in soil, groundwater, or soil vapor contamination exceeding regulatory action levels. Aerial deposited lead testing would be included as part of the Phase II site investigation. If the Phase II site investigation concludes that the site is contaminated, remediation or corrective action (e.g., removal of contamination, in-situ treatment, capping) would be conducted prior to or during construction under the oversight of federal, state, and/or local agencies (e.g., USEPA, DTSC, RWQCB, Los Angeles County) and in full compliance with current and applicable federal and state laws and regulations. Additionally, Voluntary Cleanup Agreements may be used for parcels where remediation or long-term monitoring is necessary. Generally, RECs, also known as sites of concern as identified in the Phase I Environmental Site Assessment (ESA), would be remediated by the property owner prior to acquisition of the property and construction on the site, depending on the arrangement negotiated during property acquisition.

PF-HHM-4. Soil, Soil Vapor, and Groundwater Management Plans

Prior to the start of construction, the contractor would retain a qualified environmental consultant to prepare a Soil Management Plan, Soil Reuse Management Plan, and/or a Soil, Soil Vapor, and Groundwater Management Plan. These plans would be completed to Metro's contractor specifications and submitted to Metro prior to any ground-disturbing activities for the Project.

The Soil and Soil Vapor Management Plan would establish provisions for the disturbance of contaminated materials (known and undocumented). Proper management and disposition of contaminated soils and gases would be determined in consultation with appropriate regulatory agencies and in accordance with applicable federal and/or state guidance (USEPA, DTSC, RWQCB, and other local agencies). The Soil Reuse Management Plan would establish provisions for the reuse of contaminated known or undocumented soils. Proper management and disposition of contaminated soils would be determined in consultation with appropriate regulatory agencies and in accordance with applicable

federal and/or state guidance (USEPA, DTSC, RWQCB, and other local agencies). Contaminated soil shall be disposed of at a permitted landfill per the specifications of DTSC or RWQCB or other agencies overseeing the project construction.

The Groundwater Management Plan would establish provisions for encountering and managing contaminated groundwater (known and undocumented). Proper disposal of contaminated groundwater would be determined in consultation with appropriate regulatory agencies and in accordance with applicable federal and/or state guidance (USEPA, DTSC, RWQCB, and other local agencies).

Where open or closed regulatory release cases are already managed by a regulatory agency (e.g., USEPA, DTSC, RWQCB) and construction involves plans to alter the use of the site and/or disturb contaminated soil and/or groundwater on-site, Metro would notify the regulatory agency of the planned land use changes prior to ground-disturbing activities at the location of the open or closed regulatory release site. The regulatory agency would determine the level of investigation and/or remediation (performance standards) necessary on a case-by-case basis. A closure or no further action determination letter from the regulatory agency would be obtained when investigation and/or remediation is complete.

PF-HHM-5. Disposal of Groundwater

If disposal of contaminated groundwater is required during construction, Metro would consult with the RWQCB, and the Project would comply with permits required by the RWQCB. The RWQCB may require a NPDES permit and/or WDR permit for dewatering and discharge activities. The County of Los Angeles Department of Public Works (LACDPW) would be contacted prior to discharging groundwater into their sewer or stormwater systems. The groundwater discharge and disposal requirements vary by agency, location, concentration, and contaminants of concern and are therefore developed in consultation with the agencies.

PF-HHM-6. Oil and Gas Wells

Prior to ground-disturbing activities, all oil wells (including abandoned or suspected wells) within 200 feet of the project would be identified, inspected, and addressed in accordance with the California Department of Conservation, CalGEM standards and in coordination with the well owners. Where the alignment cannot be adjusted to avoid well casings, CalGEM and a re-abandonment specialty contractor would be contacted to determine the appropriate method of re-abandoning the well. Oil well abandonment must proceed in accordance with California Laws for Conservation of Petroleum and Gas (1997), Division 3. Oil and Gas, Chapter 1. Oil and Gas Conservation, Article 4, Sections 3228, 3229, 3230, and 3232. The requirements include written notification to CalGEM, protection of adjacent property, and before commencing any work to abandon any well, obtaining approval by CalGEM. Abandonment work, including sealing off oil and gas bearing units, pressure grouting, etc., must be performed by a state-licensed contractor under the regulatory oversight and approval of CalGEM. If an unknown well is encountered during Project construction, the contractor will notify Metro, California OSHA, and CalGEM and proceed in accordance with state requirements.

Mitigation Measures

The impacts under the thresholds above would be less than significant, and mitigation measures are not required.

Findings

For the reasons stated above, Metro finds that these impacts related to hazards and hazardous materials would be less than significant.

5.14. HYDROLOGY AND WATER QUALITY

The project would have a less than significant impact related to hydrology and water quality with respect to the following significance thresholds:

- > Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality? (Impact 3.10-4.1)
- > Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin? (Impact 3.10-4.2)
- > Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces in a manner which would result in substantial erosion or siltation on- or off-site? (Impact 3.10-4.3)
- > Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces in a manner which would substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site? (Impact 3.10-4.4)
- > Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces in a manner which would create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? (Impact 3.10-4.5)
- > Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces in a manner which would impede or redirect flood flows? (Impact 3.10-4.6)
- > Would the project, in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation? (Impact 3.10-4.7)
- > Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan? (Impact 3.10-4.8)

Impacts

Impact 3.10-4.1: Degrade Water Quality During Construction

Project construction could introduce chemicals and/or hazardous substances from construction equipment into surface waters and groundwater. Dust and erosion resulting from soil exposure and disturbance during construction could lead to sedimentation of stormwater, and existing contaminants in newly exposed and eroded soil could also degrade surface water quality and groundwater quality. Introduction of these substances to receiving waters could exacerbate existing water quality impairments or introduce new water quality impairments. As part of Project Feature PF-HWQ-1 (SWPPP Implementation per Construction General Permit and MS4 Permit) Metro would prepare and implement

a SWPPP consistent with the Construction General Permit. The SWPPP would include BMPs for soil stabilization, sediment control, and pollution prevention to protect water quality during construction.

Construction of the Hawthorne Option would require deep excavation associated with the columns supporting the elevated alignment. Where excavation encounters groundwater, as identified through Phase II site investigations pursuant to PF-HHM-3, Project Feature PF-HWQ-2 (Groundwater Treatment and Discharge per RWQCB Waste Discharge Requirements for Construction Dewatering), provides that dewatered groundwater would be treated, if necessary, and discharged in accordance with RWQCB requirements. In addition, construction of the Hawthorne Option involves the permanent rerouting of two major storm drains and one minor storm drain crossing the alignment. While new routes are constructed, temporary disruption and rerouting of inflows has the potential to introduce pollutants to these inflows. However, Project Feature PF-HWQ-5 (Temporary Storm Drain Inflow Rerouting), provides that stormwater inflows temporarily rerouted during construction would be captured, treated (if required), and discharged consistent with waste discharge requirements detailed in the MS4 Permit.

These project features reflect Metro's standard construction practices and regulatory compliance obligations and provide part of the substantial evidence supporting the conclusion that construction activities will be managed to meet applicable water quality requirements. Therefore, the Hawthorne Option would have a less than significant impact during construction related to violation of water quality standards or discharge requirements or to degradation of water quality.

Impact 3.10-4.1: Degrade Water Quality During Operations

Operation of the project would increase impervious surfaces and human presence in the area, which could introduce new or exacerbate existing surface water quality impairments. Potential sources of water quality effects include sedimentation from runoff on new impervious surfaces; nitrates from landscape fertilizing; and trash, debris, or bacteria from increased human activity. As part of Project Feature PF-HWQ-6 (Low Impact Development [LID] BMPs per Regional Requirements), the Hawthorne Option would be designed with LID measures sized to retain the stormwater quality design volume (SWQDv) on-site in accordance with regional requirements. Retained stormwater would infiltrate on-site only after being managed through LID BMPs, ensuring that infiltration does not degrade groundwater quality. PF-HWQ-6 also provides for continued maintenance of existing catch basins to prevent debris and trash from entering storm drains. These features reflect Metro's standard design requirements for stormwater management.

Project operation would not involve direct contact with groundwater. PF-HWQ-6 provides part of the substantial evidence supporting the conclusion that stormwater runoff would be managed consistent with applicable regulatory requirements. Therefore, the Hawthorne Option would have a less than significant impact during operation related to violation of water quality standards or discharge requirements or to degradation of water quality.

Impact 3.10-4.2: Decrease Groundwater Supplies During Construction

Construction of the project would not substantially interfere with groundwater supplies or groundwater recharge. Construction would require some water for activities like dust control and concrete mixing; this water would be sourced from local utility lines that may depend on groundwater for a portion of their water supply. However, the water needed for construction would be extremely minimal and temporary and would not substantially decrease groundwater supplies.

Construction may also require groundwater dewatering during excavation activities. As part of Project Feature PF-HWQ-2 (Groundwater Treatment and Discharge per RWQCB Waste Discharge Requirements

for Construction Dewatering), dewatered groundwater would be discharged in a pre-approved location consistent with RWQCB requirements. The volume of groundwater potentially requiring dewatering would be small relative to the overall size of the West Coast Subbasin, and because the water would be discharged within or close to the RSA, it would ultimately recharge the subbasin. Further, detention basins considered for implementation on-site under PF HWQ-6 (LID BMPs per Regional Requirements) would retain runoff and allow infiltration, thereby helping recharge groundwater supplies. These project features reflect Metro's standard construction and design practices and provide part of the substantial evidence supporting the conclusion that construction of the Hawthorne Option would not cause a substantial decrease in groundwater supplies or interfere with groundwater recharge. Therefore, the impact would be less than significant.

Impact 3.10-4.2: Decrease Groundwater Supplies During Operations

Operational water usage primarily involves routine cleaning of equipment within the above- or at-grade (south of 190th Street) alignment. This water would be sourced from local utility lines that may depend on groundwater for a portion of their water supply. Proposed water uses for construction and operation would be minimal compared to the basin's overall annual demand. The Hawthorne Option would increase the percentage of impervious surfaces within the permanent footprint, (from 23% existing to 43% proposed), as discussed in Section 3.10-4.2.2 of the Draft EIR. This increase in impervious surfaces would reduce the total amount of pervious areas capable of groundwater recharge. As part of Project Feature PF-HWQ-6 (LID BMPs per Regional Requirements), the Hawthorne Option would incorporate LID measures designed to retain the SWQDv on-site, supporting infiltration and groundwater recharge. These project features reflect Metro's standard design practices and provide part of the substantial evidence supporting the conclusion that most stormwater generated on-site during operation would be retained for infiltration, and overall, operational water use would be minimal relative to basin supplies. Therefore, operation of the Hawthorne Option would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge, and the impact would be less than significant.

Impact 3.10-4.3: Substantial Erosion During Construction

Construction of the Hawthorne Option would not result in substantial drainage pattern alteration such that erosion or siltation occurs. As part of Project Feature PF-HWQ-1 (SWPPP Implementation per Construction General Permit and MS4 Permit) a SWPPP would be prepared and implemented with various best management practices to prevent erosion and siltation (e.g., sedimentation), as well as reduce stormwater runoff velocity, thereby limiting its capacity to result in erosion and siltation on- or off-site., including in sumps. The alignment column foundations would require two major storm drains running parallel to the alignment and one minor storm drain crossing the alignment to be rerouted. However, Project Feature PF-HWQ-5 (Temporary Storm Drain Inflow Rerouting) provides for collection and rerouting of inflows in a manner that avoids erosion or siltation impacts. These project features reflect Metro's standard construction and water quality practices and provide part of the substantial evidence supporting the conclusion that drainage patterns during construction would be managed consistent with applicable requirements. Thus, the Hawthorne Option would result in a less than significant impact during construction related to erosion or siltation.

Impact 3.10-4.3: Substantial Erosion During Operations

The Hawthorne Option would increase the percentage of impervious surfaces within the permanent footprint (from 23% existing to 43% proposed). As part of Project Feature PDF-HWQ-6 (LID BMPs per Regional Requirements), the Hawthorne Option would incorporate LID measures designed to retain the SWQDv on-site, supporting infiltration and reducing uncontrolled runoff. This project feature reflects

Metro's standard operational stormwater practices and provide part of the substantial evidence supporting the conclusion that drainage patterns during operation would be managed consistent with applicable requirements. Thus, there would be a less than significant impact during operations related to erosion or siltation.

Impact 3.10-4.4: Surface Runoff During Construction

Project excavation, equipment laydown, and other ground-disturbing activities could alter the existing drainage pattern within the project footprint and concentrate or redirect surface runoff such that flooding occurs on- or off-site. In addition, construction would involve temporary disruption and rerouting of drainage collected by three existing storm drains, which could result in flooding on or offsite. However, as part of Project Feature PF-HWQ-1 (SWPPP Implementation per Construction General Permit and MS4 Permit) construction would be conducted under a SWPPP with measures for soil stabilization, sediment control, and stormwater management consistent with permit requirements. These measures would manage runoff in a way that limits potential for localized flooding on- or off-site. Where storm drain inflows are temporarily rerouted during construction, Project Feature PF-HWQ-5 (Temporary Storm Drain Inflow Rerouting) provides for their capture, treatment if necessary, and discharge consistent with applicable requirements. These project features reflect Metro's standard construction and water quality practices and provide part of the substantial evidence supporting the conclusion that surface runoff during construction would be managed consistent with applicable regulatory requirements. Thus, the Hawthorne Option would result in a less than significant impact related to flooding during construction.

Impact 3.10-4.4: Surface Runoff During Operations

The Hawthorne Option would increase impervious surfaces compared to existing conditions, which could affect surface runoff and contribute to localized flooding if unmanaged. As part of Project Feature PF-HWQ-6 (LID BMPs per Regional Requirements), the Hawthorne Option would incorporate LID measures designed to retain the SWQDv on-site in accordance with regional requirements. These project features reflect Metro's standard operational stormwater practices and provide part of the substantial evidence supporting the conclusion that the project would not exceed stormwater drainage system capacity or generate additional polluted runoff. Thus, the Hawthorne Option would result in a less than significant impact related to flooding during operation.

Impact 3.10-4.5: Stormwater Drainage Capacity During Construction

Construction activities such as excavation, equipment laydown, and other ground-disturbing activities could temporarily alter drainage patterns within the project footprint and concentrate or redirect surface runoff. These temporary alterations could increase volumes or flow rates and, if unmanaged, potentially exceed the capacity of the stormwater drainage system or introduce additional sources of polluted runoff. Project Feature PF-HWQ-1 (SWPPP Implementation per Construction General Permit and MS4 Permit) provides for stormwater BMPs that limit stormwater runoff velocity and control erosion and sedimentation during construction. As part of Project Feature PF-HWQ-5 (Temporary Storm Drain Inflow Rerouting), any temporary rerouting of storm drain inflows would be designed consistent with the RWQCB Basin Plan water quality requirements and in a manner that maintains stormwater drainage system capacity. With these standard construction practices in place, the Hawthorne Option would result in a less than significant impact during construction related to stormwater drainage system capacity or generation of additional polluted runoff.

Impact 3.10-4.5: Stormwater Drainage Capacity During Operations

Operation of the Hawthorne Option would not result in substantial drainage pattern alteration such that runoff exceeds stormwater drainage systems or additional sources of polluted runoff are generated. As part of Project Feature PF-HWQ-6 (LID BMPs per Regional Requirements), the SWQDv would be retained on-site, thereby minimizing the potential for excessive and/or polluted runoff to enter storm drains. Retainment of most stormwater runoff within the Hawthorne Option footprint via LID BMPs, as well as maintaining the same or similar existing storm drain discharge locations, reduces the potential for exceeding stormwater drainage systems or generating sources of additional polluted runoff. Thus, the impact of project operation relating to the addition of impervious surfaces in a manner which would exceed stormwater drainage system capacity or substantially add sources of polluted runoff would be less than significant.

Impact 3.10-4.6: Redirect or Impede Floodflows During Construction

Project construction would not result in substantial drainage pattern alteration such that flood flows are impeded or redirected. A very small portion of the project's temporary footprint (south of 190th Street) is located within a 100-year flood zone. As part of Project Feature PF-HWQ-8 (City of Torrance Flood Zone Requirements), construction within this area would comply with the City of Torrance's flood hazard requirements, which establish permitting, administration, and construction standards designed to reduce potential run-ins with flood waters. Further, major excavation for piles and foundations associated with the elevated segment of the alignment would not introduce new flood risk given the distance from existing flood zones and from large drainage features. Therefore, construction would not impede or redirect flood flows. These requirements reflect existing City code and Metro's standard construction practices, and they provide part of the substantial evidence supporting the conclusion that flood flows would not be impeded or redirected. Thus, construction of the Hawthorne Option would result in a less than significant impact regarding flood flows.

Impact 3.10-4.6: Redirect or Impede Floodflows During Operations

Operations would not result in substantial drainage pattern alteration such that flood flows are impeded or redirected. The new alignment would operate elevated above the existing roadway rights-of-way, and it would therefore not introduce a new flood risk. Thus, operations would not result in substantial drainage pattern alteration which would impede or redirect flood flows, and the impact would be less than significant.

Impact 3.10-4.7: Inundation During Construction

Construction would not risk release of pollutants due to project inundation in a flood hazard, tsunami, or seiche zone. South of 190th Street, a very small portion of the temporary footprint is located within a 100-year flood zone, which would be for a temporary construction easement for the removal of an existing spur track. As part of Project Feature PF-HWQ-1 (SWPPP Implementation per Construction General Permit and MS4 Permit), BMPs would be implemented to manage stormwater and prevent the release of pollutants, including in the unlikely event of localized flooding. In addition, as part of Project Feature PF-HWQ-8 (City of Torrance Flood Zone Requirements), construction within mapped flood zones would comply with the City of Torrance's established requirements for construction within flood hazard areas, designed to reduce potential run-ins with flood waters. These project features reflect existing regulatory requirements and Metro's standard construction practices, and they provide part of the substantial evidence supporting the conclusion that inundation during construction would not result in pollutant release. Therefore, construction would not risk the release of pollutants in flood hazard, tsunami, or seiche zones, and the impact would be less than significant.

Impact 3.10-4.7: Inundation During Operations

Operations would not risk release of pollutants due to project inundation in a flood hazard, tsunami, or seiche zone. No portions of the permanent project footprint would be located within the 100-year flood zone. As part of PF-HWQ-6 (LID BMPs per Regional Requirements), the project's design would incorporate LID measures to retain the SWQDv, thereby ensuring that the majority of stormwater is managed within the project footprint. This design feature reflects Metro's standard operational stormwater practices and provides part of the substantial evidence supporting the conclusion that operations would not risk the release of pollutants due to flood hazard, tsunami, or seiche zones. Therefore, the impact would be less than significant.

Impact 3.10-4.8: Conflict with Water Quality Plan During Construction

Project construction would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. A groundwater sustainability plan has not been developed for the West Coast Subbasin of the Coastal Plain of the Los Angeles Groundwater Basin, as it is considered a "very low priority" by the state. Therefore, project construction would not conflict with a sustainable groundwater management plan. The RWQCB Basin Plan (e.g., water quality control plan) pertinent to the RSA includes beneficial uses, water quality objectives, and waste discharge requirements designed to protect surface water and groundwater quality within the region. As part of Project Features PF-HWQ-1 (SWPPP Implementation per Construction General Permit and MS4 Permit) and Project Feature PF-HWQ-2 (Groundwater Treatment and Discharge per RWQCB Waste Discharge Requirements for Construction Dewatering), the project incorporates measures that ensure compliance with applicable regulatory requirements for construction stormwater management and groundwater handling. These design features reflect Metro's standard construction practices and provide part of the substantial evidence supporting the conclusion that construction would be consistent with the Basin Plan. Therefore, construction of the project would not conflict with implementation of the Basin Plan, and the impact would be less than significant.

Impact 3.10-4.8: Conflict with Water Quality Plan During Operations

A groundwater sustainability plan has not been developed for the West Coast Subbasin of the Coastal Plain of the Los Angeles Groundwater Basin; therefore, project operation would not conflict with a sustainable groundwater management plan. The RWQCB Basin Plan (i.e., water quality control plan) pertinent to the RSA includes beneficial uses, water quality objectives, and waste discharge requirements designed to protect surface water and groundwater quality within the region. As part of Project Feature PF-HWQ-6 (LID BMPs per Regional Requirements), the project will incorporate LID BMPs consistent with Metro's design criteria and regional MS4 permit requirements, including measures to retain the SWQDv on-site and maintain catch basins to prevent debris and trash from entering storm drains. This would protect surface water and groundwater quality and help ensure compliance with beneficial uses and water quality objectives for surface water and groundwater within the region. These features provide part of the substantial evidence supporting the conclusion that runoff during operation would be managed consistent with applicable Basin Plan requirements. Therefore, operation of the Hawthorne Option would not conflict with implementation of the Basin Plan, and the impact would be less than significant.

References in the Draft and Final EIR

- > Section 3.10, Hydrology and Water Quality, Subsections 3.10-4.1, 3.10-4.2, 3.10-4.3, 3.10-4.4, 3.10-4.5, 3.10-4.6, 3.10-4.7, and 3.10-4.8 of the Draft EIR

> Chapter 4, Corrections and Additions, of the Final EIR

Project Features

PF-HWQ-1. SWPPP Implementation per Construction General Permit and MS4 Permit

Construction of the project would disturb greater than one acre of ground surface and is thus subject to the Construction General Permit SWPPP requirements. The SWPPP would include BMPs designed to prevent impacts to water quality from occurring during construction. BMPs included would be the minimum BMPs required by the MS4 Permit for all construction sites and additional BMPs determined necessary by the SWPPP developer. BMPs designed to prevent the introduction of chemicals, trash, and/or hazardous substances into waters may include but are not limited to fueling equipment offsite, secondary containment, drip pans, spill response plans, and designed waste receptacles on site. BMPs designed to prevent erosion, prevent sedimentation, and slow and capture runoff on the construction site may include but are not limited to stabilized construction entrances/exits, fiber rolls, silt fences, sandbags, water application for dust control, check dams, drainage inlet protections, infiltration basins, and hydroseeding. BMPs would be implemented before, during, and/or immediately after construction.

PF-HWQ-2. Groundwater Treatment and Discharge per RWQCB Waste Discharge Requirements for Construction Dewatering

Per the requirements of the RWQCB Waste Discharge Requirements for Construction Dewatering, dewatered groundwater would be treated if necessary and then discharged in a pre-approved location specified by said requirements.

PF-HWQ-5. Temporary Storm Drain Inflow Rerouting

Hawthorne Option construction would involve the permanent rerouting of two major storm drains running parallel to the alignment and one minor storm drain crossing the alignment. While these new permanent storm drain routes are constructed, temporary rerouting of inflows would be necessary during Hawthorne Option construction.

For the Hawthorne Option, stormwater inflows would be captured, treated (if necessary), rerouted around the construction site, and discharged into the existing storm drain system. Treatment and discharge of storm drain inflows to the existing storm drain system would be conducted per RWQCB Basin Plan water quality requirements.

PF-HWQ-6. LID BMPs per Regional Requirements

The operational design of the project would include LID BMPs designed to retain the SWQDv on site per regional LID requirements. Examples of potential LID BMPs that may be implemented include but are not limited to increasing runoff's flow path length of travel and providing on-site detention basins for retention and infiltration. Additional runoff (beyond the SWQDv) would continue to be discharged via new or existing tie-ins to the existing stormwater drainage system. In elevated portions of the alignment, runoff would be collected by down drains. Discharge locations of underdrains installed along the project would be the same as existing discharge locations. Rerouted storm drains under the Hawthorne Option would be discharged to the same or similar discharge points as existing conditions. Existing catch basins on adjacent storm drains would be retained during operation to prevent debris and trash from entering the stormwater drainage system.

PF-HWQ-8. City of Torrance Flood Zone Requirements

A small portion of the project temporary footprint would be located within the 100-year flood zone, where a temporary construction easement would be needed for removal of an existing spur track. Construction in this area would be required to comply with Division 7, Chapter 9 of the Torrance City Code, titled “Flood Hazard Insurance.” This section establishes a development permit process for flood hazard areas, designates a floodplain administrator for the City, and establishes standards for construction within flood hazard areas.

Mitigation Measures

The impacts under the thresholds above would be less than significant, and mitigation measures are not required.

Findings

For the reasons stated above, Metro finds that these impacts related to hydrology and water quality would be less than significant.

5.15. UTILITIES AND SERVICE SYSTEMS

The project would have a less than significant impact related to utilities and service systems with respect to the following significance thresholds:

- > Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects? (Impact 3.11-4.1)
- > Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years? (Impact 3.11-4.2)
- > Would the project result in a determination by the wastewater treatment provider which serves or may serve the Project that it has adequate capacity to serve the project’s projected demand in addition to the provider’s existing commitments? (Impact 3.11-4.3)
- > Would the project generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals? (Impact 3.11-4.4)

Impacts

Impact 3.11-4.1: Expansion of Utility Facilities During Construction

The Hawthorne Option would require the relocation of certain utilities, such as water and power lines, which could potentially result in environmental effects related to construction and the temporary disruption of services, including construction emissions and disrupting roadway circulation. No publicly owned oil or gas facilities are identified to be relocated. Existing telecommunication facilities would be protected in place. As part of Project Feature PF-US-1 (Utility Identification and Coordination), Metro would verify the locations of existing utilities, conduct field investigations, and develop layouts to address required separations and any relocations. In addition, as part of Project Feature PF-US-2 (Service Interruption Notification), the construction contractor would coordinate with utility and service providers to minimize service disruptions, provide temporary connections where needed, and notify the public of anticipated service interruptions, if any.

The Hawthorne Option likely requires modifications to existing storm drain infrastructure, including the relocation of 26 pieces of existing storm drainage infrastructures. Additionally, 20 pieces of power distribution infrastructure would likely be required to be relocated during construction, including overhead powerlines and two sets of overhead transmission lines. Further, five pieces of telecommunication infrastructure would likely be required to be relocated. Pursuant to PF-US-1, if relocations are required, the construction contractor would verify the locations of existing utilities potentially affected by construction activities and determine specific relocation and setback, and pursuant to PF-US-2, the construction contractor would develop a construction plan which minimizes interruptions to utilities services to the greatest extent feasible and notify the public if/when interruptions may occur. Stormwater management during construction would also occur as part of Project Features PF-HWQ-1 (SWPPP Implementation per Construction General Permit and MS4 Permit), PF-HWQ-4 (Trench Construction Runoff Collection and Treatment) and PF-HWQ-5 (Temporary Storm Drain Inflow Rerouting), ensuring that the existing storm drain capacity is not exceeded.

Project construction has no potential to require new or expanded electric power, natural gas, oil, or telecommunication facilities. Minimal electricity would be used to power field offices for the construction contractor. Minimal electricity would be used to power contractor field offices.

The project features described above reflect Metro's established utility coordination, service notification, and stormwater practices and provide part of the substantial evidence supporting the conclusion that construction would not result in significant impacts related to water, stormwater drainage, electric, natural gas and oil, or telecommunications facilities. Therefore, the impact would be less than significant.

Impact 3.11-4.1: Expansion of Utility Facilities During Operations

The Hawthorne Option would not involve a significant long-term, permanent source of water use or wastewater generation. The Hawthorne Option would increase impervious surface areas, resulting in a potential increase in stormwater runoff during operations. However, as part of Project Feature PF-HWQ-6 (LID BMPs per Regional Requirements), the Hawthorne Option would incorporate LID measures designed to retain the SWQDv on-site, limiting the potential for additional demand on stormwater facilities. Electricity would be provided to the light rail line by TPSS units and to stations by traditional distribution connection facilities (e.g., power poles, underground wires, transmission lines, and distribution lines). The project would require 7,829,000 kWh (7,829 MWh) of annual electricity use to power the extension. To offset electricity consumption levels across the Metro rail system, Metro constructed photovoltaic installations in 2018, which generated 2.9 million kWh in 2018; additional photovoltaic systems to generate renewable energy are expected in the future. The electrically powered transit line would not use oil or natural gas. It is not anticipated that natural gas would be utilized to maintain or store trains at the existing facility. There would be no potential for the project to require new or expanded natural gas or oil facilities or to interfere with telecommunication facilities. Therefore, the Hawthorne Option would have a less than significant impact during operation related to utility facilities.

Impact 3.11-4.2: Sufficient Water Supplies During Construction

Construction of the Hawthorne Option would not require substantial consumption of potable water. Water use would occur primarily related to water trucks required for dust control. This short-term use would require minimal water supplies when compared to regional supplies. Water supplies would not be impacted by limited water use during construction activities. Therefore, construction of the Hawthorne Option would result in a less than significant impact related to water supplies.

Impact 3.11-4.2: Sufficient Water Supplies During Operations

The project does not include a significant long-term, permanent source of water use. The project would not construct station restroom facilities nor a new minimal storage facility. Some water use may be needed to clean stations or wash trains. This minimal water use would not interfere with the existing and planned capacity of water facilities. In addition, station perimeters would include drought-tolerant landscaping requiring nominal amounts of water consumption. There is no potential for the project to interfere with regional water supply services. Therefore, operations of the Hawthorne Option would result in a less than significant impact related to water supplies.

Impact 3.11-4.3: Wastewater Treatment Capacity During Construction

The Hawthorne Option would generate wastewater during construction through the use of temporary worker restrooms and limited construction uses. Any wastewater generated during construction would be transported to wastewater facilities via vacuum service trucks. The Sanitation Districts of Los Angeles County operates the Joint Water Pollution Control Plant (JWPCP) that serves the entire South Bay community as well as communities located as far east as Pomona and as far north as La Cañada Flintridge for wastewater treatment. Wastewater generated by temporary worker restrooms for construction of the Hawthorne Option would represent a negligible proportion of the daily wastewater processed by the JWPCP, and the facility is anticipated to have adequate capacity to serve the project. Therefore, construction of the Hawthorne Option would result in a less than significant impact related to wastewater treatment capacity.

Impact 3.11-4.4: Solid Waste Capacity During Construction

Construction of the Hawthorne Option would generate solid waste related to discarded construction material. Construction of the Hawthorne Option is estimated to excavate approximately 67,600 CY of soil, most of which would be reused onsite as fill. Approximately 450 CY (approximately 730 tons) of soil would need to be exported, of which 10% (i.e., approximately 73 CY) is assumed to be contaminated. Contaminated soil and waste would be disposed of at a permitted landfill per the specifications of DTSC or RWQCB or other agencies overseeing construction of the project. The nearest landfills which actively process contaminated soil are the Hazmat TSDf facility and Soil Safe of California Incorporated, located in San Bernardino County. Based on the processing capacity of the two sites, they would be able to adequately process the contaminated soil anticipated to be generated by the Hawthorne Option. Construction of the project would be required to comply with all applicable federal, state, and local statutes and regulations pertaining to solid waste disposal, including AB 939. Regional facilities that process contaminated soil should have the capacity for construction related solid waste. Therefore, construction of the Hawthorne Option would result in a less than significant impact related to compliance with solid waste standards and capacity.

References in the Draft and Final EIR

- > Section 3.11, Utilities and Service Systems, Subsections 3.11-4.1, 3.11-4.2, 3.11-4.3.1, and 3.11-4.4.1 of the Draft EIR
- > Chapter 4, Corrections and Additions, of the Final EIR
- > Chapter 5, Responses to Comments, Subsection 5.2-7, Major Topic Response MR-7, Utility Relocation and Hazardous Materials Safety, of the Final EIR

Project Features

PF-US-1. Utility Identification and Coordination

Per Metro standard practice, as design progresses, Metro will continue to verify the locations of existing utilities potentially affected by construction activities. This will include coordinating with all existing utility providers for wet and dry utilities (water, sewer, oil, gas, electric, and telecommunications) and with private utility owners to obtain documentation of existing utility locations. Field verification (i.e., potholing and other methods as appropriate) shall be conducted throughout the preliminary engineering and final design phases to document the locations of all utilities within proximity to the guideway and station foundations of the guideway and station foundations, and other project elements that may affect utilities. Based on the information from the field investigations, the final designer will develop layouts of pipe separations based on coordination with the appropriate utility owners/operators to determine specific setback requirements for each utility line and the need for any stabilization for protection in place or relocation measures. During the construction and prior to digging, the contractor will conduct additional field verifications, which include requirements such as contacting a utility location service to verify the position of existing pipes, and conducting additional potholing so that the final design layouts can be confirmed or adjusted as needed.

PF-US-2. Service Interruption Notification

Per Metro standard practice, prior to the start of any demolition or construction activities, Metro will be responsible for coordinating with utility and service providers regarding potential utilities service interruptions due to relocation of existing utilities. Metro will develop a construction plan in coordination with utilities and service providers to minimize interruptions of utilities systems to the greatest extent feasible, including providing temporary connection for services that must be disconnected for extended periods of time. Further, Metro will develop a contingency plan in cooperation with the utility providers for emergency repairs of any utilities unexpectedly found or that disintegrated because of age during excavations. The public would be notified of areas where temporary utilities service interruptions are anticipated.

Mitigation Measures

The impacts under the thresholds above would be less than significant, and mitigation measures are not required.

Findings

For the reasons stated above, Metro finds that these impacts related to utilities and service systems would be less than significant.

5.16. ENERGY

The project would have a less than significant impact related to energy with respect to the following significance thresholds:

- > Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation? (Impact 3.12-4.1)
- > Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency? (Impact 3.12-4.2)

Impacts

Impact 3.12-4.1: Wasteful Energy Consumption During Construction

Construction of the Hawthorne Option would require a one-time expenditure of diesel fuel (approximately 1,348,000 gallons) and gasoline (approximately 98,000 gallons) over the approximately six-year construction period. As part of Project Feature PF-AQ-1 (Metro Green Construction Policy Compliance), construction equipment and trucks would meet advanced emissions and fuel-efficiency standards. As part of Project Feature PF-AQ-3 (Metro Moving Beyond Sustainability Strategic Plan Compliance), the project would be consistent with Metro's broader sustainability commitments, including the use of renewable diesel, where applicable. As part of Project Feature PF-AQ-4 (Metro Rail Design Guidelines), construction activities would use energy efficiently. These project features reflect Metro's standard construction and design practices and provide part of the substantial evidence supporting the conclusion that construction energy would be used efficiently. Furthermore, the energy expenditure associated with construction fuel consumption would eventually be offset by the energy savings of replacing and shortening on-road passenger vehicle trips with use of light rail. Therefore, the Hawthorne Option would have a less than significant impact during construction related to energy.

Impact 3.12-4.1: Wasteful Energy Consumption During Operations

The project would consume energy related to the light rail propulsion systems and lighting and accessory equipment at station platforms. It would also indirectly change regional energy consumption through changes in regional VMT by displacing vehicle trips for transit trips, which would reduce petroleum fuels consumption. With a VMT reduction of 42,951, annual regional energy consumption would be reduced by approximately 28.2 million MJ in the design/horizon year of 2042, when compared to the no project condition. Total annual electricity consumption to power the light rail extension would be 7,829 MWh (28,182,841 MJ). The project's incremental increase in electricity demand would not place an undue burden on the existing electrical infrastructure and represents a miniscule fraction of the total Metro electricity use. Overall, the Hawthorne Option would result in a net energy benefit, and a less than significant impact would occur.

Impact 3.12-4.2: Conflict With Energy Plans During Construction

Energy-resource consumption during construction of the project would be predominantly combustion of petroleum-based transportation fuels. Project Feature PF-AQ-1 (Metro Green Construction Policy Compliance) commits Metro contractors to using less-polluting construction equipment and vehicles and implementing best practices to reduce harmful diesel emissions. Best practices include Tier 4 emission standards for off-road diesel-powered construction equipment with greater than 50 hp and restricting idling to a maximum of five minutes. Compliance with these provisions would limit excess petroleum fuels consumption during active use of off-road equipment and on-road vehicles. The CALGreen Code Tier 2 requires reduction, disposal, and recycling of at least 80% of nonhazardous construction materials and requires demolition debris to be recycled and/or salvaged, which would ultimately result in reductions of indirect energy use associated with waste disposal and storage. Therefore, construction would have a less than significant impact related to conflicting with or obstructing plans for renewable energy or energy efficiency.

Impact 3.12-4.2: Conflict With Energy Plans During Operations

The project is a light rail system extension providing energy efficient mass transit to communities in need of enhanced accessibility options. The project would reduce auto passenger vehicle trips and reliance on petroleum-based transportation fuels. The benefits of the project are consistent with the

goals, objectives, and policies of SCAG and the Cities of Lawndale, Redondo Beach, and Torrance. As the renewable energy portfolios of Metro and local jurisdictions expand over time, natural resources consumption to provide the electricity required for operations would become more energy efficient. The project would not conflict with any adopted plan or regulation to enhance energy efficiency or reduce transportation fuels consumption and would support the initiatives of the Metro CAAP. In addition, the project would not interfere with renewable portfolio targets and would not result in a wasteful or inefficient expenditure of energy resources. The project would positively contribute to statewide, regional, and local efforts to create a more efficient and sustainable transportation infrastructure network. Therefore, operations would result in a less than significant impact related to conflicting with or obstructing plans for renewable energy or energy efficiency.

References in the Draft and Final EIR

- > Section 3.12, Energy, Subsections 3.12-4.1 and 3.12-4.2 of the Draft EIR
- > Chapter 4, Corrections and Additions, of the Final EIR

Project Features

None

Mitigation Measures

The impacts under the thresholds above would be less than significant, and mitigation measures are not required.

Findings

For the reasons stated above, Metro finds that these impacts related to energy would be less than significant.

5.17. TRIBAL CULTURAL RESOURCES

The project would have a less than significant impact related to tribal cultural resources with respect to the following significance thresholds:

- > Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC Section 5020.1(k)? (Impact 3.14-4.1)
- > Would the project cause a substantial adverse change in the significance of a Tribal Cultural Resource, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe? (Impact 3.14-4.2)

Impacts

Impact 3.14-4.1: Substantial Adverse Change in The Significance of a Tribal Cultural Resource During Operation

Operational activities of the Hawthorne Option would be limited to light rail operations on established tracks and at facilities constructed as part of the project. The operation of light rail transit traffic and other rail operations would not cause subsurface ground disturbance, nor alter any existing setting that would impact a tribal cultural resource within the RSA. Therefore, the impact would be less than significant.

Impact 3.14-4.2: Substantial Adverse Change in The Significance of a Tribal Cultural Resource Determined by a Lead Agency During Operation

Operational activities of the Hawthorne Option would be limited to light rail operations on established tracks and at facilities constructed as part of the project. The operation of light rail transit and other rail operations would not cause subsurface ground disturbance nor alter any existing setting that would impact a resource of tribal significance within the RSA. Therefore, the impact would be less than significant.

References in the Draft and Final EIR

- > Section 3.14, Tribal Cultural Resources, Subsections 3.14-4.1 and 3.14-4.2 of the Draft EIR
- > Chapter 4, Corrections and Additions, of the Final EIR

Project Features

None

Mitigation Measures

The impacts under the thresholds above would be less than significant, and mitigation measures are not required.

Findings

For the reasons stated above, Metro finds that these impacts related to tribal cultural resources would be less than significant.

5.18. PUBLIC SERVICES

The project would have a less than significant impact related to public services with respect to the following significance thresholds:

- > Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection? (Impact 3.15-4.1)
- > Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for police protection? (Impact 3.15-4.2)

- > Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to meet demand for schools? (Impact 3.15-4.3)
- > Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to meet demand for parks? (Impact 3.15-4.5)
- > Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? (Impact 3.15-4.6)
- > Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? (Impact 3.15-4.7)

Impacts

Impact 3.15-4.1: Fire Protection Response Times During Construction

There are no fire stations or other related government facilities in or adjacent to the RSA. Construction staging areas would, therefore, not result in the acquisition of any fire facilities within the RSA, nor result in the alteration of existing facilities or construction of new facilities to maintain fire protection services the RSA. Roadways that intersect the project would need to be temporarily closed to accommodate construction activities, which could impede the vehicle circulation network in the RSA. As part of Project Feature PF-T-1 (Construction Traffic Management Plan), Metro's construction contractor would coordinate with the cities and emergency providers to develop CTMPs that are communicated to those providers. The CTMPs would clearly identify alternative routes to ensure that fire services response times would remain compliant with NFPA guidelines. This project feature reflects Metro's standard construction coordination practices and provides part of the substantial evidence supporting the conclusion that construction would not result in the need for new or physically altered fire protection facilities.

Although construction of the project would create additional jobs in the project area, it would not indirectly result in population growth, and therefore, not lead to the need for additional fire protection facilities to maintain service ratios. Therefore, construction of the Hawthorne Option would not result in the need for new or physically altered fire protection facilities and this impact would be less than significant.

Impact 3.15-4.1: Fire Protection Response Times During Operations

During operation of the Hawthorne Option, fire protection services would continue to be provided by Los Angeles County Fire Department, Redondo Beach Fire Department, and the Torrance Fire Department. The Hawthorne Option would not have at-grade rail street crossings and, therefore, would not have the potential to increase emergency vehicle delays and affect response times of fire protection services. Operation of the Hawthorne Option would not induce unplanned population growth that would impact the demand for fire protection facilities. Therefore, operation of the Hawthorne Option would not result in the need for new or physically altered fire protection facilities and this impact would be less than significant.

Impact 3.15-4.2: Police Protection Response Times During Construction

There are no police stations within the RSA. Construction staging areas would, therefore, not result in the acquisition of any police facilities within the RSA, nor would it result in the alteration of existing facilities or construction of new facilities to service the RSA. Construction activities would be temporary. As part of Project Feature PF-T-1 (Construction Traffic Management Plan), Metro's contractor would coordinate with affected cities and emergency providers to prepare CTMPs that are communicated to those providers. The CTMPs would identify alternative routes to ensure that police response times remain adequate. This feature reflects Metro's standard practice for construction coordination and provides part of the substantial evidence supporting the conclusion that construction would not interfere with police protection response times.

Construction activities would also be conducted in compliance with Metro's MRDC, which follows the principles of Crime Prevention through Environmental Design (CPTED) and Metro safety and security programs. Incorporation of CPTED principles would reduce potential impacts to police service performance ratios that may arise from the introduction of construction staging areas.

Although construction of the project would create additional jobs in the project area, it would not indirectly result in population growth and, therefore, not lead to the need for additional police facilities to maintain service ratios. Thus, construction of the Hawthorne Option would not result in the need for new or physically altered police facilities and this impact would be less than significant.

Impact 3.15-4.2: Police Protection Response Times During Operations

During operations, police protection services would continue to be provided by the Los Angeles Sheriff's Department, Hawthorne Police Department, Redondo Beach Police Department, and Torrance Police Department within their respective jurisdictions. The Hawthorne Option would fully grade separate light rail transit from roadway crossings and, therefore, would not increase emergency vehicle delays. Operation of the Hawthorne Option would not induce unplanned population growth that would impact the demand for police protection services. Therefore, operation of the Hawthorne Option would not result in the need for new or physically altered police protection facilities and this impact would be less than significant.

Impact 3.15-4.3: School Demand During Construction

No educational facilities are located immediately adjacent to the proposed alignment or transit stations. Construction of the Hawthorne Option would not require the acquisition of any public facilities, including educational facilities. The nearest educational facility to the Hawthorne Option is the R.K. Lloyd Continuation High School located on Marine Avenue approximately 650 feet to the east of the Metro ROW. As part of Project Feature PF-T-1 (Construction Traffic Management Plan), access to nearby schools would be maintained during construction and detour routes would be identified to ensure circulation is provided during construction. This feature reflects Metro's standard practice for construction coordination and provides part of the substantial evidence supporting the conclusion that construction would not interfere with access to educational facilities. Therefore, construction of the Hawthorne Option would not result in the need for new or physically altered educational facilities and this impact would be less than significant.

Impact 3.15-4.5: Park Demand During Construction

Construction staging areas of the Hawthorne Option would not be located adjacent to any parks and recreational facilities in the RSA. Approximately 15 to 40 construction workers per day may utilize nearby parks, which include Charles B. Hopper Park, Columbia Park, and Pequeno Park, during lunchtime

breaks, however such uses would be temporary and nominal. These recreational facilities would continue to be regularly maintained by the respective recreational departments of the Cities of Hawthorne, Lawndale, Redondo Beach, and Torrance. Roadways that intersect the alignment would need to be temporarily closed to accommodate construction activities, which could impede the vehicle circulation network in the RSA. As part of Project Feature PF-T-1 (Construction Traffic Management Plan), alternative vehicular and pedestrian access routes to park facilities would be identified, clearly marked, and maintained throughout construction. This feature reflects Metro's standard practice for construction coordination and provides part of the substantial evidence supporting the conclusion that access to park facilities would be preserved.

Although construction of the project would create additional jobs in the project area, it would not indirectly result in population growth, and therefore, not lead to the need for additional park facilities to maintain service ratios. Therefore, construction of the Hawthorne Option would not result in the need for new or physically altered park facilities and this impact would be less than significant.

Impact 3.15-4.5: Park Demand During Operation

Pequeno Park would be located within a quarter-mile of the South Bay Galleria Station and may see some increased demand for and usage of its facilities during operations of the Hawthorne Option. However, the South Bay Galleria Station would be located adjacent to high-volume commercial uses, which are expected to attract greater numbers of riders than surrounding residential and open space destinations. Therefore, the Hawthorne Option is not reasonably anticipated to generate substantial additional demand for and usage of Pequeno Park beyond the existing maintenance capacity of the City of Torrance Park Services Division.

Project operation would not result in the need for new or physically altered park facilities and this impact would be less than significant.

Impact 3.15-4.6: Park Deterioration During Construction

The project would neither directly nor indirectly result in population growth that could lead to increased or accelerated deterioration of recreational facilities. Construction workers may potentially increase the usage of and demand for parks and recreational facilities, but this increased usage would be temporary and nominal compared to total facility usage by all local residents. The existing parks and recreational facilities in the RSA would continue to be regularly maintained by the respective recreational departments of the Cities of Hawthorne, Lawndale, Redondo Beach, and Torrance, and would continue to serve the existing surrounding residential population during construction activities. Therefore, construction impacts of the Hawthorne Option would not result in the substantial deterioration of park facilities and this impact would be less than significant.

Impact 3.15-4.6: Park Deterioration During Operations

Pequeno Park could potentially experience some increased demand for and usage of its facilities during operation of the Hawthorne Option due to its proximity to the South Bay Galleria Station. However, this station would be located adjacent to high-volume commercial uses and transportation connections, which are expected to attract greater numbers of riders than surrounding residential and open space destinations. Therefore, the Hawthorne Option is reasonably anticipated to not generate substantial additional demand for and usage of Pequeno Park beyond the existing maintenance capacity of the City of Torrance Park Services Division.

Project operation would not result in the substantial deterioration of park facilities and this impact would be less than significant.

Impact 3.15-4.7: Expansion of Recreation During Construction

The Hawthorne Option does not include construction of recreational paths. Construction workers would temporarily work in the area and would not likely relocate to the project area on a permanent basis. Construction workers may potentially increase the usage of and demand for parks and recreational facilities, but this increased usage would be temporary and nominal compared to total facility usage by all local residents. Therefore, impacts related to adverse physical effects of construction of recreational facilities would be less than significant.

Impact 3.15-4.7: Expansion of Recreation During Operations

The project would not indirectly induce unplanned population growth that would impact the demand for recreational facilities. Therefore, impacts related to adverse physical effects of operation of recreational facilities would be less than significant.

References in the Draft and Final EIR

- > Section 3.15, Public Services and Utilities, Subsections 3.15-4.1, 3.15-4.2, 3.15-4.3.1, 3.15-4.5, 3.15-4.6, and 3.15-4.7 of the Draft EIR
- > Chapter 4, Corrections and Additions, of the Final EIR
- > Chapter 5, Responses to Comments, Subsection 5.2-12, Major Topic Response MR-12: Emergency Access, of the Final EIR

Project Features

PF-PS-1. Coordination with Torrance Refining Company and Emergency Responders

Before construction of the project and during the advanced design stages, Metro would work with the Torrance Refining Company and Torrance Logistics Company, BNSF Railway, the City of Torrance, and other City entities responsible for emergency response to coordinate emergency communication systems so that, in the event of an emergency relating to flaring or other refinery operations-related hazards, Metro could hold or detour trains to avoid traveling near the refinery.

Mitigation Measures

The impacts under the thresholds above would be less than significant, and mitigation measures are not required.

Findings

For the reasons stated above, Metro finds that these impacts related to public services and recreation would be less than significant.

5.19. NOISE AND VIBRATION

The project would have a less than significant impact related to noise and vibration with respect to the following significance threshold:

- > Would the project result in generation of excessive ground-borne vibration levels (Impact 3.6-4.3)

Impacts

Impact 3.6-4.3: Ground-borne Vibration Levels During Operation

The medium that the vibration travels through are the columns supporting the elevated rail track. The vibration from the Hawthorne Option would propagate radially as a point source (due to the vibration being transferred to the ground at intermittent column locations) through the columns. As shown in Appendix 3.6-C of the Draft EIR, the vibration impact thresholds around each column do not intersect with any residences, and therefore are not expected to result in any vibration impacts. Operation of the Hawthorne Option would have a less than significant impact related to excessive ground-borne vibration levels.

References in the Draft and Final EIR

- > Section 3.6, Noise and Vibration, Subsection 3.6-4.3, of the Draft EIR

Project Features

None

Mitigation Measures

The impacts under the thresholds above would be less than significant, and mitigation measures are not required.

Findings

For the reasons stated above, Metro finds that these impacts related to operational ground-borne vibration levels would be less than significant.

5.20. CULTURAL RESOURCES

The project would have a less than significant impact related to cultural resources with respect to the following significance threshold:

- > Would the project disturb any human remains, including those interred outside of formal cemeteries (Impact 3.13-4.3)

Impacts

Impact 3.13-4.3: Disturbance of Human Remains During Construction

The Hawthorne Option has a low sensitivity to encounter historic remains and buried Native American archaeological deposits, which could include human remains, as there are no known cemeteries or archaeological sites with human remains located within the RSA. If Native American remains are encountered, these remains would be treated with appropriate deference through compliance with legal requirements pursuant to Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.98. Therefore, construction of the Hawthorne Option would result in a less than significant impact related to disturbance of human remains.

References in the Draft and Final EIR

- > Section 3.13, Cultural Resources, Subsection 3.13-4.3, of the Draft EIR

Project Features

None

Mitigation Measures

The impacts under the thresholds above would be less than significant, and mitigation measures are not required.

Findings

For the reasons stated above, Metro finds that these impacts related to construction impacts related to human remains would be less than significant.

6. FINDINGS FOR ENVIRONMENTAL RESOURCES FOUND NOT TO BE IMPACTED

Metro finds that there would be no impacts for the following environmental resources, as found in the referenced sections of the Draft EIR.

Aesthetics

- > Scenic Vistas: Construction (Subsection 3.3-4.1.1) and Operation (Subsection 3.3-4.1.2)
- > Scenic Highways: Construction (Subsection 3.3-4.2.1) and Operation (Subsection 3.3-4.2.2)

Noise and Vibration

- > Airports: Construction and Operation (Subsection 3.6-4.2)

Biological Resources

- > Riparian Habitat/Sensitive Natural Community: Construction (Subsection 3.7-4.2.1) and Operation (Subsection 3.7-4.2.2)
- > Wetlands: Construction (Subsection 3.7-4.3.1) and Operation (Subsection 3.7-4.3.2)
- > Movement of Fish & Wildlife Species: Construction (Subsection 3.7-4.4.1) and Operation (Subsection 3.7-4.4.2)
- > Conflicts with Habitat Conservation Plans: Construction (Subsection 3.7-4.6.1) and Operation (Subsection 3.7-4.6.2)

Geology, Soils, and Paleontological Resources

- > Known Earthquake Fault Zone: Construction (Subsection 3.8-4.1.1) and Operation (Subsection 3.8-4.1.2)
- > Soil Erosion: Operation (Subsection 3.8-4.5.2)
- > Septic Tanks or Alternative Wastewater Disposal Systems: Construction and Operation (Subsection 3.8-4.8)
- > Paleontological Features: Operations (Subsection 3.8-4.9.2)

Hazards and Hazardous Materials

- > Hazardous Materials Within One-Quarter Mile of School: Operation (Subsection 3.9-4.3.2)
- > Hazardous Materials Sites: Operation (Subsection 3.9-4.4.2)
- > Airport Land Use Plans: Construction and Operation (Subsection 3.9-4.5)
- > Private Air Strip: Construction and Operation (Subsection 3.9-4.6)
- > Wildfire Hazards: Construction and Operation (Subsection 3.9-4.8)

Utilities and Service Systems

- > Wastewater Treatment Capacity: Operation (Subsection 3.11-4.3.2)
- > Solid Waste Capacity: Operation (Subsection 3.11-4.3.4)
- > Compliance with Solid Waste Regulations: Construction (Subsection 3.11-4.3.5) and Operation (Subsection 3.11-4.3.6)

Cultural Resources

- > Adverse Change to Historical Resources: Construction (Subsection 3.13-4.1.1) and Operation (Subsection 3.13-4.1.2)
- > Adverse Change to Archaeological Resources: Operation (Subsection 3.13-4.2.2)
- > Disturbance of Human Remains: Operation (Subsection 3.13-4.3.2)

Public Services and Recreation

- > School Demand During Operation (Subsection 3.15-4.3.2)
- > Demand for Library Facilities: Construction (Subsection 3.15-4.4.1) and Operation (Subsection 3.15-4.4.2)

Other CEQA Considerations

- > Agricultural and Forestry Resources: Construction and Operation (Subsection 3.16-2.1)
- > Mineral Resources: Construction and Operation (Subsection 3.16-2.2)
- > Population and Housing: Construction and Operation (Subsection 3.16-2.3)
- > Wildfire: Construction and Operation (Subsection 3.16-2.4)

7. FINDINGS FOR CUMULATIVE IMPACTS

CEQA Guidelines Section 15130(a)(3) defines “cumulatively considerable” to mean the incremental effects of an individual project are significant when viewed in connection with effects of past, present, and reasonably foreseeable probable future projects. Refer to Section 3.0, Introduction of the Draft EIR for the methodology used to assess the potential for cumulative impacts, as well as for a list of the probable future projects considered in the cumulative analysis.

7.1. TRANSPORTATION

Overlapping construction activities could be potentially disruptive if construction occurred concurrently, but given the shorter and more intermittent duration of the nature of these types of roadway improvement projects, overlap of construction periods would be minimal, if at all. Construction of these projects is not expected to result in significant duration or disruption.

During operations, the cumulative projects are not within the footprint of the project and would not cumulatively create new geometric hazards, obstructed visibility, or reduce emergency access.

Finding

For the reasons stated above and based on substantial evidence in the record as a whole, Metro finds that the Hawthorne Option, combined with past, present, and reasonably foreseeable projects, would not result in a cumulatively significant impact related to transportation during construction or operations.

7.2. LAND USE AND PLANNING

Simultaneous construction of other projects and the Hawthorne Option could occur, potentially resulting in short-term and temporary construction disruptions to the existing built environment and circulation through temporary roadway or sidewalk closures or construction laydown areas. Given the shorter and more intermittent duration of the nature of these types of roadway improvement projects, overlap of construction periods would be minimal, if at all. With implementation of Mitigation Measure MM-LU-1 (Temporary Crossings), the roadway closures and laydown areas during construction, in conjunction with other projects, would not divide existing communities as access within and out of the communities as they would generally be required to be maintained through their respective construction traffic management plans.

Operation of the Hawthorne Option would not divide the existing community in conjunction with the related projects as access within and out of the communities would be unchanged or changed very little by these projects. Further, the cumulative projects would be required to be consistent with applicable general plans and zoning codes.

Finding

For the reasons stated above and based on substantial evidence in the record as a whole, with implementation of Mitigation Measure MM-LU-1, Metro finds that the Hawthorne Option, combined with past, present, and reasonably foreseeable projects, would not result in a cumulatively significant impact to land use and planning during construction or operations. Thus, with respect to the cumulative impact related to physical division of an established community during construction, Metro adopts CEQA Finding 1, as identified in Section 3 above and in Section 15091, subdivisions (a)(1) of the CEQA Guidelines. For other impacts related to aesthetics, Metro finds that the Hawthorne Option would either

not result in a cumulatively significant impact or the incremental contribution to the cumulative impact would not be cumulative considerable.

7.3. AESTHETICS

Scenic Vistas or Scenic Highways

No scenic vistas or scenic highways are located near the Hawthorne Option.

Conflicts with Regulations on Scenic Quality

Construction of the Hawthorne Option in combination with other projects would represent a temporary change in the visual quality and character of the RSA. This temporary change during construction would be similar to other construction projects in the RSA, which would also have a temporary impact on visual character and quality of the RSA and its surroundings compared to existing conditions. As part of Project Feature PF-AES-2 (Metro Design Standards), construction activities would comply with applicable zoning regulations within the Cities of Lawndale, Redondo Beach, and Torrance, as well as with BMPs and development standards within each City.

During operation, the Hawthorne Option would result in a visual change compared to existing conditions, but would not conflict with local regulations related to scenic quality.

Light and Glare

Construction of the Hawthorne Option could result in construction-related illumination and nighttime construction lighting. Cumulative projects may be constructed during the same timeframe as the project and may also require night-time lighting. Mitigation Measure MM-AES-1 (Construction Lighting) would require that construction lighting be shielded and directed downward and away from adjacent residential and commercial areas. Similar to the Hawthorne Option, cumulative projects are expected to comply with applicable regulations with each City related to light and glare, and to incorporate mitigation measures that would reduce light and glare impacts to the maximum extent feasible.

During operations, the Hawthorne Option would be lit to provide adequate lighting for maintenance activities and ensure a safe environment. As part of PF-AES-2 (Metro Design Standards), all lighting would comply with Metro Design Standards and applicable lighting regulations that would be verified during the permitting process. Cumulative projects are also expected to comply with applicable city regulations related to light and glare, and to incorporate mitigation measures that would reduce light and glare impacts to the maximum extent feasible.

Findings

For the reasons stated above and based on substantial evidence in the record as a whole, with implementation of Mitigation Measure MM-AES-1, the Hawthorne Option would not result in a cumulatively considerable impact related to construction lighting. Thus, with respect to this cumulative impact, Metro adopts CEQA Finding 1, as identified in Section 3 above and in Section 15091, subdivisions (a)(1) of the CEQA Guidelines.

For other impacts related to aesthetics, Metro finds that the Hawthorne Option would either not result in a cumulatively significant impact or the incremental contribution to the cumulative impact would not be cumulative considerable.

7.4. AIR QUALITY

Construction of the Hawthorne Option would generate emissions of air pollutants through the use of heavy-duty off-road equipment and light- and heavy-duty on-road vehicles. In addition to diesel exhaust fumes, off-road equipment would produce fugitive emissions including dust during ground disturbance and material stockpiling and volatile asphalt off-gassing during paving activities. As described in Section 3.4, Air Quality of the Draft EIR, construction activities for the Hawthorne Option would not generate mass daily emission in excess of any regional-scale SCAQMD threshold for individual projects under CEQA.

Attainment of the air quality standards is accomplished at the regional level, and the SCAQMD has adopted the rationale that projects with mass daily emissions below the regional screening thresholds would not generate sufficient air pollution to render cumulative impacts potentially significant. Although construction of other projects would occur within SCAB during construction of the Hawthorne Option, emissions from project construction would not be cumulatively considerable for nonattainment pollutants and would also not be cumulatively significant based on the SCAQMD guidance.

Construction of the Hawthorne Option would not generate localized emissions of NOX, CO, or particulate matter in excess of the applicable LST screening values. Although it is possible that construction of other cumulative projects may occur within the localized RSA during construction of the project, emissions from project construction would be controlled to the maximum extent feasible through implementation of BMPs contained within the Metro Green Construction Policy and would not exceed the SRA 3 LST screening values.

Long-term operation of the project would not introduce a new substantial stationary, area, or mobile source of air pollutant emissions into the SCAB. The primary effect of operations on regional air quality would be the displacement of on-road VMT resulting from increased transit ridership. Operation of the project would reduce emissions of air pollutants within the SCAB overall through the elimination of passenger vehicle trips. The 2016 AQMP emissions budgets are partially developed based on the 2016–2040 RTP/SCS, and the two planning documents are developed in conjunction with one another. The project is included in the 2016–2040 RTP/SCS, the 2020–2045 RTP/SCS and the 2024–2050 RTP/SCS under RTP ID 1TR1001 and Federal Transportation Improvement Program (FTIP) ID LA0G632, which demonstrates that the regional transportation and emissions modeling budget in the 2016 AQMP accounts for implementation of the project in its conformity demonstration. Therefore, operation of the project would not contribute in a significant way to cumulative effects related to air quality violations, timely attainment of the air quality standards, or emissions of nonattainment pollutants. Operation of the project would not introduce a substantial new source of emissions that could result in sensitive receptor exposures to unhealthy localized pollutant concentrations or public nuisances related to odors.

Finding

For the reasons stated above and based on substantial evidence in the record as a whole, Metro finds that the Hawthorne Option's incremental contribution to cumulatively significant impacts related to air quality during construction and operation would not be cumulatively considerable.

7.5. GREENHOUSE GAS EMISSIONS

All construction activities for the project would comply with Project Features PF-AQ-1 (Metro Green Construction Policy Compliance), PF-AQ-3 (Metro Moving Beyond Sustainability Strategic Plan Compliance), and PF-AQ-4 (Metro Rail Design Guidelines). These features are integral components of Metro's standard construction and design requirements and ensure that equipment and vehicles are

maintained according to manufacturer specifications and are subject to idling limitations consistent with applicable regulations. The project would not interfere with state and regional GHG-reduction targets.

Reasonably foreseeable actions within the RSA include all transportation projects that are programmed in the Connect SoCal 2020–2045 RTP/SCS. CARB issued a determination that the Connect SoCal SCS successfully demonstrated that the region would attain its established SB 375 per capita GHG emissions targets in the 2035 horizon year of the analysis on October 30, 2020. This determination relies on projects that are programmed into the RTP/SCS being implemented, one of which is the project as identified under RTP ID TR1001 (and FTIP ID LA0G632). Although implementation of the project would generate long-term indirect GHG emissions through energy use (i.e., light rail transit propulsion, lighting and accessory equipment at station platforms), those emissions would be more than fully offset by reductions in on-road motor vehicle emissions due to mode shift from automobiles to transit. The project is anticipated to reduce overall GHG emissions relative to future 2042 baseline conditions and would not conflict with GHG emissions reductions plans and policies. In particular, under the C-2 Operating Plan, the project would achieve a net reduction of approximately 1,871.18 MTCO₂e compared to the future 2042 baseline. (See Memorandum re: Vehicle Miles Traveled Correction to the C Line (Green) Extension to Torrance Project, October 2025). The project would ultimately provide environmental and community benefits related to GHG emissions reductions and active transportation.

Finding

For the reasons stated above and based on substantial evidence in the record as a whole, Metro finds that the Hawthorne Option's incremental contribution to cumulatively significant impacts related to GHG emissions during construction and operation would not be cumulatively considerable.

7.6. NOISE AND VIBRATION

Noise

Construction of the project would require heavy earth-moving equipment, generators, cranes, pneumatic tools, and other similar machinery. The existing cumulative noise condition is characterized by existing traffic noise and existing freight noise which was captured by existing ambient noise measurements. Construction noise levels for the project would exceed FTA and local noise standards due to the intensive nature of light rail construction activities and the proximity of sensitive land uses to the corridor. Implementation of Mitigation Measure MM-NOI-1 (Noise Control Plan) would reduce construction noise levels, but there may still be temporary or periodic exceedances of the FTA construction noise criteria and local standards resulting in temporary adverse effects related to construction noise. Similar to the project, construction of projected future projects would likely include the use of heavy construction equipment that would generate elevated construction noise levels. Projected future projects would go through their own environmental clearance process and would include mitigation for construction noise to reduce impacts. Related projects within 500 feet of construction could result in a cumulative construction noise impact at sensitive receptors. Although it is not possible to predict which related projects would result in a cumulative construction noise scenario, the construction noise levels associated with the project could increase ambient noise levels. Therefore, the Hawthorne Option's incremental contribution to cumulatively significant noise impacts during construction would be cumulatively considerable.

Operation of the Hawthorne Option would result in significant operational noise impacts at sensitive receptors along the project alignment. The noise environment in the vicinity of the alignment can be primarily defined by traffic on I-405 and adjacent roadways, including Hawthorne Boulevard, the existing Metro C (Green) Line, and cumulative growth and development in the cities located in the vicinity of the

project could result in increases in roadway traffic volumes over time that would concurrently increase ambient noise levels in the vicinity of the project. However, future increases in roadway noise are expected to be minimal along the alignment because of limited roadway capacity. Implementation of MM-NOI-2 (Soundwalls) and MM-NOI-3 (Low Impact Frogs), which would require installation of soundwalls and low impact frogs, would reduce the light rail transit operation noise impacts to a less than significant level. MM-NOI-5 (Wheel Squeal Noise Monitoring) would reduce noise impacts related to wheel squeal to a less than significant level. e. Therefore, the Hawthorne Option's incremental contribution to cumulatively significant noise impacts during operation would not be cumulatively considerable.

Vibration

Construction of the Hawthorne Option would result in significant and unavoidable vibration impacts, even with implementation of Mitigation Measures MM-VIB-1 (Vibration Control Plan), MM-VIB-2 (Construction Equipment Location), and MM-VIB-3 (Pre- and Post-Construction Surveys). However, it is not anticipated that vibration-generating equipment from past, present, and probable future projects would operate at the same time and in the same location as the construction equipment for the project.

Operation of the Hawthorne Option would not result in a significant ground-borne vibration impact. Therefore, impacts of the Hawthorne Option in combination with past, present, and probable future projects would not have a cumulatively significant impact related to ground-borne vibration.

Findings

Mitigation Measure MM-NOI-1 would reduce the project's construction noise impacts, but the incremental contribution to the potentially significant cumulative noise impact would remain cumulatively considerable. No additional feasible mitigation measures were identified to reduce the project's incremental contribution to this noise impact during construction. Thus, with respect to this cumulative impact and based on substantial evidence in the record as a whole, Metro adopts CEQA Findings 1 and 3, as identified in Section 3 above and in Section 15091, subdivisions (a)(1) and (a)(3) of the CEQA Guidelines.

With implementation of MM-NOI-2, MM-NOI-3, and MM-NOI-5, the impact would be less than significant. Thus, with respect to this cumulative impact and based on substantial evidence in the record as a whole, Metro adopts CEQA Findings 1, as identified in Section 3 above and in Section 15091, subdivisions (a)(1) of the CEQA Guidelines.

The Hawthorne Option's incremental contribution to cumulatively significant vibration impacts during operation would not be cumulatively considerable. Thus, for operational vibration impacts and based on substantial evidence in the record as a whole, Metro finds that the cumulative operational vibration impact would be less than significant and mitigation is not required.

For vibration impacts during construction and based on substantial evidence in the record as a whole, Metro finds that with mitigation, the Hawthorne Option, combined with past, present, and reasonably foreseeable projects, would not result in a cumulatively significant impact.

7.7. BIOLOGICAL RESOURCES

Historically, development and rapid urbanization has been occurring in the surrounding region since the late 1800s. Continued development relating to infrastructure improvement, housing construction, and other community needs is regularly, and frequently, occurring. There is an existing cumulative impact related to biological resources as a result of the highly urbanized setting and both historic and present

development throughout the region. Implementation of Mitigation Measures MM-BIO-1 (General Protection Measures to Avoid and Minimize Impacts on Sensitive Biological Resources), MM-BIO-2 (Nesting Bird Season Restrictions and Pre-Construction Surveys), MM-BIO-3 (Roosting Bat Restrictions and Survey Requirements), MM-BIO-4 (Pre-Construction Rare Plant Survey), and MM-BIO-5 (Off-Site Mitigation for Southern Tarplant Habitat) would reduce impacts to southern tarplant, nesting birds, and bats to less than significant levels. Therefore, with mitigation, the project's incremental contribution to cumulatively significant impacts on biological resources would not be cumulatively considerable during construction.

With implementation of MM-BIO-1 and MM-BIO-5, operation of the project on biological resources would be reduced to less than significant. Therefore, based on substantial evidence in the record as a whole, with mitigation, the project's incremental contribution to cumulatively significant impacts related to biological resources during operations would not be cumulatively considerable.

Finding

With implementation of Mitigation Measures MM-BIO-1, MM-BIO-2, MM-BIO-3, MM-BIO-4, and MM-BIO-5, Metro finds that the Hawthorne Option would not result in a cumulatively considerable impact related to biological resources during construction. Thus, for this cumulative impact and based on substantial evidence in the record as a whole, Metro adopts CEQA Finding 1, as identified in Section 3 above and in Section 15091, subdivision (a)(1) of the CEQA Guidelines.

For biological resources impacts during operations and based on substantial evidence in the record as a whole, Metro finds that with implementation of Mitigation Measures MM-BIO-1 and MM-BIO-5, the Hawthorne Option, combined with past, present, and reasonably foreseeable projects, would not result in a cumulatively significant impact. Thus, Metro adopts CEQA Finding 1, as identified in Section 3 above and in Section 15091, subdivision (a)(1) of the CEQA Guidelines.

7.8. GEOLOGY, SOILS, AND PALEONTOLOGICAL RESOURCES

During both construction and operation, the project would not expose people or structures to adverse effects, including the risk of loss, injury, or death involving fault rupture or seismic hazards including liquefaction or landslides. The project would also not result in impacts related to soil erosion, unstable or expansive soils, or adequacy of soils to support septic tanks. The project would comply with all applicable state and local guidelines and mandatory design requirements related to geologic, subsurface, and seismic hazards. Projected future projects would also be required to comply with all prescribed standards, requirements, and guidance hazards, and implement mitigation measures as necessary.

While the project would result in significant impacts on unknown paleontological resources during construction, with implementation of Mitigation Measure MM-GEO-1 (Engage a Qualified Paleontological Resources Specialist), impacts would be reduced to less than significant. Other projects disturbing ground and subsurface areas would similarly be required to mitigate potential impacts to paleontological resources in highly sensitive paleontological areas.

Finding

For the reasons stated above and based on substantial evidence in the record as a whole, Metro finds that with implementation of Mitigation Measure MM-GEO-1, the Hawthorne Option, combined with past, present, and reasonably foreseeable projects, would not result in a cumulatively significant impact related to geology, soils, and paleontological resources during construction or operation. Thus, Metro

adopts CEQA Finding 1, as identified in Section 3 above and in Section 15091, subdivision (a)(1) of the CEQA Guidelines for this impact.

7.9. HAZARDS AND HAZARDOUS MATERIALS

The project would not result in significant impacts related to hazards and hazardous materials during construction or operations. The project would be required to comply with all prescribed standards, requirements, and guidance related to hazards and hazardous waste. Impacts associated with hazards and hazardous materials are site-specific and largely localized. This project and other future projects would also comply with all the same requirements and apply mitigation measures as necessary to minimize impacts.

Finding

For the reasons stated above and based on substantial evidence in the record as a whole, Metro finds that the Hawthorne Option, combined with related past, present, and probable future projects, would not result in cumulatively significant impact related to hazards and hazardous materials during construction or operations.

7.10. HYDROLOGY AND WATER QUALITY

Water Quality

The project is located in the Santa Monica Bay and Dominguez Channel watersheds, which currently are both impaired from development in the region. Additionally, development has resulted in limited availability of water resources, due to the use of groundwater for municipal water supplies and existing pollutant loads of surface water sources. Construction of the project has the potential to further introduce chemicals and/or hazardous substances as well as sediment into surface waters and groundwaters, or degrade surface water quality via dewatering of groundwater. Operations could impact water quality via sedimentation caused by runoff from newly added impervious surfaces; nitrates from landscape fertilizing; and trash, debris, and bacteria from human presence. However, multiple project features would be implemented as a part of the Hawthorne Option that would protect water quality and ensure appropriate treatment and discharge of contaminated water. Probable future projects would also be required to comply with the same regulations and permits as the project. Nonetheless, given the existing levels of impairment, the cumulative water quality impact is significant. The Hawthorne Option incremental contribution to this cumulative impact, however, would be less than cumulatively considerable.

Groundwater Recharge and Groundwater Supplies

Development in the region has resulted in limited availability of water resources due to the use of groundwater for municipal water supplies and existing pollutant project of surface water sources. This is considered a significant cumulative impact. Construction of the project would require water for activities like dust control and concrete mixing, which would be sourced from local utility lines that may depend on groundwater for a portion of their water supply. However, the water needed for construction would be minimal, and would not substantially decrease groundwater supplies. All dewatered groundwater would be discharged in a pre-approved location specified by the RWQCB Waste Discharge Requirements for Construction Dewatering. Project operation would involve minimal water usage for activities like routine cleaning, which would not substantially decrease groundwater supplies. As part of Project Feature PF-HWQ-6 (LID BMPs per Regional Requirements), the Hawthorne Option would be designed with LID measures sized to retain the SWQDv on-site in accordance with regional requirements. There would be a less than significant impact on groundwater during operation. Water

for probable future projects would likely also be minimal, and all projects would be subject to the same regional LID requirements. Nonetheless, given the historic impact development has had in the region, impacts to groundwater recharge and groundwater supplies are cumulatively significant. The Hawthorne Option's incremental contribution to that impact, however, would not be cumulatively considerable.

Alteration of Drainage Patterns

Project construction or operation would not result in substantial drainage pattern alteration such that erosion or siltation, flooding, stormwater drainage system exceedance, additional polluted runoff, or impediment of flood flows would occur. As part of Project Feature PF-HWQ-1 (SWPPP Implementation per Construction General Permit and MS4 Permit), construction would comply with the Construction General Permit requirements, which include BMPs to control erosion and siltation, stabilize disturbed soils, and manage runoff to reduce peak flow velocities. During operation, increased impervious surfaces would have the potential to generate additional runoff; however, as part of Project Feature PF-HWQ-6 (LID BMPs per Regional Requirements), the Hawthorne Option would retain the SWQDv on-site through LID measures that promote infiltration and manage flows consistent with regional requirements. Probable future projects in the area would also be required to comply with the same state and local regulatory framework. Probable future projects would also be required to comply with the same regulations and local ordinances, at a minimum. Therefore, cumulative impacts related to alteration of drainage patterns would be less than significant.

Release of Pollutants in Flood Zones, Tsunami Zones, or Seiche Zones

The Hawthorne Option is outside of current seiche and tsunami potential inundation areas. A very small portion of the temporary footprint south of 190th Street overlaps with the 100-year flood zone, which is an area that would be used during construction to remove a spur track. As part of Project Feature PF-HWQ-8 (City of Torrance Flood Zone Requirements), construction would comply with the City of Torrance's requirements for construction within flood hazard areas, which are designed to reduce potential run-ins with flood waters. In addition, Project Feature PF-HWQ-1 (SWPPP Implementation per Construction General Permit and MS4 Permit) provides that construction activities must incorporate BMPs to prevent the release of pollutants into surface waters during construction, including in the unlikely case of rare flooding events. None of the related projects are located within or adjacent to an existing flood zone or current seiche or tsunami area. Therefore, cumulative impacts related to the potential release of pollutants in flood hazard, tsunami, or seiche zones would be less than significant.

Conflict with a Water Quality Plan

Construction would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. A groundwater sustainability plan has not been developed for the groundwater basin. Construction of the Hawthorne Option would be required to comply with beneficial uses, water quality objectives, and waste discharge requirements detailed in the RWQCB Basin Plan. Probable future projects would also be required to comply with the same regulations and local ordinances, at a minimum, and cumulative impacts would be less than significant.

Findings

For the reasons stated above and based on substantial evidence in the record as a whole, Metro finds that the Hawthorne Option's incremental contribution to cumulatively significant impacts related to water quality and groundwater during construction and operation would not be cumulatively considerable. Metro also finds that the Hawthorne Option, in combination with past, present and probable future projects, would not result in a significant cumulative impact related to alteration of

drainage patterns, flooding, or conflicts with water quality control plans during construction or operation.

7.11. UTILITIES AND SERVICE SYSTEMS

Water Facilities

As described in Section 3.11, Utilities and Service Systems, of the Draft EIR, the West Basin's water supplies are anticipated to be reliable, and no shortfalls are expected from 2021 to 2025, even when assuming a driest five-year scenario. Development of the project and probable future projects could cumulatively increase demands on water services post 2025, thereby creating shortages. However, construction of the project would not require substantial consumption of potable water, with water use occurring primarily for dust control. This short-term use would require minimal water supplies when compared to regional supplies. During operations, the project does not include a significant long-term, permanent source of water use. Although some water use may be needed to clean stations or wash trains, this minimal water use would not interfere with the existing and planned capacity of water facilities. There is no potential for the project to interfere with regional water supply services. The project's incremental contribution to cumulatively significant water service impacts would not be cumulatively considerable during construction or operation.

Wastewater

Construction activities would generate minimal wastewater through the use of temporary worker restrooms, which would have no potential to necessitate the construction of new or expanded wastewater facilities. Wastewater treatment facilities would not be required to be relocated during construction of the project. During operations, the project does not include a significant long-term, permanent source of wastewater. Although some water use may be needed to clean stations or wash trains, this minimal water generation would not interfere with the existing and planned capacity of wastewater facilities. As part of Project Feature PF-US-1 (Utility Identification and Coordination) and PF-US-2 (Service Interruption Notification), Metro would coordinate with utility providers to confirm service connections, ensure service continuity, and notify users of any temporary interruptions. The Hawthorne Option's incremental contribution to cumulatively significant wastewater impacts would be less than cumulatively considerable.

Stormwater Drainage

Development of the Hawthorne Option, in combination with past, present, and probable future projects, could cumulatively increase demands on existing stormwater infrastructure in the RSA. As part of Project Feature PF-HWQ-1 (SWPPP Implementation per Construction General Permit and MS4 Permit), construction would incorporate BMPs consistent with regulatory requirements, and any new stormwater drainage facilities constructed at stations or along the alignment would comply with applicable state and local design standards. If new stormwater drainage facilities are needed at stations or along the alignment, they would be designed in compliance with applicable state and local requirements.

During operations, the Hawthorne Option would increase impervious surface areas, resulting in a potential increase in stormwater runoff during operations. As part of Project Feature PF-HWQ-6 (LID BMPs per Regional Requirements), stormwater volumes would be retained on-site, and proposed station designs would incorporate landscaping to further support runoff management. Metro's Environmental Compliance and Sustainability Department would oversee ongoing compliance with stormwater drainage requirements.

For these reasons, the Hawthorne Option's incremental contribution to cumulatively significant impacts on stormwater drainage facilities would not be cumulatively considerable during construction or operation.

Solid Waste

Construction of the project and probable future projects could cumulatively increase demands on solid waste facilities. Construction of the project would generate solid waste from discarded construction materials, including contaminated soil. However, the project would not generate a substantial amount of solid waste during construction that would result in the exceedance of remaining regional capacity. Additionally, the construction contractor would be subject to AB 939, which requires implementation of a Solid Waste Diversion Program and diversion of at least 50% of the solid waste generated during construction activities from landfills to recycling facilities.

During operation, the project would not include a direct source of solid waste. Indirectly, solid waste would be generated by transit users, but this would be collected and managed by Metro. Therefore, the Hawthorne Option's incremental contribution to cumulatively significant impacts on solid waste facilities would not be cumulatively considerable during construction or operation.

Electric Power

While development of the project and past, present, and probable future projects would increase the demand for SCE services, neither construction nor operation of the project would require significant electricity. Construction of the Hawthorne Option would use only minimal amounts of electricity, such as to power field offices, and would not require new or expanded electric power facilities. For operations, the project would require electricity to power the extension, but this would be a minimal demand in comparison to what SCE delivers to its entire service area. Metro has also installed photovoltaic systems and plans additional renewable energy generation to offset systemwide electricity consumption. Accordingly, the incremental contribution of the Hawthorne Option to significant cumulative electric power impacts would not be cumulatively considerable.

Natural Gas and Oil Facilities

While development of the Hawthorne Option and past, present, and probable future projects would increase the demand for SoCal Gas services, neither construction nor operations of the project would require significant natural gas. SoCal Gas has not identified a cumulative shortfall in its service area. Construction of the Hawthorne Option would not require significant natural gas supplies and has no potential to require new or expanded natural gas facilities. Relocation of pipelines would be coordinated through PF-US-1 and service interruptions would be notified pursuant to PF-US-2. The electrically powered transit line would not use natural gas for operations. Similarly, there are no publicly owned oil facilities in the RSA that would require relocation and no potential for the Hawthorne Option to require new or expanded oil facilities, thereby contributing to a cumulative effect. Development of the Hawthorne Option, in combination with past, present, and probable future projects, would not result in a cumulatively considerable impact on natural gas or oil facilities. Therefore, cumulative impacts would be less than significant.

Telecommunications Facilities

AT&T, Frontier Communications, and Spectrum provide telephone and telecommunication services within the RSA, and no cumulative shortfalls in service capacity have been identified. Construction activities would have no potential to necessitate the construction of new or expanded telecommunication facilities. Relocation of telecommunication facilities would be coordinated through

PF-US-1 and service interruptions would be notified pursuant to PF-US-2. Operations have no potential to interfere with telecommunication facilities, which would be entirely outside of the alignment. For past, present, and probable future projects, any necessary utility upgrades would be determined and implemented by the responsible service providers under their established procedures and requirements. Accordingly, development of the Hawthorne Option, in combination with other projects, would not result in a cumulatively considerable impact on telecommunication facilities during construction or operation. Therefore, cumulative impacts would be less than significant.

Findings

For the reasons stated above and based on substantial evidence in the record as a whole, Metro finds that the Hawthorne Option's incremental contribution to cumulatively significant impacts related to water facilities, wastewater, stormwater, solid waste, electric power, and natural gas during construction and operation would not be cumulatively considerable. Metro also finds that the Hawthorne Option, in combination with past, present, and probable future projects, would not result in a significant cumulative impact related to oil or telecommunication facilities.

7.12. ENERGY

There is an existing cumulative impact related to energy resources. State, regional, and local agencies and jurisdictions have published a wide range of documents intended to reduce energy consumption and increase the use of renewable energy, in order to reduce pollution that contributes to global warming. The Hawthorne Option, combined with past, present, and probable future projects, could contribute to the existing cumulative impact.

Construction of the Hawthorne Option would require a one-time expenditure of diesel fuel and gasoline over the approximately six-year duration. However, the forecasted fuel consumption would represent tiny increases of less than 0.05% and less than 0.001% for diesel fuel and gasoline, respectively, relative to the forecasted on-road vehicle fueled consumption within the SCAB portion of Los Angeles County. These increases would not place an undue burden on existing petroleum-based transportation fuel reserves or supply within Los Angeles County. All equipment and vehicles that would be used in construction activities would comply with applicable CARB regulations, the Pavley and Low Carbon Fuel Standards, and the Corporate Average Fuel Economy Standards. The project would adhere to the provisions of the Metro Green Construction Policy to control and minimize emissions to the maximum extent feasible and would also be consistent with GHG-reduction plans.

Therefore, the incremental contribution of the Hawthorne Option's construction activities to the existing cumulative energy impact would not be cumulatively considerable.

Regarding operational activities, the project would indirectly change regional energy consumption through changes in regional VMT. The Hawthorne Option would reduce annual regional energy consumption and result in a net energy benefit. Operational electricity requirements would not place a strain on available SCE power supply.

Finding

For the reasons stated above and based on substantial evidence in the record as a whole, Metro finds that the Hawthorne Option's incremental contribution to cumulatively significant impacts related to energy during construction and operation would not be cumulatively considerable.

7.13. CULTURAL RESOURCES

Development of the project in combination with other projects located in the adjacent area would increase the potential for impacts to historical and archaeological resources and could contribute to the loss of such resources in the region.

There are no historical resources located within the RSA, and therefore, there would be no impact related to historical resources. However, the project would have a potentially significant impact related to the disturbance of unknown archaeological resources during construction. Mitigation Measures MM-CUL-1 (Cultural Resources Identification Training), and MM-CUL-2 (Cultural Resources Monitoring and Mitigation Plan) would be implemented, which would reduce the impact to less than significant. Probable future projects would be expected to comply with applicable federal, state, and local regulations to protect historic and archaeological resources, and would implement project-specific mitigation measures during construction. Operational activities would not have the potential to encounter archaeological resources or human remains, and there would be no impact. Therefore, the Hawthorne Option, in combination with past, present, and probable future projects, would not result in a significant cumulative impact on historic and archaeological resources during construction or operation.

Finding

For the reasons stated above and based on substantial evidence in the record as a whole, with implementation of Mitigation Measures MM-CUL-1, MM-CUL-2, and MM-CUL-3, the Hawthorne Option would not combine with past, present, and probable future projects to result in a significant cumulative impact on historic and archaeological resources during construction or operation. Thus, with respect to this cumulative impact, Metro adopts CEQA Finding 1, as identified in Section 3 above and in Section 15091, subdivision (a)(1) of the CEQA Guidelines.

7.14. TRIBAL CULTURAL RESOURCES

Development of the Hawthorne Option, in combination with past, present, and probable future projects, would increase the potential for disturbance of tribal cultural resources in the region. The degree of impact from cumulative development depends on site-specific conditions and the nature of each project. No tribal cultural resources have been identified within the Hawthorne Option RSA, but unknown resources could be encountered during ground disturbance. In that event, Metro would comply with applicable federal, state, and local guidelines, including PRC Sections 2108.3.2 and 5097.98 and Health and Safety Code Section 7050.5. Mitigation Measures MM-TCR-1 (Native American Monitoring), MM-TCR-2 (Unanticipated Discovery of Tribal Cultural Resource Objects [Non-Funerary/Non-Ceremonial]), and MM-TCR-3 (Unanticipated Discovery of Human Remains and Associated Funerary or Ceremonial Objects) would be implemented to address any discovery, which would reduce the impact to less than significant. Probable future projects in the area would similarly be required to comply with federal, state, and local regulations governing tribal cultural resources and implement appropriate mitigation measures, as needed. Accordingly, development of the Hawthorne Option, in combination with past, present, and probable future projects, would not result in a cumulatively significant impact on tribal cultural resources during construction. During operation, the project would not involve subsurface disturbance that could affect such resources, and no cumulative operational impacts would occur.

Finding

For the reasons stated above and based on substantial evidence in the record as a whole, with implementation of Mitigation Measures MM-TCR-1, MM-TCR-2, and MM-TCR-3, the Hawthorne Option would not result in a cumulatively considerable impact related to cultural resources. Thus, with respect to this cumulative impact, Metro adopts CEQA Finding 1, as identified in Section 3 above and in Section 15091, subdivision (a)(1) of the CEQA Guidelines.

7.15. PUBLIC SERVICES

Fire and Police Protection

Construction of the project, in combination with past, present, and probable future projects, could increase demand for fire and police protection services within the RSA. Construction of the Hawthorne Option would not result in direct physical impacts to fire and police protection facilities. While temporary lane closures could occur during construction, as part of Project Feature PF-T-1 (Construction Traffic Management Plan), Metro would coordinate with emergency service providers to maintain emergency access. There are planned roadway projects close to the alignment that could be potentially disruptive to service if construction occurred concurrently, but given the shorter and more-intermittent duration of the nature of these types of roadway improvement projects, overlap of construction periods would be minimal, if at all. The probable future projects would implement their own measures to reduce impacts to emergency services by implementing detours and appropriate notification of agencies. Neither construction nor operation of the Hawthorne Option would result in direct population growth that would necessitate new police facilities and police services or otherwise substantially impact police services. Indirect population growth as a result of and in combination with probable future projects in the region are anticipated to be consistent with the SCAG adopted growth projects and are accounted for within cities' plans. Accordingly, the project, in combination with past, present, and probable future projects, would not have cumulatively significant impacts related to fire and police protection during construction or operation.

Schools

Construction of the project, in combination with past, present, and probable future projects, would not result in a significant cumulative impact related to demand for school facilities. During construction, the project and other probable future projects could bring additional workers to the area. However, construction workers would be unlikely to relocate households or residences as a consequence of working on the project or other local projects; therefore, no significant demand for unpanned new school facilities would occur during construction and there would be no significant cumulative impact.

During operation, the project, combined with past, present, and probable future projects, could increase demand for schools by increasing the population in the area. However, the project would not directly increase the number of residents and, thus, would not directly increase demand for schools or necessitate new school facilities. Any indirect population growth as a result of and in combination with past, present, and probable future projects is expected to be consistent with the SCAG adopted growth projects and accounted for within cities' plans. Therefore, cumulative impacts to schools are expected to be less than significant. Moreover, the Hawthorne Option's incremental contribution to any such impact would not be cumulatively considerable.

Parks and Recreational Facilities

Construction of the project, in combination with past, present, and probable future projects, would not result in a significant cumulative impact on parks. Cumulative construction could increase the local

workforce, which could increase use of parks during construction. However, construction workers would not be expected to relocate household or permanent residences in connection with the project or other present and future projects under construction; therefore, no significant long-term demand on existing parks is anticipated during construction.

During operation, past, present, and probable future projects could increase demand for parks and recreational facilities by population growth. However, the project would not directly increase the number of residents and, therefore, would not directly increase the need for new parks and recreational facilities. Any indirect population growth as a result of the project, in combination with past, present and probable future projects in the region, is anticipated to be consistent with the SCAG regional growth projections, which account for population increases in planning for parks. Accordingly, cumulative impacts to parks and recreational facilities are expected to be less than significant, and, in any case, the incremental contribution of the Hawthorne Option to any such cumulative impact would not be cumulatively considerable.

Libraries

There are no libraries within a quarter mile of the Hawthorne Option. Regionally, past, present, and probable future projects could increase use of libraries during construction as a result of a larger workforce, but construction workers would not be expected to relocate households or permanent residences in connection with the Hawthorne Option or other projects. Accordingly, no significant long-term demand for libraries is anticipated during construction.

During operation, the Hawthorne Option would not directly increase the number of residents and thus would not directly increase demand for library facilities. Any indirect effects of the project, in combination with past, present, and probable future projects, are anticipated to be consistent with the SCAG adopted growth projects and accounted for within cities' plans, which already account for population increases in planning for libraries. Therefore, a significant cumulative impact is not expected. Moreover, the project's incremental contribution to any such impact would not be cumulatively considerable.

Findings

For the reasons stated above and based on substantial evidence in the record as a whole, Metro finds that the Hawthorne Option's incremental contribution to cumulatively significant impacts related to schools, parks, and libraries during construction and operation would not be cumulatively considerable. Metro also finds that the Hawthorne Option, in combination with past, present and probable future projects, would not result in a significant cumulative impact related to fire or police protection services during construction or operation.

8. FINDINGS FOR ALTERNATIVES

CEQA provides that “public agencies should not approve projects as proposed if there are feasible alternatives ... available which would substantially lessen the significant environmental effects of such projects[.]” (PRC Section 21002.) However, “in the event specific economic, social, or other conditions make infeasible such project alternatives ... , individual projects may be approved in spite of one or more significant effects thereof.” (*Ibid.*) As defined by CEQA, “feasible” means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, legal, and technological factors. (PRC Section 21061.1; CEQA Guidelines Section 15126.6(f)(1).)

In determining whether an alternative is “feasible” under CEQA, an agency may consider whether that alternative will promote the project’s objectives and goals. (*Sequoyah Hills Homeowners Assn. v. City of Oakland* (1993) 23 Cal.App.4th 704, 715; *California Native Plant Society v. City of Santa Cruz* (2009) 177 Cal.App.4th 957, 1001.) The feasibility determination also “encompasses ‘desirability’ to the extent that desirability is based on a reasonable balancing of the relevant economic, environmental, social, legal, and technological factors.” (*City of Del Mar v. City of San Diego* (1982) 133 Cal.App.3d 401, 417; *California Native Plant Society, supra*, at p. 1001.) Broad policy decisions come into play when determining whether alternatives are feasible, and “an alternative that ‘is impractical or undesirable from a policy standpoint’ may be rejected as infeasible.” (*Ibid.* [upholding agency’s reliance on policy considerations like “promoting transportation alternatives” and “access to ... open space for persons with disabilities” in making its infeasibility findings].)

In accordance with CEQA Guidelines Section 15126.6(a), a range of feasible alternatives was identified and evaluated in a manner intended to foster meaningful public participation and support informed decision making. A detailed description of the project alternatives is provided in Chapter 2, Project Description, and Chapter 4, Evaluation of Alternatives, of the Draft EIR.

8.1. NO PROJECT ALTERNATIVE

The No Project Alternative, required by CEQA Guidelines Section 15126.6(e)(2), assumes that the project would not be implemented. As part of the No Project Alternative, no additional light rail tracks or stations would be added south of the existing light rail terminus at the Redondo Beach (Marine) Station. The No Project Alternative is based on a review of local general plans, capital improvement programs, and regional transportation plans, including the SCAG 2020-2045 RTP/SCS and Metro’s 2020 Long-Range Transportation Plan (LRTP).

As described in Chapter 4, Evaluation of Alternatives, of the Draft EIR, the No Project Alternative would avoid all construction disruption and construction-related environmental impacts. However, the No Project Alternative would conflict with regional and local programs, plans, ordinances, and policies related to transportation, land use and planning, air quality, GHG emissions, and energy. It would also constrain opportunities for transit-oriented development and related economic investment in station areas, leaving adopted regional growth plans unsupported by major transit infrastructure. The No Project Alternative would also not achieve or address any of the project objectives or benefits since it would not provide light rail service in the South Bay, achieve the air quality and reduction in GHG emissions, avoid or minimize environmental impacts to the maximum extent, nor provide equitable development opportunities as proposed by the Hawthorne Option. By failing to provide a transit solution, the No Project Alternative would exacerbate cumulative traffic, air quality, and GHG conditions by shifting growth-related travel demand onto already congested roadways.

Therefore, the No Project Alternative would not be consistent with the goals and objectives for the project. Thus, Metro adopts CEQA Finding 3, as identified in Section 3 above and in Section 15091, subdivision (a)(3) of the CEQA Guidelines.

8.2. HIGH-FREQUENCY BUS ALTERNATIVE

The High-Frequency Bus (HFB) Alternative would implement a rapid bus service instead of a light rail extension. There would be four bus stops between the existing Redondo Beach (Marine) Station and Torrance TC. Physical improvements would be limited to new signs at bus stops, as well as shelters with solar lighting, benches, and trash receptacles, as a minimum level of bus stop amenities. Where practical, the HFB Alternative may include curb extensions, elimination of street parking, or other improvements to the sidewalk area near new bus stops. The HFB Alternative would also require a transfer at the Redondo Beach (Marine) Station in order for riders to continue further, increasing travel time and potential delays. Travel times from end to end would be about 25 minutes, which is faster than local bus service (approximately one hour, with a transfer), but slower than the travel times expected from the Hawthorne Option. The HFB Alternative would create a duplication of service for Torrance Line 8.

As described in Chapter 4, Evaluation of Alternatives, of the Draft EIR, the HFB Alternative would reduce all significant impacts to a less than significant level, have the shortest construction period, and the lowest costs of all the alternatives, including the Hawthorne Option. While the HFB Alternative would meet the objectives of the project to some degree, the objectives would be better met by the Hawthorne Option, which would provide greater mobility benefits and VMT reductions. The HFB Alternative would offer less passenger capacity than the light rail alternatives and options. As traffic conditions worsen with projected population growth, the HFB Alternative may experience slower travel times and reduced reliability.

In addition, the HFB Alternative would not advance Metro's adopted regional transit expansion commitment or the SCAG RTP/SCS strategy of expanding high-capacity transit to meet climate and mobility goals to the degree that the Hawthorne Option would. The HFB Alternative would not provide the same long-term capacity for projected ridership, limiting Metro's ability to reduce VMT, GHG emissions, and regional air pollutants relative to the Hawthorne Option. The HFB Alternative would also provide fewer opportunities for equitable transit-oriented development near stations, reducing potential economic investment and housing opportunities compared to the Hawthorne Option. Because the HFB Alternative would require transfers and provide longer travel times, it would be less attractive to riders, particularly transit-dependent riders who would disproportionately bear the burden of slower and less reliable service.

Given the limited environmental benefits of the HFB Alternative and its limited ability to achieve the project's goals and objectives, Metro adopts CEQA Finding 3, as identified in Section 3 above and in Section 15091, subdivision (a)(3) of the CEQA Guidelines.

8.3. ELEVATED/AT-GRADE ALIGNMENT

The Elevated/At-Grade Alignment, referred to as the Proposed Project in the Draft EIR, would remain within the Metro ROW for the 4.5-mile extension, generally paralleling the freight rail corridor and providing rail connections to the Redondo Beach TC and the Torrance TC. It would have at-grade crossings at 170th and 182nd Streets (rather than the short below-grade trench segments proposed for the 170th/182nd Grade-Separated Light Rail Transit Alternative).

As described in the 2025 Ridership Summary Report, the Elevated/At-Grade Alignment would have similar, basic benefits as the Hawthorne Option, which include an annual VMT reduction, increased ridership and travel time savings, direct access to other transit networks, and station areas. However, the Hawthorne Option would generate higher ridership than the Elevated/At-Grade Alignment. Specifically, the Hawthorne Option is estimated to generate approximately 4.98 million annual project trips and 1.75 million annual new riders, compared to approximately 3.68 million annual project trips and 1.49 million annual new riders for Metro ROW alignments, including the Elevated/At-Grade Alignment. Although the Elevated/At-Grade Alignment would complete construction sooner than the Hawthorne Option and has a lower capital cost compared to the Hawthorne Option, it would result in significant and unavoidable noise impacts during operations due to the light rail crossing gates and warning bells required for at-grade crossings. These impacts could not be reduced to less than significant levels with feasible mitigation.

The Elevated/At-Grade Alignment would also result in a significant and unavoidable vibration damage impact during construction because it would require reconstruction of the existing Grant Avenue freight bridge—an impact that would not occur under the Hawthorne Option. Even with implementation of mitigation measures, the Elevated/At-Grade Alignment would still result in a significant and unavoidable vibration damage impact to one structure during construction, as well as the temporary vibration annoyance impacts similar to those anticipated for the other light rail alternatives and options.

In sum, compared to the Hawthorne Option, the Elevated/At-Grade Alignment would result in greater significant and unavoidable impacts without providing any additional long-term environmental benefits. Although the Elevated/At-Grade Alignment would have lower construction costs and a nearer opening date of revenue service than the Hawthorne Option, these advantages are outweighed by the increased operational noise and construction vibration damage impacts. No feasible mitigation measures are available to reduce the significant and unavoidable operational noise and construction vibration damage impacts to less than significant levels. Thus, Metro adopts CEQA Finding 3, as identified in Section 3 above and in Section 15091, subdivision (a)(3) of the CEQA Guidelines.

8.4. TRENCH OPTION

The Trench Option is similar to the Elevated/At-Grade Alignment but would include a continuous below-grade trench between Inglewood Avenue and 170th Street as well as a short trench under 182nd Street to grade-separate the light rail crossing.

As described in the 2025 Ridership Summary Report, the Trench Option would achieve similar basic benefits as the Hawthorne Option, including an annual VMT reduction, increased ridership and travel time savings, direct access to other transit networks, and opportunities for station area development. However, the Hawthorne Option would generate higher ridership than the Trench Option. Specifically, the Hawthorne Option is estimated to generate approximately 4.98 million annual project trips and 1.75 million annual new riders, compared to approximately 3.68 million annual project trips and 1.49 million annual new riders for Metro ROW alignments, including the Trench Option. The Trench Option would also require a longer overall construction period than the Hawthorne Option. Unlike the Hawthorne Option, the Trench Option would require deep excavations to avoid an underground storm drain near Inglewood Avenue and Manhattan Beach Boulevard, an area that includes shallow groundwater and known soil and groundwater contamination. As a result, the Trench Option would involve complex dewatering and groundwater management procedures to prevent migration or release of contaminated groundwater. Constructing a lengthy trench (approximately two miles) in close proximity to residential

neighborhoods while maintaining active freight operations would also create logistical and engineering challenges.

Moreover, unlike the Hawthorne Option, the Trench Option would cause significant and unavoidable air quality impacts during construction, which could not be mitigated to less than significant levels. The more complex trench design would also increase community disruption during construction, including greater truck hauling, dust, and noise near sensitive residential uses.

In comparison to the Hawthorne Option, the Trench Option would, therefore, achieve no additional long-term benefits while imposing a longer overall construction period, and significant and unavoidable construction-related air quality impacts.

Accordingly, although the Trench Option would meet many project objectives, it would do so less effectively than the Hawthorne Option and with greater adverse impacts. Metro, therefore, adopts CEQA Finding 3, as identified in Section 3 above and in Section 15091, subdivision (a)(3) of the CEQA Guidelines.

8.5. 170TH/182ND GRADE SEPARATED LIGHT RAIL TRANSIT ALTERNATIVE (LPA)

Construction and operation of the 170th/182nd Grade Separated Light Rail Transit Alternative, selected in May 2024 as the Locally Preferred Alternative (LPA), would be similar to the Elevated/At-Grade Alignment, except for the area between 170th and 182nd Streets, where the alignment would be in a trench to fully grade separate light rail. The two grade separations, with mitigations, eliminate significant noise impacts during operations and significant vibration impacts during construction related to building damage. However, due to less excavation than the Trench Option, this alternative reduces air quality impacts during construction to less than significant, similar to the Hawthorne Option. The LPA and Hawthorne Option have comparable environmental impacts; each would have significant and unavoidable construction noise and construction vibration (annoyance) impacts.

Metro's technical comparisons show that the Hawthorne Option would generate higher ridership and new riders than the LPA. Specifically, the Hawthorne Option is estimated to generate approximately 4.98 million annual project trips and 1.75 million annual new riders, compared to approximately 3.68 million annual project trips and 1.49 million annual new riders for the Metro ROW alignments, including the LPA.

The Hawthorne Option also performs well in terms of station-area redevelopment potential. Metro's comparative summary characterizes TOD opportunities for the Hawthorne Option's station area as high, reflecting that the option would place a station near the South Bay Galleria area. (Metro Board Report, for the May 23, 2024 Regular Board Meeting, File #: 2024-0272).

Metro recognizes that the Hawthorne Option has a greater capital cost, requires additional third-party approvals and introduces specific construction and permitting challenges, including a Caltrans encroachment permit, potential federal environmental documentation, complex utility relocations, with construction staged largely within the roadway and affecting a heavily traveled corridor with substantial business frontage, and permanent commercial property acquisitions. However, even with these challenges, Metro finds that the Hawthorne Option is a strong mobility option with high projected annual project trips and annual new riders, which help it achieve the basic objectives of the Project to improve mobility within the South Bay and encourage mode shift.

Thus, Metro finds that the Hawthorne Option is more desirable from a policy standpoint than the LPA.

8.6. FINDINGS FOR THE ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA Guidelines Section 15126.6 requires that an “environmentally superior” alternative be identified. The environmentally superior alternative is the alternative that would be expected to generate the fewest adverse impacts, regardless of its ability to meet the project objectives. If the environmentally superior alternative is the No Project alternative, the EIR must also identify an environmentally superior alternative among the other alternatives.

As described in Chapter 4, Evaluation of Alternatives, in the Draft EIR, the HFB Alternative would be the environmentally superior alternative, as it would avoid all significant environmental impacts. However, while the HFB Alternative would minimize impacts, it would not realize the same level of benefits from VMT reduction, air quality improvements, GHG emissions reduction, energy savings, and equitable access. Accordingly, although the HFB Alternative is the environmentally superior alternative in terms of impact avoidance, the Hawthorne Option is the superior alternative among those that feasibly meet the project objectives, because it provides the most effective balance of environmental protection, mobility improvements, and consistency with regional and local plans. Thus, with respect to the environmentally superior alternative, Metro adopts CEQA Finding 3, as identified in Section 3 above and in Section 15091, subdivision (a)(3) of the CEQA Guidelines.

9. FINDINGS FOR MITIGATION MEASURES

CEQA provides that “public agencies should not approve projects as proposed if there are ... feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects[.]” (PRC Section 21002.) However, “in the event specific economic, social, or other conditions make infeasible ... such mitigation measures, individual projects may be approved in spite of one or more significant effects thereof.” (*Ibid.*) As defined by CEQA, “feasible” means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, legal, and technological factors. (PRC Section 21061.1; CEQA Guidelines Section 15126.6(f)(1).)

In determining whether a mitigation measure is “feasible” under CEQA, an agency may consider whether that mitigation measure will promote the project’s objectives and goals. (*Sequoyah Hills Homeowners Assn., supra*, 23 Cal.App.4th at p. 715; *California Native Plant Society, supra*, 177 Cal.App.4th at p. 1001.) The feasibility determination also “encompasses ‘desirability’ to the extent that desirability is based on a reasonable balancing of the relevant economic, environmental, social, legal, and technological factors.” (*City of Del Mar, supra*, 133 Cal.App.3d at p. 417; *California Native Plant Society, supra*, at p. 1001.) Broad policy decisions come into play when determining whether mitigation measures are feasible. (See *Ibid.*)

The Metro Board has considered every mitigation measure recommended in the Draft EIR and Final EIR. Metro hereby binds itself to implement or, as appropriate, require implementation of these measures. The MMRP will be adopted concurrently with these Findings and will be effectuated through the process of constructing and implementing the project.

Regarding the project features, the Metro Board finds and affirms that these features are integral components of the project itself, not mitigation measures. They were included in the project description and evaluated in the Draft and Final EIR as part of the proposed project, rather than being imposed after the fact to reduce significant impacts. In approving the project, Metro commits to full implementation of the project features identified in the Draft and Final EIR.

Some comments on the Draft EIR suggested additional mitigation measures or modifications to the mitigation measures recommended in the Draft EIR. As shown in Chapter 4, Corrections and Additions, of the Final EIR, Metro added or revised project features and mitigation measures in response to comments. In response to other comments, Metro explained why suggested mitigation measures were not feasible or not superior to the mitigation measures already identified in the Draft EIR. The Metro Board agrees with the Final EIR in those instances when proposed mitigation measure revisions were not accepted, and hereby ratifies, adopts, and incorporates the Final EIR’s reasoning on these issues.

10. STATEMENT OF OVERRIDING CONSIDERATIONS

Pursuant to PRC Section 21081, subdivision (b) and CEQA Guidelines Section 15093, if an EIR demonstrates that a project will result in one or more significant and unavoidable environmental impacts, the lead agency may nonetheless approve the project if it determines that the project's economic, social, environmental, or other benefits outweigh those impacts. This determination is embodied in a Statement of Overriding Considerations.

CEQA requires that such a statement be supported by substantial evidence in the record and reflect the lead agency's balancing of the project's benefits against its environmental consequences. In making this determination, the agency exercises its discretion to weigh competing policy considerations, including statewide and regional objectives, local planning goals, and community needs. The statute expressly recognizes that public agencies may approve projects with unavoidable impacts where there are countervailing benefits, and the courts have confirmed that the responsibility for striking this balance rests squarely with the decision-making body.

As the lead agency for the project, the Metro Board has both the authority and the responsibility under CEQA to make this policy judgment. In adopting this Statement of Overriding Considerations, the Metro Board exercises its discretion to determine that the benefits of the Hawthorne Option outweigh the project's significant and unavoidable impacts, and that approval of the project is, therefore, appropriate under CEQA.

10.1. SIGNIFICANT AND UNAVOIDABLE IMPACTS

The Hawthorne Option would result in temporary significant and unavoidable impacts for noise and vibration during construction.

Impact 3.6-4.1: Ambient Noise During Construction

The project would result in temporary and periodic increases in ambient noise levels due to construction activity that would exceed FTA standards. While Mitigation Measure MM-NOI-1 (Noise Control Plan) would be implemented as part of the project, which would include noise-reducing measures, there would still be temporary or periodic increases in ambient noise levels that exceed FTA construction impact criteria. There are no feasible mitigation measures to reduce construction noise levels below the FTA's threshold of significance. Therefore, the significant and unavoidable impact related to construction noise would remain.

Impact 3.6-4.3: Ground-Borne Vibration Annoyance During Construction

Construction of the Hawthorne Option would result in significant annoyance vibration impacts, resulting from operation of construction equipment (e.g., vibratory roller and impact pile driver) near residential structures and sensitive land uses. Mitigation Measures MM-VIB-1 (Vibration Control Plan) and MM-VIB-2 (Construction Equipment Location) would reduce vibration impacts, but it would not be feasible to limit the use of all types of equipment, as some pieces of equipment cannot be modified or replaced. Therefore, the significant and unavoidable impact related to vibration annoyance during construction would remain.

10.2. OVERRIDING BENEFITS OF THE PROJECT

The Metro Board has carefully weighed the benefits of the Hawthorne Option against its significant and unavoidable impacts identified above. As discussed in Section 10.1, these impacts consist of temporary construction-period noise and vibration (annoyance) impacts. The Metro Board finds that, even assuming these impacts, the Hawthorne Option would generate specific economic, social, environmental, and other benefits that outweigh the adverse impacts. Each benefit described below constitutes a separate and independent basis for approving the Hawthorne Option, and any one of them, standing alone, would be sufficient to override the significant and unavoidable impacts. Considered together, these benefits provide compelling and overwhelming justification for approval of the Hawthorne Option.

- > **Increased Transportation Mobility:** The South Bay currently lacks fast, frequent, and reliable transit connections to the rest of Los Angeles County, limiting access to jobs, services, and key destinations. The project addresses these challenges and would substantially expand access to opportunities for residents and workers throughout the South Bay and the greater Los Angeles region. Approximately 4.98 million boardings are expected each year, including approximately 1.75 million annual new riders to the Metro system. By extending the K Line south to Torrance, the project would also integrate two new bus transit centers into the existing regional rail and bus network and provide seamless connections to the LAX/Metro Transit Center located at LAX, as well as the broader regional system. These connections would significantly improve transit mobility for South Bay residents and strengthen the regional multimodal transportation network.
- > **Reduced Travel Times:** The project would provide a direct, one-seat ride from the Torrance TC to LAX in 19 minutes. This represents a significant travel time saving compared to existing conditions and would markedly improve connections between the South Bay, the airport, and the greater Los Angeles area. By providing faster, more reliable service, the project would link many Equity Focus Communities to major employment and activity centers along the Metro C, K, and E Lines, thereby improving access to jobs, education, health care, and other essential services. These mobility benefits would enhance regional competitiveness and promote equitable access to opportunities.
- > **Environmental Benefits:** The project would divert vehicle trips from congested freeways and arterial streets, thereby reducing VMT. Reductions in VMT translate into reductions in air pollutants and GHG emissions. These benefits are consistent with, and help advance, regional and statewide policy commitments to address climate change and improve air quality, including implementation of SB 375, California's Scoping Plan under AB 32 and SB 32, and SCAG's RTP/SCS. By shifting drivers to transit, the Hawthorne Option would help address climate change and reduce congestion, with anticipated reductions of approximately 42,951 million VMT per day and 1,871.18 MTCO₂e per year.
- > **Economic Development and Job Creation:** The project would generate substantial economic benefits through both short-term construction employment and long-term economic growth. During construction, the project is expected to create 15,000 jobs in the Los Angeles region, including skilled trade and apprenticeship opportunities that support local workforce development and disadvantaged communities. Consistent with Metro's commitment to small business participation and disadvantaged business enterprises, the project would also create contracting opportunities for local firms. Over the long term, the project would help catalyze investment in station areas, thereby supporting new housing, commercial space, and transit-oriented development and stimulating sustained economic activity and expanding the local tax base. These benefits would extend beyond the immediate corridor and strengthen the region's overall economic vitality.

- > **Equity Benefits:** The project would provide particular benefits for Equity Focus Communities in the South Bay and South Los Angeles, where many residents are transit-dependent and face disproportionate transportation cost burdens. By offering a fast, reliable, and affordable connection to major employment and activity centers, the project would expand access to jobs, education, health care, and other essential services. The project would also reduce exposure to harmful air pollutants in these communities by shifting trips away from single-occupancy vehicles and reducing emissions in areas already burdened by poor air quality. By advancing Metro's adopted equity policies and state commitments to environmental justice, the project would meaningfully improve mobility, affordability, and health outcomes for historically underserved populations. Additionally, Metro has engaged in, and would continue to engage in, extensive public outreach to ensure that community perspectives are reflected in the project's development.
- > **Consistency with Regional and Local Planning Documents:** The project advances the region's collective commitments to mobility, equity, air quality, and climate goals. The project is identified as a priority investment in Metro's 2020 Long Range Transportation Plan and SCAG's 2020–2045 RTP/SCS and 2024–2050 RTP/SCS. Advancing the project directly implements these adopted plans, which establish the region's strategy for reducing GHG emissions, supporting sustainable growth, and expanding high-capacity transit. At the local level, the project is consistent with the general plans of the corridor cities, which encourage transit. Failure to implement the project would frustrate these adopted plans and undermine the region's ability to achieve its climate and sustainability goals.

Based on the foregoing findings, the Metro Board determines that the economic, social, and environmental benefits of the Hawthorne Option outweigh the significant and unavoidable impacts identified in the Final EIR and the record of proceedings. In making this determination, the Metro Board has carefully balanced the benefits of the Hawthorne Option against its unavoidable impacts and concludes that approval of the Hawthorne Option is appropriate under CEQA. The Metro Board further finds that each one of the foregoing benefits, independent of the others, provides a sufficient basis to approve the Hawthorne Option notwithstanding its unavoidable significant impacts.

ACRONYMS

ACM	Asbestos-Containing Material
ADL	Aerially deposited lead
ATCM	Airborne Toxic Control Measure
BACT	Best Available Control Technology
bgs	Below Ground Surface
BMP	Best Management Practice
CAAP	Climate Action and Adaptation Plan
CAAQS	California Ambient Air Quality Standards
CalGEM	California Geologic Energy Management Division
CALGreen Code	California Green Building Standards Code
CAMUTCD	California Manual on Uniform Traffic Control Devices
CARB	California Air Resource Board
CBC	California Building Code
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFGF	California Fish and Game Code
CFR	Code of Federal Regulations
CGS	California Geological Survey
CHRIS	California Historical Resources Information System
CO	Carbon Monoxide
CPTED	Crime Prevention through Environmental Design
CPUC	California Public Utilities Commission
CRMMP	Cultural Resources Monitoring and Mitigation Plan
CTMP	Construction Traffic Management Plan
CWA	Clean Water Act
CY	Cubic Yard
dBA	Decibels A
DTSC	Department of Toxic Substances Control
EIR	Environmental Impact Report
ESA	Environmental Site Assessment
FRA	Federal Railroad Administration
FTA	Federal Transit Administration
FTIP	Federal Transportation Improvement Program
FRA	Federal Railroad Administration
GHG	Greenhouse Gases
HFB	High-Frequency Bus
JWPCP	Joint Water Pollution Control Plant
kWh	Kilowatt-Hours
LACDPW	County of Los Angeles Department of Public Works
LAX	Los Angeles International Airport
LBP	Lead-Based Paint
LED	Light Emitting Diode
L _{eq}	Equivalent Continuous Sound Level
LID	Low Impact Development

LPA	Locally Preferred Alternative
L RTP	Long-Range Transportation Plan
MBTA	Migratory Bird Treaty Act
MDE	Maximum Design Earthquake
Metro	Los Angeles County Metropolitan Transportation Authority
Metro ROW	Metro-owned right-of-way
MJ	Megajoule
MM	Mitigation Measure
MMRP	Mitigation Monitoring and Reporting Program
MRDC	Metro Rail Design Criteria
MS4	Municipal Separate Storm Sewer System
MSAT	Mobile Source Air Toxics
MTCO _e	Metric tons of carbon dioxide equivalent
MWh	Megawatt-Hours
NAAQS	National Ambient Air Quality Standards
NOP	Notice of Preparation
NO _x	Nitrogen Oxides
NPDES	National Pollutant Discharge Elimination System
NTP	Notice to Proceed
O ₃	Ozone
ODE	Operating Design Earthquake
PCB	Polychlorinated Biphenyls
PF	Project Feature
PM _{2.5}	Particulate Matter Less than 2.5 Microns in Diameter
PM ₁₀	Particulate Matter Less than 10 Microns in Diameter
PRC	Public Resources Code
PRMMP	Paleontological Resources Monitoring and Mitigation Plan
RSA	Resource Study Area
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison
SOI	Secretary of the Interior
SSDC	Supplemental Seismic Design Criteria
SVP	Society of Vertebrate Paleontology
SWQDV	Stormwater Quality Design Volume
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TC	Transit Center
Torrance TC	Mary K. Giordano Regional Transit Center
TPSS	Traction Power Substation
TWW	Treated Wood Waste
USEPA	United States Environmental Protection Agency
VdB	Velocity Level Decibels

VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compounds
WDR	Waste Discharge Requirements

Mitigation Monitoring and Reporting Program

December 2025

C LINE (GREEN) EXTENSION TO TORRANCE



Metro

1. INTRODUCTION

Public Resources Code, under Section 21081.6, requires the lead agency to adopt a “reporting or monitoring program for the changes made to the project or conditions of project approval, adopted in order to mitigate or avoid significant effects on the environment.”

As lead agency, Metro is responsible for administering and implementing a Mitigation Monitoring and Reporting Report (MMRP) for the Project. A Draft and Final Environmental Impact Report (EIR) has been prepared to evaluate potential environmental impacts of the Project and recommend mitigation measures adopted for the Project are implemented in compliance with Public Resources Code section 21081.6 and CEQA Guidelines (14 Cal. Code Regs.) section 15097. The purpose of the MMRP is to ensure implementation of the mitigation measures identified in the Final EIR and approved for the Project. The MMRP provides a means for monitoring and documenting the implementation of mitigation measures, thereby ensuring that the measures are completed in a timely and effective manner. Mitigation measures apply to all alignments unless otherwise noted. Table 1 provides the following information for each adopted mitigation measure:

- > Compliance Action/Deliverable – The specific action(s) or documentation that has been identified to demonstrate compliance with the mitigation measure.
- > Responsible Party – Metro is ultimately responsible for ensuring implementation of all mitigation measures. In many cases, Metro will rely on its contractors, consultants, or qualified specialists (e.g., a qualified biologist, archaeologist, or paleontologist) to carry out specific actions or deliverables. Table A identifies these entities for clarity, but Metro retains overall responsibility for implementation.
- > Enforcement Agency – Metro is generally responsible for monitoring and verifying compliance. Where another agency has permitting or statutory authority, that agency is identified. Listing another agency in this column does not expand Metro’s legal authority or reduce Metro’s responsibility under CEQA to ensure implementation to the extent feasible.
- > Monitoring/Compliance Schedule – The timing of implementation, including the applicable phase(s) of the project.
- > Verification of Compliance – Confirmation that the mitigation measure has been implemented, as documented by initialing, dating, and signing.

In addition to mitigation measures, the Project includes project features, which are integral components of the Project design rather than measures to reduce environmental impacts. These features reflect Metro’s standard design practices, commitments to regulatory compliance, and the application of best practices in transit construction and operation. Because they are part of the Project itself, project features are not mitigation measures under CEQA; however, they are included in this MMRP to ensure clarity regarding implementation and verification. The project features are presented as an attachment to this MMRP, as well as in Appendix 2-C, Project Features, of the Draft EIR and Chapter 4, Corrections and Additions, of the Final EIR.

Table 1 Mitigation Monitoring and Reporting Program

Mitigation Measure		Compliance Action/Deliverable	Responsible Party	Enforcement Agency	Monitoring/Compliance Schedule	Verification of Compliance	
						Initial	Date
Land Use							
Hawthorne Option Only	MM-LU-1: Temporary Crossings	Incorporate temporary crossing requirements into the construction traffic management plans.	Metro	Metro	Final Design (prior to permit issuance and initiation of major roadway work)		
	Where construction requires the closure of crosswalks or other pedestrian roadway crossings and an alternate crossing route does not exist within 1,000 feet of the closed crossing, the contractor shall provide a temporary alternate crossing nearby. These temporary crossings shall be identified in the construction traffic management plans for the cities of Lawndale, Redondo Beach, and Torrance, described in Project Feature T-1, which would be completed prior to the issuance of a building permit for the Hawthorne Option and the initiation of major roadway work. The plan shall identify the placement of temporary pedestrian crossings to ensure safe pedestrian crossings near all closed roadway crossings where an alternate crossing is not available within 1,000 feet.	Install and maintain temporary pedestrian crossings as specified in the approved construction traffic management plans.	Contractor	Metro	Construction (as roadway crossings are closed)		
Visual & Aesthetics							
MM-AES-1: Construction Lighting		Incorporate lighting requirements into applicable construction contract documents.	Metro	Metro	Final Design		
During nighttime construction activities lighting, including “down lighting,” shall be directed toward the interior of the construction staging area and shall be shielded so that it would not spill over into adjacent light-sensitive areas.		Install and maintain nighttime construction lighting directed toward the interior of the construction staging areas, with shielding if needed to prevent spillover into adjacent light-sensitive areas.	Contractor	Metro	Construction (all nighttime activities)		
Air Quality							
Trench Option Only	MM-AQ-1: Zero or Near Zero Emissions Haul Trucks	Incorporate ZE/NZE truck requirements into applicable construction contract documents.	Metro	Metro	Final Design		
	Metro shall require Zero Emissions (ZE) or NZE Near Zero Emissions (NZE) on-road haul trucks such as heavy-duty trucks with natural gas engines that meet or exceed the CARB’s adopted optional NOx emissions standard at 0.02 grams/brake-horsepower hour (g/bhp-hr), if and when feasible. Operators shall maintain records of all trucks associated with project construction to document that each truck used meets these emission standards and make the records available for inspection. Metro shall conduct regular inspections to the maximum extent feasible to ensure compliance.	Maintain records and other related documents of all trucks used in construction to demonstrate compliance with emission standards.	Contractor	Metro	Construction		
		Conduct regular inspections.	Contractor	Metro	Construction		
		Use on-road haul and heavy-duty trucks that meet CARBS optional NOx emissions standard of 0.02 g/bhp-hr (or better).	Contractor	Metro	Construction		
Noise & Vibration							
MM-NOI-1: Noise Control Plan		Develop a Noise Control Plan (by a board-certified acoustic engineer) demonstrating compliance with FTA 1-hour Leq construction noise criteria and local noise ordinance/variances.	Metro	Metro	Final Design		
Metro’s contractor shall develop a Noise Control Plan demonstrating how the Federal Transit Administration (FTA) 1-hour Leq noise criteria would be achieved during construction. The Noise Control Plan shall be prepared by a board-certified acoustical engineer. The FTA 1-hour Leq construction noise standards are as follows: Residential daytime standard of 90 A-weighted decibels (dBA) Equivalent Continuous Sound Level		Incorporate noise control requirements into applicable construction contract documents.	Metro	Metro	Final Design		

Mitigation Measure	Compliance Action/Deliverable	Responsible Party	Enforcement Agency	Monitoring/Compliance Schedule	Verification of Compliance	
					Initial	Date
(Leq) and nighttime standard of 80 dBA Leq, and Commercial and Industrial daytime standard of 100 dBA Leq and nighttime standard of 100 dBA Leq. The Noise Control Plan shall be designed to follow Metro requirements, and shall include measurements of existing noise, a list of the major pieces of construction equipment that would be used, predictions of the noise levels at the closest noise-sensitive receivers (residences, hotels, schools, churches, temples, and similar facilities), and noise mitigation measures to be implemented to achieve compliance with applicable noise thresholds. The Noise Control Plans must be approved by Metro prior to initiating noise-generating construction activities. The contractor shall conduct continuous noise monitoring to demonstrate compliance with the FTA 1-hour Leq noise limits. If the FTA 1-hour Leq criteria are exceeded, the contractor shall implement alternative construction measures to reduce construction noise as much as feasible. The contractor shall establish a public information and complaint system. The contractor shall respond to and provide corrective action for complaints filed within a time period of 24-hours. In addition, Metro shall comply with local noise ordinances when applicable, including by obtaining a variance(s) from the applicable local jurisdiction when nighttime work is required. Noise-reducing methods that may be implemented by the contractor include: > Construction activities shall be limited to daytime hours, except when nighttime work is necessary due to utility coordination, safety considerations, traffic minimization, or other conditions requiring a nighttime variance. In such cases, the contractor shall obtain a variance from the applicable jurisdiction and demonstrate that noise control measures will maintain noise levels below FTA and local standards. > Where construction occurs near noise sensitive land uses, specialty equipment with enclosed engines, acoustically attenuating shields, and/or high-performance mufflers may be used. > Limit unnecessary idling of equipment. > Install temporary/movable noise barriers or noise-control curtains, where feasible and as required by the Noise Control Plan. > Reroute construction-related truck traffic away from local residential streets and/or sensitive receivers. > Limit impact pile driving where feasible and effective. > Use electric instead of diesel-powered equipment and hydraulic instead of pneumatic tools where feasible. > Minimize the use of impact devices such as jackhammers and hoe rams, using concrete crushers and pavement saws instead.	Implement noise reduction measures identified in the approved Noise Control Plan, including complaint response procedures; Maintain documentation of compliance.	Contractor	Metro	Construction		
	Conduct continuous noise monitoring during construction and implement corrective actions if thresholds are exceeded; Maintain documentation of monitoring and corrective actions.	Contractor	Metro	Construction		
MM-NOI-2: Soundwalls Where feasible, soundwalls shall be placed at the edge of the near light rail track with appropriate setback distance from the tracks or at the edge of elevated structures to reduce noise related to light rail vehicles as required to meet FTA criteria. Height,	Incorporate soundwall design requirements (location, height, length, materials, treatments) into final design plans to ensure compliance with FTA noise criteria.	Metro	Metro	Final Design		
	Incorporate soundwall construction requirements into contract documents.	Metro	Metro	Final Design		

Mitigation Measure		Compliance Action/Deliverable	Responsible Party	Enforcement Agency	Monitoring/Compliance Schedule	Verification of Compliance	
						Initial	Date
length, and need for absorptive noise-reducing materials will be finalized during final design as necessary to reduce noise from light rail trains to below the FTA moderate impact criteria, as feasible. Materials, color, landscaping, and/or other aesthetic treatments would also be integrated into the design of the soundwall to minimize dominance and scale.¹ --- ¹ The applicability of the term “feasible” applies only to the Elevated/At-Grade Alignment (the “Proposed Project” in the Draft EIR). Specifically, as explained on page 36-100 of the Draft EIR, with respect to the Elevated/At-Grade Alignment, soundwalls would not be feasible at the 170th Street and 182nd Street at-grade crossing because vehicle travel must be maintained. The “where feasible” and “as feasible” text in MM-NOI-2 was included in MM-NOI-2 to address this specific physical constraint for the Elevated/At-Grade Alignment. This qualifying language does not apply to the LPA, the Trench Option, or the Hawthorne Option, which do not have at-grade crossings or other physical constraints that would prevent construction of the soundwalls as necessary to reduce operational noise impacts of the light rail to below the FTA significance thresholds with mitigation		Construct soundwalls consistent with approved design plans, integrating aesthetic treatments where specified.	Contractor	Metro	Construction		
MM-NOI-3: Low Impact Frogs		Verify locations where low impact frogs are required during final design to ensure compliance with FTA noise criteria.	Contractor	Metro	Final Design		
Low impact frogs (crossing point of two rails) shall be installed to reduce crossover impact noise where necessary to reduce noise from light rail trains to below the FTA moderate impact criteria. Locations shall be verified during final design as necessary to reduce noise from light rail trains to below the FTA moderate impact criteria.		Install low impact frogs.	Contractor	Metro	Construction		
Elevated/At-Grade Alignment, Trench Option, and LPA Only	MM-NOI-4: Quiet Zone Establishment (Elevated/At-Grade Alignment, Trench Option, and Hybrid Alternative/Locally Preferred Alternative)	Metro to coordinate with the Cities of Lawndale, Redondo Beach, and Torrance by providing technical documentation of quiet zone ready design and construction (see PF-NV-1).	Metro	Metro	Final Design		
	Metro shall cooperate with the City of Lawndale, City of Redondo Beach, and City of Torrance to provide support and guidance during the quiet zone establishment process. The cities shall comply with Federal Railroad Administration (FRA) requirements (49 CFR Section 222.35 to Section 222.57) to establish a quiet zone(s) from north of Inglewood Avenue to south of 182nd Street, including by providing written notice to BNSF Railway (BNSF), Metro, and the California Public Utilities Commission (CPUC) on its intent to establish a quiet zone(s) for the listed freight crossings: >Inglewood Avenue >Manhattan Beach Boulevard >159th Street >160th Street	Cities of Lawndale, Redondo Beach, and Torrance to comply with FRA requirements (49 CFR §§ 222.35–222.57) by submitting a Notice of Intent and subsequent Notice of Establishment to FRA, BNSF, CPUC, and Metro to establish the quiet zone(s).	City of Lawndale, City of Redondo Beach, City of Torrance	CPUC	Prior to commencement of rail operations (<i>if Cities do not act, the noise impact would remain significant and unavoidable, as explained in the CEQA Findings</i>)		

Mitigation Measure		Compliance Action/Deliverable	Responsible Party	Enforcement Agency	Monitoring/Compliance Schedule	Verification of Compliance	
						Initial	Date
	>161st Street >162nd Street >170th Street >182nd Street	Metro to maintain records of coordination and communications with the Cities.	Metro	Metro	Prior to commencement of rail operations (<i>if Cities do not act, the noise impact would remain significant and unavoidable, as explained in the CEQA Findings</i>)		
Hawthorne Option Only	MM-NOI-5: Wheel Squeal Noise Monitoring Metro shall conduct wheel squeal noise monitoring prior to the start of revenue operations to determine if wheel squeal is occurring at the listed curves with a radius less than 1,000 feet located near sensitive receptors. If wheel squeal occurs, Metro shall use wayside rail lubrication as necessary to ensure wheel squeal does not occur and to reduce noise from light rail trains to below the FTA moderate impact criteria. >Curve between Santa Fe Avenue and Inglewood Avenue >Curve between 161st Street and 163rd Street	Conduct wheel squeal monitoring at designated curves (Santa Fe Ave–Inglewood Ave and 161st–163 rd Street) prior to revenue operation; if monitoring finds wheel squeal, implement wayside rail lubrication to reduce noise below FTA moderate impact criteria; Maintain documentation of monitoring and corrective actions.	Contractor	Metro	Prior to commencing revenue operations		
MM-VIB-1: Vibration Control Plan Prior to construction, the contractor would prepare a Vibration Control Plan demonstrating how the FTA building damage risk criteria and the FTA vibration annoyance criteria would be achieved. The Vibration Control Plan must be approved by Metro prior to initiating vibration-generating construction activities and include the requirement that the contractor, in coordination with Metro and the City of Torrance Public Works Department, shall notify nearby receptors, including businesses near Del Amo Bridge, of pile-driving activities at least 72 hours in advance. The Vibration Control Plan would include a list of the major pieces of construction equipment that would be used, and the predictions of the vibration levels at the closest sensitive receivers. The contractor would conduct continuous vibration monitoring to demonstrate compliance with the vibration limits. Where the construction cannot be performed to meet the vibration criteria, the contractor would investigate alternative means and methods of construction measures to reduce vibration levels as much as feasible.		Incorporate vibration control requirements into applicable construction contract documents to ensure contractor responsibilities for plan preparation, notification, monitoring, and corrective actions.	Metro	Metro	Final Design		
		Prepare a Vibration Control Plan demonstrating compliance with FTA building damage risk criteria and vibration annoyance criteria; submit for Metro approval prior to vibration-generating construction activities.	Contractor	Metro	Prior to Construction		
		Contractor, in coordination with Metro and City of Torrance Public Works Department, to notify nearby receptors of pile-driving activities at least 72 hours in advance.	Contractor	Metro	Prior to Construction (at least 72 hours before pile driving);		
		Implement measures identified in the approved Vibration Control Plan during construction; Conduct continuous vibration monitoring during vibration-generating activities and implement alternative means/methods if criteria are exceeded.	Contractor	Metro	During Construction		
		Maintain records of notice, monitoring and corrective actions.	Contractor	Metro	During Construction		
MM-VIB-2: Construction Equipment Location To address potential building damage, the following measures would be implemented.		Incorporate vibration control requirements into construction contract documents, including restrictions on vibratory rollers and pile driving.	Metro	Metro	Final Design		
		Limit vibratory pile driving to no closer than 22 feet from the nearest sensitive structure; where closer pile driving is unavoidable, use alternative technology (e.g., CIDH);	Contractor	Metro	Construction		

Mitigation Measure	Compliance Action/Deliverable	Responsible Party	Enforcement Agency	Monitoring/Compliance Schedule	Verification of Compliance	
					Initial	Date
>Where a vibratory roller would be operated within 26 feet of a building structure, the vibratory roller shall be operated in static mode only. >Where pile driving is needed, the use of vibratory pile driving would be limited to be no closer than 22 feet of the nearest sensitive structure. In areas adjacent to sensitive structures where the distance cannot be limited to 22 feet or greater, pile driving will use alternative technology such as cast-in-drilled hole (CIDH). >Limit the location of impact pile driving to the extent feasible.	Limit impact pile driving near sensitive structures to the extent feasible.					
	Install vibratory roller and operate vibratory rollers in static mode within 26 feet of a building.	Contractor	Metro	Construction		
MM-VIB-3: Pre- and Post-Construction Surveys	Incorporate survey and repair requirements into construction contract documents.	Metro	Metro	Final Design		
	Retain a qualified structural engineer.	Contractor	Metro	Prior to Construction and Post-Construction		
	Conduct pre-construction surveys to document existing conditions (e.g., plaster cracks, window damage)	Contractor	Metro	Prior to Construction		
	Conduct post-construction surveys to identify any construction-related damage;	Contractor	Metro	Post-Construction		
	Repair construction-related damage identified in post-construction surveys;					
MM-VIB-4: Low Impact Frogs	Maintain documentation of surveys and repairs.					
	Conduct a site-specific Detailed Vibration Assessment during final design, including transfer mobility measurements, to verify locations where low impact frogs are required (per FTA Section 6.5 guidance).	Contractor	Metro	Final Design		
	Install low impact frogs at identified locations to achieve a 10 dB vibration reduction and ensure vibration levels are below FTA criteria (80 VdB for freight; 72 VdB for light rail).	Contractor	Metro	Construction		
MM-VIB-5: Resilient Fasteners	Conduct a site-specific Detailed Vibration Assessment, including transfer mobility requirements, to verify locations where resilient fasteners are required (per FTA Section 6.5 guidance).	Contractor	Metro	Final Design		
	Install resilient fasteners at identified locations to achieve a minimum 5 dB vibration reduction and ensure vibration levels are below FTA criteria (80 VdB for freight; 72 VdB for light rail).	Contractor	Metro	Construction		
MM-VIB-6: Ballast Mats	Conduct a site-specific Detailed Vibration Assessment during final design, including transfer mobility measurements to verify location where ballasts mats are required (per FTA Section 6.5 guidance).	Contractor	Metro	Final Design		

Mitigation Measure	Compliance Action/Deliverable	Responsible Party	Enforcement Agency	Monitoring/Compliance Schedule	Verification of Compliance	
					Initial	Date
reduction is achieved, and the impact is reduced to below FTA criteria (80 VdB for freight and 72 VdB for light rail). The locations of the ballast mats shall be verified during final design using a site-specific Detailed Vibration Assessment, including transfer mobility measurements, for the preferred alignment option (as per FTA guidance, Section 6.5).	Install ballast mats at identified locations to achieve a minimum 10 dB vibration reduction and ensure vibration levels are below FTA criteria (80 VdB for freight; 72 VdB for light rail).	Contractor	Metro	Construction		
Biological Resources						
MM-BIO-1: General Protection Measures to Avoid and Minimize Impacts on Sensitive Biological Resources	Retain a qualified biologist (approved by Metro) to oversee implementation of avoidance measures.	Contractor	Metro	Prior to Construction		
	Clearly identify, stake and fence construction work limits.	Contractor	Metro	Prior to Construction		

Mitigation Measure	Compliance Action/Deliverable	Responsible Party	Enforcement Agency	Monitoring/Compliance Schedule	Verification of Compliance	
					Initial	Date
Prior to the initiation of construction activities, construction work limits shall be defined and marked (i.e., by caution tape, temporary fencing, etc.). All temporary fencing or other markers must be clearly visible to construction personnel. Prior to and during construction, a qualified Biologist, selected by Metro, shall confirm that the outer perimeter of the construction work limits, fencing, and erosion control measures are properly installed and shall monitor compliance with these measures within and adjacent to the Open Space Preserve. No native vegetation removal or grading shall occur within any remaining areas of the Open Space Preserve. Fenced impact limits shall include erosion control measures to minimize erosion and siltation during initial vegetation clearing/removal and construction through the use of silt fencing, siltation basins, gravel bags, or other controls necessary to stabilize the soil in cleared or graded areas. Erosion control measures would be installed prior to the onset of vegetation clearing/removal. These measures would be maintained in good repair until the completion of construction. Vegetation clearing/removal during routine maintenance shall also include similar erosion control measures. Specific work areas within the Torrance TC Station site adjacent to portions of the Open Space Preserve that remain in place, if the City of Torrance does not relocate the Preserve to a different site prior to construction, shall include specific erosion and run-off control measures necessary to ensure no contaminants enter the fenced impact limits of the Open Space Preserve and consequently degrade any remaining habitat for the southern tarplant. These erosion and run-off control measures shall be implemented long-term per Regional Water Quality Control Board requirements to ensure the continued protection of the Open Space Preserve and quality of habitat within. These measures are in addition to, and not in lieu of, the compensatory mitigation requirements of MM-BIO-5, which shall be implemented prior to any ground-disturbing activities within the Southern Tarplant Open Space Preserve.	Install erosion and sediment control measures (e.g., silt fencing, basins, gravel bags) and maintain in good repair through construction.	Contractor	Metro	Prior to and During Construction		
MM-BIO-2: Nesting Bird Season Restrictions and Pre-Construction Surveys The clearance of vegetation or demolition of nesting substrate (i.e., bridge features) during construction shall occur outside of the nesting bird season (nesting bird season defined herein as February 1 through September 15), if feasible. If vegetation removal and/or demolition outside this time period is not feasible, the following additional	Incorporate nesting bird requirements into applicable construction documents.	Metro	Metro	Final Design		
	Retain a qualified biologist (familiar with southern California bird species) to conduct surveys and monitoring.	Metro (retain biologist) Qualified Biologist (surveys and monitoring)	Metro	Prior to Construction		

Mitigation Measure	Compliance Action/Deliverable	Responsible Party	Enforcement Agency	Monitoring/Compliance Schedule	Verification of Compliance	
					Initial	Date
measures shall be employed to avoid impacts to nesting birds protected under the MBTA and CFGC. A pre-construction nesting bird survey shall be conducted by a qualified biologist (i.e., a biologist familiar and experienced with the identification and life histories of wildlife and plant species in southern California) within 72 hours, or as determined by the qualified biologist, prior to the start of construction activities to determine whether active nests are present within or directly adjacent to the construction zone. Nests found shall be recorded. If construction activities must occur within 150 feet of an active nest of any passerine bird or within 300 feet of an active nest of any raptor, a qualified biologist shall monitor the nest on a bi-weekly (twice a week) basis, or at a frequency necessary to determine potential project impacts, and the construction activity shall be postponed until the biologist determines that the nest is no longer active. If the recommended nest avoidance zone is not feasible, the qualified biologist shall provide justification on a case-by-case basis if a buffer reduction is possible, taking into consideration the location of work and type of activity, distance of nest from work area, surrounding vegetation, and line-of-sight between the nest and work areas, tolerance of species to disturbance, and observations of the nesting bird’s reaction to construction activities (including light, noise, dust, and human presence). If the biologist determines nesting activities may fail as a result of work activities, work activities shall be modified or shall temporarily cease (except access along established roadways) within the recommended no-disturbance buffer until the biologist determines the adults and young are no longer reliant on the nest site. Buffers shall be delineated (by or under the supervision of the qualified biologist) on-site with bright flagging, for easy identification by staff and the construction team. The perimeter of the buffer (150 feet to 300 feet depending on the species) shall be flagged so as not to draw predator attention to the direct location of the nest itself and flagging will be minimized where feasible. The on-site construction supervisor and operator staff shall be notified of the nest and the buffer limits to ensure it is maintained. The indirect impacts of night-time construction lighting on nesting birds outside the construction limits shall be reduced by shielding or directing construction lighting to avoid light encroachment into adjacent habitats. A summary of preconstruction surveys, monitoring efforts, and any no-disturbance buffers that were installed shall be documented in a report by the qualified biologist at the conclusion of each nesting season.	Conduct pre-construction bird surveys within 72 hours prior to vegetation clearance, demolition, or other disturbance during nesting season (February 1 – September 15).	Qualified Biologist	Metro	Prior to Construction		
	If active nests are found, establish no-disturbance buffers (150 feet for passerines; 300 feet for raptors), delineated with flagging. If a full buffer is not feasible, biologist to document justification and determine case-specific reduced buffer with monitoring. Biologist is to monitor active nests on a bi-weekly basis (as needed) until nests are no longer active.	Qualified Biologist	Metro	Prior to and During Construction		
	Contractor to modify or temporarily cease work if construction could cause nest failure.	Contractor (compliance with buffers and restrictions) Metro (compliance oversight)	Metro	Prior to and During Construction		
	Shield or direct construction lighting to avoid light spillover into adjacent nesting habitat.	Contractor	Metro	Prior to and During Construction		
	Prepare end-of-season report summarizing survey results, monitoring, buffers, and outcomes.	Metro (compliance oversight) Qualified Biologist (reporting)	Metro	End of nesting season		
MM-BIO-3: Roosting Bat Restrictions and Survey Requirements	Incorporate bat protection requirements into applicable construction contract documents.	Metro	Metro	Final Design		
Prior to demolition permit issuance and in preparation for activities at the Del Amo Boulevard bridge and for other bridge modifications, a bat roost habitat assessment shall be performed by a qualified biologist (i.e., a biologist familiar with bat	Retain a qualified bat biologist (familiar with bat ecology in Southern California).	Metro	Metro	Construction; Prior to demolition permit or bridge modification		

Mitigation Measure	Compliance Action/Deliverable	Responsible Party	Enforcement Agency	Monitoring/Compliance Schedule	Verification of Compliance	
					Initial	Date
identification and ecology in southern California) at each location in order to identify both potential day time and nighttime roosting activity and maternity roosts, for bat species with potential to occur. The bat roost habitat assessment shall be conducted during the spring/summer months between April 1 through August 31 to most effectively identify maternity roost activity. Signs indicating active use by bat species may include guano, urine staining, and audible vocalizations; and shall be recorded upon observation for inclusion in a summary report. If active maternity roosts are identified, consultation shall occur with CDFW and a bat mitigation plan shall be prepared in advance of construction that shall include measures to avoid, minimize, and mitigate project impacts to bat species per conversations with, and recommendations from, CDFW. The bat mitigation plan may include bat exclusion measures to be implemented outside the California maternity season (the maternity season is defined as April 1 through August 31 in southern California) in order to prevent potential direct impacts to individuals. During the maternity season, a recommended buffer shall be implemented around any active maternity roosts, and no project related activities shall occur within the buffer until a biologist has determined that the roost is no longer in use. In addition, the bat mitigation plan shall require the replacement of lost habitat associated with demolition of the bridges and shall include mitigation addressing loss of roosts; this replacement should be on site when feasible and off site only when on site replacement is not feasible. The mitigation plan shall include required monitoring of mitigation to ensure the success of the proposed mitigation measures.	Conduct bat roost assessments at bridges prior to demolition permit issuance or other bridge modification work, during summer months (April 1 – August 31), to identify potential roosting activity and maternity roosts.	Metro (compliance oversight) Qualified Biologist (conduct assessment)	Metro	Construction; Prior to demolition permit or bridge modification		
	If an active roost nest is identified: consult with CDFW; Prepare a bat mitigation plan in advance of construction, including measures for avoidance, exclusion (outside maternity season), buffers around active roots, and replacement of lost roosting habitat (on-site where feasible); Record signs of bat activity (guano, staining, vocalizations) and include findings in a summary report.	Contractor (comply with restrictions and buffers; habitat replacement) Metro (compliance oversight) Qualified Biologist (prepare mitigation plan; monitoring; reporting)	Metro	Construction; Prior to demolition permit or bridge modification		
MM-BIO-4: Pre-construction Rare Plant Survey	Incorporate rare plant protection requirements into applicable construction contract documents.	Metro	Metro	Final Design		
	Prior to construction, if the Open Space Preserve has not been fully relocated and portions of the Preserve remain, suitable habitat in the portion of the RSA immediately	Retain a qualified botanist (familiar with southern tarplant identification).	Metro	Prior to Construction		

Mitigation Measure	Compliance Action/Deliverable	Responsible Party	Enforcement Agency	Monitoring/Compliance Schedule	Verification of Compliance	
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adjacent to the Open Space Preserve shall be visually surveyed on foot by a qualified botanist (i.e., a botanist familiar with southern tarplant identification) in order to identify potential southern tarplant presence. Surveys should be conducted during the appropriate blooming period for optimal identification (defined as May – November). If individuals are detected, individuals shall be flagged, and this area shall be clearly marked for avoidance through visible signage and fencing. A buffer zone shall be established of at least 50 feet from the outermost perimeter of the population in order to sufficiently eliminate potential disturbance to the plants from human activity and any other potential sources of disturbance including trampling, erosion, and dust. No vegetation removal, grading, or other earthwork shall occur within areas designated for avoidance. These avoidance requirements apply to southern tarplant individuals outside the permanent impact footprint of the Project within the Open Space Preserve. Impacts to individuals within the permanent Project footprint shall instead be addressed through the compensatory mitigation requirements of MM-BIO-5. A qualified botanist shall perform bi-weekly (twice per week) site visits, or at a frequency necessary to ensure protection of any remaining areas of the Open Space Preserve, during all construction activities occurring immediately adjacent to any remaining areas of the Open Space Preserve to ensure construction activities remain within the designated, and delineated, approved construction area; and that construction fencing, and other boundary demarcations remain in the appropriate condition	Conduct a pre-construction rare plant survey in suitable habitat adjacent to the Open Space Preserve during the blooming period (May – November) to identify potential southern tarplant individuals.	Metro	Metro	Prior to Construction (during May–Nov blooming period)		
	If individuals are detected, implement a buffer zone by flagging and fencing the area; establish a minimum 50-foot avoidance buffer; Install visible signage to restrict access.	Contractor (compliance with fencing/signage requirements) Metro (compliance oversight) Qualified Botanist (conduct survey; establish buffer; monitoring)	Metro	Prior to and During Construction		
	Qualified botanist to perform bi-weekly site visits (or more frequently if needed) during construction to verify fencing, buffers, and compliance.	Metro (compliance oversight) Qualified Botanist (visit site/ verify fencing, buffers, and compliance)	Metro	During Construction		
MM-BIO-5. Off-site Mitigation for Southern Tarplant Habitat Prior to construction, Metro shall coordinate with the City of Torrance and CDFW to identify and evaluate one or more suitable off-site mitigation sites for southern tarplant habitat. The goal of this effort is to mitigate the permanent loss of southern tarplant habitat through the establishment, preservation, and long-term management of suitable off-site mitigation habitat. Metro shall ensure that mitigation occurs at a minimum 3:1 ratio for habitat area, or at a higher ratio if required by CDFW. A site-specific biological assessment, prepared by a qualified botanist (i.e., a botanist familiar with identification, survey, and management of southern tarplant), shall demonstrate that the selected mitigation site(s) have appropriate soil, hydrology, and ecological conditions to support self-sustaining, long-term tarplant populations. It is Metro’s understanding that the City of Torrance is currently evaluating the relocation and re-establishment of the entire Open Space Preserve to the Elm Water Yard in the City of Torrance. If the City elects to proceed with that relocation, Metro may satisfy its mitigation obligation by entering into an agreement with the City to fund and implement a proportional share of the new preserve area. This agreement must include provisions for a non-wasting endowment or other long-term funding mechanism sufficient to cover Metro’s proportional share of perpetual management costs, and must include performance standards equivalent or greater than those described in this mitigation measure for Metro’s proportional share.	Retain a qualified botanist (familiar with Southern tarplant identification, survey, and management).	Metro	Metro	Prior to Construction		
	Coordinate with the City of Torrance and CDFW to identify, evaluate, and secure suitable off-site mitigation site(s) that meet required performance standards. If the City of Torrance relocates the Open Space Preserve to the Elm Water Yard, enter into an agreement with the City to fund and implement Metro’s proportional share of the new preserve, including the establishment of an endowment or long-term funding mechanism.	Metro (coordination with City and CDFW, securing agreements, funding, implementation of mitigation, documentation) Qualified Botanist (biological assessment)	Metro	Prior to Construction		

Mitigation Measure	Compliance Action/Deliverable	Responsible Party	Enforcement Agency	Monitoring/Compliance Schedule	Verification of Compliance	
					Initial	Date
If the City of Torrance opts not to relocate and re-establish the Open Space Preserve, Metro shall implement an independent off-site mitigation project that achieves the same performance standards for habitat value and long-term viability, including securing a conservation easement, deed restriction, or other legally enforceable land protection instrument; implementing habitat enhancement measures; conducting long-term monitoring, and establishing a non-wasting endowment or other funding mechanism sufficient to cover Metro’s proportional share of perpetual management costs. Metro shall make a reasonable, documented effort to implement the off-site mitigation within the City of Torrance. If no appropriate off-site mitigation site can be identified within the City of Torrance, Metro shall identify and evaluate one or more suitable sites outside the City, such as an existing preserve that includes the same species of southern tarplant, that achieve the same habitat value and long-term viability standards as determined by a qualified botanist. A qualified botanist shall also prepare a Southern Tarplant Translocation/Enhancement Plan in consultation with CDFW that includes feasible and achievable performance standards. The plan shall include, but is not limited to, methods and sourcing guidelines for seed collection (to occur for a minimum of two years); best management practices for planting and invasive species control; monitoring protocols, and a schedule of implementation activities. The Translocation/Enhancement Plan shall be finalized prior to any ground-disturbing activities that could affect the Southern Tarplant Open Space Preserve. If, after a reasonable and documented effort, no suitable off-site mitigation site can be identified or implemented within or outside the City of Torrance, Metro shall consult with CDFW to identify an alternative mitigation strategy that achieves equivalent biological value and long-term viability. This may include payment of an in-lieu fee to a CDFW-approved land management entity, provided that the entity commits to establishing, preserving, and managing southern tarplant habitat in perpetuity at a minimum ratio of 3:1 or higher, consistent with the performance standards described above.	If the City does not proceed with relocation, implement an independent off-site mitigation project to meet performance standards, including land rights, habitat enhancement, monitoring, and long-term management funding, prioritizing off-site mitigation within the City of Torrance. If no suitable site is identified after documented effort, consult with CDFW on an alternative mitigation strategy (e.g., in-lieu fee program) that achieves equivalent biological value and long-term viability.					
	Qualified botanist to prepare and implement a Southern Tarplant Translocation/Enhancement Plan in consultation with CDFW, including at least two years of seed collection, planting BMPs, invasive species control, monitoring protocols and implementation schedule.	Metro (compliance oversight) Qualified Botanist (translocation plan preparation, monitoring)	Metro CDFW (review translocation plan)	Prior to Construction		
Geology & Soils						
MM-GEO-1: Engage a Qualified Paleontological Resources Specialist Grading and excavation equating to 1,000 cubic yards or more at depths of 13 feet or greater within highly sensitive Qoa geologic formation shall require monitoring by a qualified paleontologist, including the following measures: > Prior to beginning any work that requires paleontological monitoring: - Metro shall retain the services of a qualified paleontologist meeting the standards of the SVP to compose a Paleontological Resources Monitoring and Mitigation Plan (PRMMP) identifying the steps to be taken in the event of the inadvertent discovery of paleontological resources. - A pre-construction meeting will be held that includes the qualified paleontologist, Construction Manager and/or Grading Contractor, and other	Incorporate paleontological resources requirements into applicable construction contract documents.	Metro	Metro	Final Design		
	Retain a qualified paleontological resources specialist meeting SVP standards.	Metro	Metro	Final Design		
	Prepare a Paleontological Resources Monitoring and Mitigation Plan (PRMMP), including monitoring protocol, discovery procedures, curation requirements, and reporting standards.	Metro (review and approve PRMMP) Qualified Paleontologist (prepare PRMMP)	Metro	Prior to Construction		
	Hold a pre-construction coordination meeting with Metro, contractor(s), and the paleontologist to review the PRMMP.	Metro, Contractor, Qualified Paleontologist	Metro	Prior to Construction		
	Prepare a site/grading plan annotated for monitoring areas.	Qualified Paleontologist (annotate monitoring areas)	Metro	Prior to Construction		

Mitigation Measure	Compliance Action/Deliverable	Responsible Party	Enforcement Agency	Monitoring/Compliance Schedule	Verification of Compliance	
					Initial	Date
appropriate personnel so the qualified paleontologist can make comments and/or suggestions concerning the monitoring program to the Construction Manager and/or Grading Contractor. - The qualified paleontologist will (at that meeting or subsequently) submit to the Project Manager a copy of the site/grading plan (reduced to 11 x 17 inches) that identifies areas to be monitored as well as areas that may require delineation of grading limits. - The qualified paleontologist will also coordinate with the Project Manager on the construction schedule to identify when and where monitoring is to begin and to specify the start date for monitoring. > The qualified paleontologist will document monitoring activity on a standardized form. A record of daily activity will be sent to Metro and the Project Manager each month. > The qualified paleontologist will be present initially during all earth-moving activities. After 50 percent of the excavations are complete within the unit, if no significant fossils have been recovered, the level of monitoring may be reduced or suspended entirely at the qualified paleontologist’s discretion and in consultation with Metro. > At locations where sensitive subsurface soils cannot be observed during ground disturbing activities, such as driving of piles, a subsurface investigation to test for the presence or absence of microfossils should be implemented under the direction of a qualified paleontologist following SVP guidelines. Prior to the start of ground disturbance, mechanical coring, or other methods determined appropriate by the paleontologist, will be used to collect a test sample of 600 lbs (0.4 cubic yards) to be wet screened. In the event fossil remains are identified, two standard samples of 6,000 lbs each (4.0 cubic yards) shall be collected for processing following SVP guidelines for microfossil salvage. > Discoveries - Discovery Process – In the event of a discovery, and when requested by the qualified paleontologist, the Project Manager will be contacted and will divert, direct, or temporarily halt ground-disturbing activities in the area of discovery to allow for preliminary evaluation of potentially significant paleontological resources. The paleontologist will also immediately notify Metro of such findings at the time of discovery. - Determination of Significance – The significance of the discovered resources will be determined by the paleontologist in consultation with the Project Manager and Metro, who must concur with the evaluation before grading activities will be allowed to resume. - Documentation and Treatment of Finds – Based on the scientific value and/or uniqueness of the find, the qualified paleontologist may record the find and allow work to continue, or recommend salvage and recovery of the fossil. If treatment and salvage are required, recommendations will be consistent with SVP 2015 guidelines and currently accepted scientific practice. Work in the		Contractor/design team (provide site/grading plan for annotation) Metro (review and approve plan)				
	Conduct paleontological monitoring during earth-moving activities (≥1,000 cy at ≥13 feet depth in Qoa formation), document daily activities, and submit monthly summaries to Metro.	Qualified Paleontologist or qualified paleontological monitor (monitoring, daily logs, monthly summaries) Contractor (coordination, access, work stoppage on request) Metro (compliance oversight; receipt of reports)	Metro	Construction (earth moving activities ≥ 1,000 cy at ≥13 feet depth in Qoa formation)		
	Conduct subsurface investigations for microfossils where sensitive soils cannot be visually observed (e.g., pile driving), per SVP guidelines.	Qualified Paleontologist (direct and oversee subsurface investigations; ensure compliance with SVP guidelines; analyze samples; document results) Contractor (perform coring/boring/sampling as directed) Metro (compliance oversight)	Metro	Construction		
	Implement discovery protocols.	Qualified Paleontologist (evaluate finds; direct treatment; documentation) Contractor (stop-work/support protocol implementation) Metro (compliance oversight and concurrence)	Metro	Construction		
	If significant fossils are discovered, salvage/prepare/curate specimens consistent with SVP guidelines, and obtain letter of acceptance from a recognized curation institution.	Qualified Paleontologist (salvage; preparation; curation; acceptance letter)	Metro	Post Construction		

Mitigation Measure	Compliance Action/Deliverable	Responsible Party	Enforcement Agency	Monitoring/Compliance Schedule	Verification of Compliance	
					Initial	Date
affected area may resume once the fossil has been assessed and/or salvaged and a paleontological monitor is present. > Notification of Completion – The paleontologist will notify Metro in writing of the end date of monitoring. > Handling and Curation of Significant Paleontological Specimens and Letter of Acceptance – The paleontologist will ensure that all significant fossils collected are appropriately prepared and permanently curated with an appropriate institution, and that a letter of acceptance from the curation institution has been submitted to Metro. > Final Results Reports (Monitoring and Research Design and Recovery Program) – Prior to completion of the project, two copies of the Final Results Report (even if no significant resources were found) and/or evaluation report, if applicable, which describe the results, analysis, and conclusions of the Paleontological Monitoring Program (with appropriate graphics) will be submitted to Metro for approval.		Contractor (support during salvage) Metro (compliance oversight; receipt of acceptance letter)				
	Prepare a Notification of Completion.	Qualified Paleontologist (draft, submit) Contractor (confirm completion of monitoring activities) Metro (compliance oversight, receipt of notification)	Metro	Post Construction		
	Prepare and submit a Final Results Report documenting monitoring methods, discoveries, analyses, and curation.	Qualified Paleontologist (prepare and submit Final Report) Contractor (provide support information as needed) Metro (oversight, review, approval)	Metro	Post Construction		
Cultural Resources						
MM-CUL-1: Cultural Resources Identification Training Prior to the issuance of notice to proceed with construction, all construction personnel involved in ground-disturbing activities shall be provided with appropriate cultural resources training. The training shall instruct the personnel regarding the legal framework protecting cultural resources, typical kinds of cultural resources that may be found during construction, artifacts that would be considered potentially significant, and proper procedures and notifications if cultural resources and/or are inadvertently discovered. The training shall be prepared by a Secretary of the Interior (SOI) professionally qualified archaeologist, in consultation with interested Native American tribes consulting under AB 52, who shall provide information on resources of interest to Native American tribes and include cultural resources and artifacts that would be considered potentially significant to ensure operator recognition of these materials during construction.	Retain a qualified archaeologist.	Metro	Metro	Prior to Construction		
	Provide cultural resources training.	Qualified Archaeologist or Approved Designee (prepare and present training) Contractor (ensure attendance) Metro (compliance oversight)	Metro	Prior to Construction and During Construction as new personnel join the project		

Mitigation Measure	Compliance Action/Deliverable	Responsible Party	Enforcement Agency	Monitoring/Compliance Schedule	Verification of Compliance	
					Initial	Date
MM-CUL-2. Cultural Resources Monitoring and Mitigation Plan Prior to the issuance of notice to proceed with construction, the construction contractor shall prepare, and Metro shall review and approve, a Cultural Resources Monitoring and Mitigation Plan (CRMMP). The CRMMP shall be prepared in consultation with a Secretary of the Interior-qualified archaeologist and interested Native American tribes consulting under AB 52. At a minimum, the CRMMP shall: > Identify the areas where archaeological and Native American monitoring will occur, consistent with MM-CUL-3, and describe monitoring methods and reporting requirements. > Establish the protocol to follow in the event of an unanticipated discovery, requiring that, if an archaeological deposit is identified, the construction contractor shall stop construction within 50 feet of the exposed resource until a Secretary of Interior professionally qualified archaeologist can evaluate the find (see 36 CFR 800.11.1 and California Code of Regulations, Title 14, Section 15064.5[f]). If the resource is determined to be a historical resource (as defined in Public Resources Code Section 21084.1) or a unique archaeological resource (as defined in Public Resources Code Section 21083.2[g]), the CRRMP shall require: • Avoidance of the resource, where feasible, through project redesign, preservation in place, capping or other methods consistent with Title 14, Section 15126.4(b)(3). > Where avoidance is not feasible, as determined by Metro, in light of factors such as the nature of the find, project design, costs, and other considerations, data recovery shall be implemented through excavation and documentation consistent with the Secretary of Interior’s Standards for Archaeology and Historic Preservation (48 Fed. Res. 44716) and the State Office of Historic Preservation Standards. > Define performance standards requiring all data recovery efforts to obtain information necessary to address important research questions, that all recovered be cleaned, catalogued, and curated at a qualified repository that meets federal and state curation standards, and that a comprehensive technical report be prepared and filed with the South Central Coastal Information Center of the California Historical Resources Information System (CHRIS). > Incorporate tribal consultation with Native American tribes consulting under AB 52. > Provide documentation and reporting protocols for submitting monitoring logs during construction and a final report documenting all findings to be submitted to Metro, consulting tribes, and CHRIS. The CRMMP shall be implemented throughout all ground-disturbing activities in previously undisturbed areas or areas of deep excavation below the depth of prior disturbance (generally assumed to be five feet unless site-specific studies show a greater or lesser depth of prior disturbance), or as otherwise required by MM-CUL-3.	Retain a SOI-qualified archaeologist.	Metro	Metro	Prior to Construction		
	Develop Cultural Resources Monitoring and Mitigation Plan (CRMMP) in consultation with interested Native American tribes (per AB 52).	Qualified Archaeologist (prepare CRMMP) Contractor (incorporation CRMMP into construction documents) Metro (consult with tribes; review/approve CRMMP)	Metro	Prior to issuance of Notice to Proceed		
	Implement CRMMP.	Qualified Archaeologist (direct monitoring and recovery; ensure curation; prepare reports) Contractor (implement stop-work and access procedures; support monitoring and recovery) Metro (compliance oversight)	Metro	Throughout ground-disturbing activities in previously undisturbed areas or areas of deep excavation below the depth of prior disturbance, or as otherwise required by MM-CUL-3		

Mitigation Measure	Compliance Action/Deliverable	Responsible Party	Enforcement Agency	Monitoring/Compliance Schedule	Verification of Compliance	
					Initial	Date
MM-CUL-3. Unanticipated Discovery of Human Remains Archaeological and Native American monitoring (see MM-CUL-1 and MM-TCR-1) shall be required during all ground- disturbing activities in areas of excavation extending below the depth of prior disturbances, as defined in MM-CUL-2, and in areas adjacent to known cemeteries or other locations where the potential for encountering human remains is elevated, including El Nido Park (located between the Kingsdale Avenue and 186th Street cross section to 182nd Street) and the Pacific Crest Cemetery (2701 182nd Street). Archaeological monitoring shall be conducted in accordance with the Project CRMMP required by MM-CUL-2, which establishes monitoring methods, evaluation procedures, treatment, standards, and reporting requirements. If human remains and/or associated funerary objects are encountered, then work shall be halted within 50 feet of the find and California Health and Safety Code Section 5097.98 and Public Resources Code Section 5097.98 shall be followed, including immediate notification of the County Coroner and consultation with the Most Likely Descendent identified by the Native American Heritage Commissions.	Retain qualified archaeologist.	Metro	Metro	Prior to Construction		
	Conduct archaeological and tribal monitoring during aground disturbing activities in areas deeper than prior disturbance and areas adjacent to known cemeteries (including El Nido Park and Pacific Crest Cemetery).	Qualified Archaeologist and Native American Monitor (monitoring, discovery protocol, documentation)	Metro	Construction		
	If human remains and/or associated funerary objects are encountered, halt work within 50 feet of the find; notify the Los Angeles County Coroner immediately; follow PRC §5097.98 and H&SC §7050.5 procedures, including consultation with the Most Likely Descendant identified by the NAHC; and implement treatment and disposition of remains/funerary objects as directed by the MLD and in accordance with applicable law.	Contractor (comply with stop-work procedures; support discovery protocols) Metro (compliance oversight; comply with legal requirements)	Metro	Construction		

Mitigation Measure	Compliance Action/Deliverable	Responsible Party	Enforcement Agency	Monitoring/Compliance Schedule	Verification of Compliance	
					Initial	Date
Tribal Cultural Resources						
MM-TCR-1: Native American Monitoring Prior to the issuance of notice to proceed with construction, Metro shall document retention of a Native American Monitor from, or approved by, consulting tribes under AB 52. Native American monitoring shall be required during all excavation that extends below the depth of prior disturbance, as defined in MM-CUL-2, and in any areas identified through the cultural resources search or tribal consultation as having higher potential for intact tribal cultural resources. Native American monitoring shall be conducted in coordination with archaeological monitoring required under MM-CUL-3 and consistent with the CRMMP prepared under MM-CUL-2. If, after a good-faith effort, a qualified Native American monitor is not available at the time ground-disturbing activities are scheduled, construction may proceed with archaeological monitoring in accordance with MM-CUL-3, provided that consultation with the tribes continues regarding treatment of any tribal cultural resources identified. For the purposes of this measure, a good-faith effort shall consist of documented outreach to consulting tribes regarding the construction schedule, made at least 15 working days in advance of the ground-disturbance start date, with at least one follow-up attempt by phone or email if no response is received. The Native American Monitor shall prepare monitoring documentation describing the relevant ground-disturbing activities, the type of construction activities performed, locations of ground-disturbing activities, locations of monitoring, soil types, and any cultural or tribal resources identified, including but not necessarily limited to, Native American cultural and historical artifacts, remains, places of significance, etc., as well as any discovered Native American (ancestral) human remains and burial goods. The documentation shall be prepared in accordance with the CRMMP and provided to Metro. Metro shall make the documentation available to consulting tribes upon request. Native American monitoring may conclude when Metro determines, in consultation with the project archaeologist and consulting tribes, that all ground-disturbing activities with the potential to affect tribal cultural resources have been completed.	Document retention of a Native American monitor from, or approved by, consulting tribes under AB 52.	Metro	Metro	Prior to Notice to Proceed		
	Verify in the field that a Native American monitor is monitoring the site during ground-disturbing activities per the CRMMP. If a qualified monitor is unavailable despite a documented good-faith effort (as defined in MM-TCR-1), construction may proceed with archaeological monitoring provided consultation with tribes continues.	Contractor (cooperate with monitors; comply with stop-work procedures) Metro (compliance oversight; coordinate with tribes; receipt of documentation)	Metro	Construction		
	Native American monitor to prepare monitoring documentation (construction activities, soils, resource finds, etc.) in accordance with the CRMMP and provide to Metro; Metro to make documentation available to consulting tribes upon request. Metro, in consultation with the project archaeologist and consulting tribes, to determine when monitoring may conclude.	Native American Monitor (conduct monitoring; prepare documentation) Metro (compliance oversight; coordinate with	Metro	Construction		
MM-TCR-2: Unanticipated Discovery of Tribal Cultural Resource Objects (Non-Funerary/Non-Ceremonial) In the event that potential cultural material is discovered during ground-disturbing activities, all construction activities in the immediate vicinity of the discovery shall cease (i.e., not less than the surrounding 50 feet). The discovery shall be evaluated promptly	Contractor to halt ground-disturbing activities within 50 feet of discovery.	Contractor	Metro	Construction		
	Archaeological and Native American Monitors to promptly evaluate find in accordance with the CRMMP.	Monitors (evaluation, treatment, recommendations, documentation)	Metro	Construction		

Mitigation Measure	Compliance Action/Deliverable	Responsible Party	Enforcement Agency	Monitoring/Compliance Schedule	Verification of Compliance	
					Initial	Date
by the archaeological and Native American monitors in accordance with the CRMMP required by MM-CUL-2. If the find is determined to be a tribal cultural resource under Public Resources Code Section 21074, Metro, in consultation with the monitors and consulting tribes under AB 52, shall determine appropriate treatment consistent with the protocols and performance standards set forth in MM-CUL-2. Preservation in place, including avoidance or protective measures such as capping, shall be the preferred treatment. If preservation in place is not feasible, mitigation shall be implemented through data recovery and documentation in accordance with the Secretary of the Interior’s Standards (SOI) and CEQA Guidelines Section 15126.4(b), with tribal consultation to ensure culturally appropriate treatment.	If the find is determined to be a tribal cultural resource under PRC § 21074, Metro, in consultation with monitors and consulting tribes, to determine appropriate treatment;	Contractor (implement treatment as directed by Metro/monitors)	Metro	Construction		
	Implement preservation in place (avoidance, protective capping, etc.) as the preferred treatment;					
	If preservation in place is not feasible, conduct data recovery and documentation consistent with SOI standards and CEQA Guidelines §15126.4(b), with tribal consultation for culturally appropriate treatment.					
	Archaeological and Native American Monitors to document discovery, evaluation, and treatment actions; provide documentation to Metro.	Metro (compliance oversight; consultation with tribes; approval of treatment)	Metro	Construction		
MM-TCR-3: Unanticipated Discovery of Human Remains and Associated Funerary or Ceremonial Objects	Contractor to halt work within 50 feet of discovery and immediately notify Metro.	Contractor	Metro	Construction		
Native American human remains are defined in Public Resources Code 5097.98 (d)(1) as an inhumation or cremation, and in any state of decomposition or skeletal completeness. Funerary objects, called associated grave goods in Public Resources Code Section 5097.98, are also to be treated according to this statute. In the event that human remains or associated funerary objects are encountered during ground-disturbing activities, construction shall halt within 50 feet of the find. The discovery shall be addressed in accordance with the CRMMP required by MM-CUL-2 and the protocols set forth in MM-CUL-3. Consistent with California Health and Safety Code Section 7050.5, the County Coroner shall be notified immediately. If the remains are determined to be Native American, the Native American Heritage Commission shall be contacted, and consultation shall occur with the Most Likely Descendant identified by the Commission, pursuant to Public Resources Code Section 5097.98. Native American human remains and associated funerary or ceremonial objects shall be treated together as a single burial unit under Public Resources Code Section 5097.98(d), with preservation in place as the preferred treatment. If preservation in place is not feasible, the Most Likely Descendant, in consultation with Metro, shall determine culturally appropriate treatment in accordance with Public Resources Code Section 5097.98(d)(2). Any discovery of human remains/burial goods shall be kept confidential to prevent further disturbance.	Notify the Los Angeles County Coroner pursuant to Health & Safety Code § 7050.5.	Metro (compliance oversight; coordination with Coroner/NAHC/MLD; documentation, consultation with MLD) Contractor (implement treatment measures as directed)	Metro NAHC/County Coroner (oversight of statutory process for human remains)	Construction (discovery, evaluation, and treatment, if remains are encountered)		
	If remains are determined to be Native American, notify the Native American Heritage Commission (NAHC) and initiate consultation with the Most Likely Descendant (MLD).	County Coroner	NAHC/County Coroner (oversight of statutory process for human remains)	Construction (discovery, evaluation, and treatment, if remains are encountered)		
	Treat Native American human remains and associated funerary/ceremonial objects together as a single burial unit, consistent with PRC §5097.98(d)(1).	Contractor	Metro NAHC/MLD (consultation and determination of culturally appropriate treatment)	Construction (discovery, evaluation, and treatment, if remains are encountered)		
	Implement preservation in place as the preferred treatment. If not feasible, consult with the MLD (in coordination with Metro) to determine culturally appropriate treatment consistent with PRC §5097.98(d)(2).	Contractor	Metro	Construction (discovery, evaluation, and treatment, if remains are encountered)		

Mitigation Measure	Compliance Action/Deliverable	Responsible Party	Enforcement Agency	Monitoring/Compliance Schedule	Verification of Compliance	
					Initial	Date
	Maintain confidentiality of the discovery location and treatment process to prevent further disturbance.	Contractor	Metro	Construction and Post Construction (documentation)		
	Document notifications, consultations, and treatment measures per CRMMP requirements.	Contractor	Metro	Construction and Post Construction (documentation)		

ATTACHMENT – PROJECT FEATURES

As a part of the project, several project features would be implemented during construction or operations, which would ensure compliance with the laws, guidelines, and best practices of regulatory agencies. These project features consist of design features, best management practices, and other measures that would be required by law and/or permit approvals by federal, state, regional or local agencies or that demonstrate best practices in transit construction and operation. Project features apply to all alignments unless otherwise noted.

TRANSPORTATION PROJECT FEATURES

PF-T-1. Construction Traffic Management Plan (CTMP)

Metro Rail Design Criteria (MRDC) requires that contractors develop a CTMP prior to the initiation of localized construction activities. Per Metro standard practice, this CTMP (inclusive of street closure information, detour plans, haul routes, and a staging plan) shall be prepared and submitted to the Cities of Lawndale, Redondo Beach, and Torrance for review. For the Hawthorne Option, it would also be submitted to Caltrans. Caltrans would also review selected areas of the Elevated/At-Grade Alignment, Trench Option, or LPA, such as bridge construction over Artesia Boulevard. The CTMPs shall be based on the nature and timing of the specific construction activities at each of the construction sites. This coordination will ensure construction activities of the concurrent related projects and associated hauling activities are managed in collaboration with one another and the project. The CTMPs may be updated as construction progresses to reflect progress at the various construction sites. The CTMPs will include, but not be limited to, the following elements, as appropriate:

- > As traffic lane, parking lane, sidewalk closures and full road closures are anticipated, worksite traffic control plans, approved by the local jurisdictions and Caltrans, shall be developed and implemented to route vehicular traffic, bicyclists, and pedestrians around any such closures.
- > As partial and full street closures are anticipated at various locations during portions of the Project construction, detour plans, approved by the local jurisdictions, shall be developed and implemented to route vehicular traffic, pedestrians and bicyclists to alternative routes during these periods, including maintaining access for these modes across Hawthorne Boulevard during construction.
- > Ensure that vehicle and pedestrian access will remain available from at least one entry and egress point for properties in proximity to the alignments and component sites during construction with access to businesses maintained during normal business hours; nighttime closures may be possible and accordingly arranged with property owners.
- > Coordinate with the city and emergency service providers to ensure emergency access is provided to the alignments and component sites and neighboring land uses. Emergency access points will be marked accordingly in consultation with local fire departments, as applicable.
- > Provide off-site truck staging in a legal area furnished by the construction truck contractor.
- > Schedule deliveries and pick-ups of construction materials during non-peak travel periods to the extent possible and coordinate to reduce the potential of trucks waiting to load or unload for protracted periods.

AESTHETICS PROJECT FEATURES

PF-AES-1. Local Zoning Ordinances

All project components located on properties outside of existing Metro-owned right-of-way (Metro ROW) and public ROW would adhere to local zoning ordinances.

PF-AES-2. Metro Design Standards

All project components, including, but not limited to track guideway, auxiliary facilities, and station (public and ancillary) facilities, will be designed per the MRDC and consistent with the objectives of the Metro Art Program Policy, Metro's Transit Service Policies & Standards, Systemwide Station Design Standards Policy, and Standard/Directive Drawings, or equivalent. Landscaping and operational lighting will also be installed consistent with these design standards.

AIR QUALITY PROJECT FEATURES

PF-AQ-1. Metro Green Construction Policy Compliance

Following construction equipment requirements, construction best management practices (BMP) and implementation strategies for all construction projects performed on Metro properties or rights-of-way.

- > Construction equipment shall incorporate, where feasible, emissions-reducing technology such as hybrid drives and specific fuel economy standards.
- > Maintain equipment according to manufacturer specifications.
- > Idling of construction equipment and heavy-duty trucks shall be restricted to a maximum of five minutes when not in use (certain exceptions apply based on California Air Resources Board [CARB] exemptions).
- > All off-road diesel-powered construction equipment greater than 50 horsepower (hp) shall meet Tier-4 off-road emission standards at a minimum.
- > All on-road heavy-duty trucks with a gross vehicle weight rating greater than or equal to 14,000 pounds must have engines meeting U.S. 2010 on-road emission standards.
- > Where applicable and feasible, work with local jurisdictions to improve traffic flow by signal synchronization during construction activities.
- > Use electric power in lieu of diesel power where available.
- > Generators: every effort shall be made to utilize grid-based electric power at any construction site, where feasible. Where access to the power grid is not available, on-site generators must:
 - Meet a 0.01 gram per brake-horsepower-hour (g/bhp-hr) standard for particulate matter (PM); or,
- > Be equipped with Best Available Control Technology (BACT) for PM emissions reductions.
- > Inspections: Metro shall conduct inspections of construction sites and affected off-road and on-road equipment and generator as well as compliance with air quality rules.
- > Records: Prior to Notice to Proceed (NTP) to commence construction and to be verified afterwards consistent with project contract requirements and through enforcement provisions above, the Contractor shall submit to Metro the following information for all construction equipment to be used on Metro properties or rights-of-way:

- A certified statement that all construction equipment used conform to the requirements specified above;
- A list of all the equipment and vehicles (i.e., off-road equipment, include the CARB-issued Equipment Identification Number) to be used;
- A copy of each Contractor's certified U.S. Environmental Protection Agency (EPA) rating and applicable paperwork issued either by CARB, the South Coast Air Quality Management District (SCAQMD), and any other jurisdiction that has oversight over the equipment.

PF-AQ-2. South Coast Air Quality Management District (SCAQMD) Rule 403 Compliance

Construction of the project would implement the following BMPs in compliance with SCAQMD Rule 403 – Fugitive Dust:

- > Backfilling: Backfill material stabilization when actively handling or inactive and stabilize soil at completion of activity.
- > Clearing/Grubbing: Maintain stability of soil through watering of site prior to, during, and after all clearing/grubbing activities.
- > Cut and Fill: Pre-water soils prior to cut and fill activities using water trucks; stabilize soil during and after activities.
- > Debris Hauling: All trucks hauling dirt, sand, soil, or other loose materials are to be tarped with a fabric cover and maintain a freeboard height of 12 inches.
- > Demolition Activities: Prohibit demolition activities when wind speeds exceed 25 mph; apply water to disturbed soils after demolition is completed or at the end of each day of cleanup.
- > Disturbed Soil: Stabilize disturbed soil throughout the construction site by limiting vehicular traffic and disturbance on soil where possible and applying water or a stabilizing agent in sufficient quantities to prevent the generation of visible dust plumes (Rule 401 – Visible Emissions).
- > Disturbed Surface Areas: Apply dust suppression in sufficient quantity and frequency to maintain a stabilized surface; apply water at three-hour intervals to at least 80% of the un-stabilized area.
- > Earth-Moving Activities: Pre-apply water to depth of proposed cuts and reapply as necessary to maintain soils in a damp condition and to ensure that visible dust plumes do not exceed 100 feet in any direction.
- > Importing/Exporting of Bulk Materials: Stabilize material with tarps or other suitable enclosures on trucks while loading/unloading to reduce fugitive dust emissions and maintain at least six inches of freeboard on haul vehicle; provide water during loading/unloading to prevent dust plumes.
- > Staging Areas and Unpaved Roads: Stabilize surface areas and limit vehicle speeds to 15 miles per hour.
- > Stockpiles/Bulk Material Handling: stabilize stockpiled materials with intermittent watering and limit stockpiles to eight feet in height within 100 yards of off-site occupied buildings.
- > Trenching: Stabilize surface soils with pre-watering where trencher or excavator and support equipment will operate; wash mud and soils from equipment at completion of activities.

PF-AQ-3. Metro Moving Beyond Sustainability Strategic Plan Compliance

Construction and operation of the project will adhere to the commitments established by the Metro Moving Beyond Sustainability Strategic Plan 2020, including, but not limited to the application of renewable diesel requirements for contractors and identify opportunities to decarbonize fuel sources at construction sites.

PF-AQ-4. Metro Rail Design Guidelines

The project will be designed in accordance with the Metro Rail Design Criteria and the Metro Systemwide Station Design Standards Policy, which includes the installation of high-efficiency light emitting diode (LED) lighting in all fixtures to reduce electricity consumption.

NOISE AND VIBRATION PROJECT FEATURES

PF-NV-1. Quiet Zone Equipment Installation (Elevated/At-Grade Alignment, Trench Option, and LPA)

The eight at-grade freight crossings between Inglewood Ave and 182nd Street have been designed and would be constructed to include all Federal Railroad Administration (FRA)-required Supplemental Safety Measures and associated improvements and equipment that are needed to qualify for Automatic FRA Approval to establish a quiet zone. In order to establish a quiet zone, local jurisdictions will need to submit a Notice of Intent to the operating railroads (e.g. BNSF), California Public Utilities Commission (CPUC), Metro, and FRA followed by a Notice of Establishment, which would ultimately eliminate the sounding of freight horns within the project limits. Freight crossing signal bells would continue to generate a minimum of noise level of 75 decibels A (dBA) at 10 feet per American Railway Engineering and Maintenance of Way requirements.

PF-NV-2. Crossing Signal Bell Shrouds (Elevated/At-Grade Alignment)

Crossing signal bells at the two at-grade light rail crossings (170th Street and 182nd Street) would be equipped with shrouds to direct bell noise away from sensitive receivers and towards the crossings. Crossing signal bell noise would not exceed 104 dBA sound exposure level at 50 feet. This measure is subject to CPUC authorization.

PF-NV-3. Gate-Down-Bell-Stop Variance (Elevated/At-Grade Alignment)

Metro would apply for a gate-down-bell-stop variance at the two at-grade light-rail crossings (170th Street and 182nd Street) to reduce the duration of bell ringing and therefore reduce impacts at sensitive receivers. Crossing signal noise would not exceed 30 seconds in duration. This measure is subject to CPUC authorization.

BIOLOGICAL RESOURCES PROJECT FEATURES

PF-BIO-1. Metro Tree Policy

The Metro Tree Policy outlines Metro's commitment to protecting trees, when possible, or replacing trees removed as a result of Metro construction and maintenance. For non-heritage trees, the replacement ratio defined was two trees for every tree removed. This policy also prioritizes planting strategies that maximizes the use of native species.

GEOLOGY, SOILS, AND PALEONTOLOGICAL RESOURCES PROJECT FEATURES

PF-GEO-1. Metro Geotechnical Design Standards

Prior to construction, Metro will complete soil investigations, including examination of any potential sinkholes by the geotechnical engineer of record, to inform site-specific design and construction measures.

The project shall be designed and constructed per the MRDC. Key compliance sections of the MRDC relative to geology and soils are Section 5.3, Section 5.4, Section 5.6, and MRDC Section 5 Appendix, Metro Supplemental Seismic Design Criteria (SSDC). Section 5.6 of the MRDC provides detailed requirements for planning and conducting a geotechnical investigation, geotechnical design methodologies, and reporting. In accordance with the MRDC, geotechnical report recommendations shall be incorporated into the project plans and specifications. These recommendations shall be a product of final design and shall address potential subsurface hazards. In addition, Caltrans and the California Building Code (CBC) have independent design criteria for bridges, aerial structures and building structures, which shall be followed.

As noted in Section 3.8-1.2, SSDC outlined in the MRDC Section 5 appendix (Metro, 2017) recommends the seismic stability and potential permanent deformation of sloping ground or embankments supporting aerial guideway and bridges along proposed alignments be investigated. Investigations should include evaluation of the potential for ground liquefaction and related deformations. The evaluations and associated analyses shall be displacement-based leading to the determinations of potential lateral deformations of slopes or embankments and ground settlement. It is recommended that the total settlement and lateral ground deformations under operating design earthquake (ODE) seismic events shall not be allowed to exceed two inches to allow for track re-leveling or re-alignment. Larger deformations may be allowed for maximum design earthquake (MDE) events on a case-by-case basis on approval by Metro.

The MRDC section also provides details on how the stability analysis of the slopes and embankments is to be performed. Two options are provided: (1) seismic coefficient approach for pseudo-static case or (2) slope displacement method. If the factor of safety is less than 1.1, then slope performance shall be evaluated using Method (2) where displacements are computed using Newmark time-history analyses.

Metro Supplemental Seismic Design Criteria outlined in the MRDC Section 5 appendix provides guidance for liquefaction studies. If potentially liquefiable soils are identified along proposed alignments, liquefaction susceptibility shall be determined using the procedures documented in the American Association of State Highway and Transportation Officials-California Load and Resistance Factor Design Bridge Design Specifications. The liquefaction potential assessment should consider the impact of the following effects where liquefaction is judged to occur:

- > Loss of strength of liquefied layers (post liquefaction residual strength)
- > Flow failures, slope deformations
- > Post liquefaction ground settlement

According to the SSDC, the displacement performance of slopes and embankments underlain by liquefied soils may be evaluated in a similar manner to non-liquefiable cases, except residual strengths of liquefied soils are used in analyses. The post-liquefaction settlement of liquefied soil layers may be determined using procedures documented by Tokimatsu and Seed (1987). The bridge and elevated rail

structures located in liquefaction sites should be analyzed for non-liquefiable and liquefiable soil configurations. For the liquefiable condition, residual strengths of liquefied soil layers are used for lateral and axial deep foundation response analyses. For those sites where liquefaction related permanent lateral ground displacements are determined to occur, the effects on pile performance shall be evaluated. Down drag forces on piles due to post liquefaction settlement shall also be evaluated. If the above impact assessments yield unacceptable performance of the structures, appropriate measures shall be incorporated into the design.

As outlined in the MRDC Section 5.6, the geotechnical investigation should evaluate impacts related to potential settlement due to lowering of the groundwater table or excavation instability due to draining of perched groundwater during construction activities. Specific topics to be considered in the geotechnical investigation include the following:

- > Selection of appropriate construction methodology that minimizes permanent changes to sub-surface drainage conditions or groundwater pressures.
- > Installation of dewatering wells outside trench walls, sump pumps within the trench, deep secant pile walls to minimize excavation base instability, heaving of soils on the upgradient side of the trench, fluidization, and erosion.
- > Identification of zones of relatively high permeability strata with high potential to excessive groundwater influx and recommend construction methodology and design technologies such as keying secant pile walls into lower permeability strata.

HAZARDS AND HAZARDOUS MATERIALS PROJECT FEATURES

PF-HHM-1. Handling, Storage, and Transport of Hazardous Materials and Wastes

Prior to the start of construction, the contractor would provide Metro with a hazardous waste and hazardous materials management plan, such as a plan defined in Title 19 California Code of Regulations (CCR), or a Spill Prevention, Control, and Countermeasure Plan. The plan will be completed to Metro contractor specifications and will comply with the State Water Resources Control Board (SWRCB) Construction Clean Water Act (CWA) Section 402 General Permit conditions and requirements for transport, labeling, containment, cover, and storage of hazardous materials during construction and operation. The plan will identify the responsible parties and outline procedures for hazardous waste and hazardous materials handling, storage, and transport. The excavation and transport of soils contaminated by heavy metals (e.g., lead) would be managed according to SCAQMD Rule 1466 (Control of Particulate Emissions from Soils with Toxic Air Contaminants) and SCAQMD Rule 1166 (volatile organic compounds [VOC] emissions from Decontamination of Soil). The plan would also prescribe BMPs to follow to prevent hazardous material releases and for cleanup of any hazardous material releases that may occur. The transportation of hazardous materials and waste shall be conducted in accordance with the applicable regulations codified in 49 CFR Parts 101, 106, 107, and 171 to 180, including, but not limited to, those related to packagings, pre-transportation functions, transportation functions, and functions not subject to the requirements of the federal Hazardous Materials Regulations.

Additionally, the contractor would comply with applicable federal and state regulations regarding hazardous material handling and storage practices, such as the Resource Conservation and Recovery Act, Comprehensive Environmental Response, Compensation, and Liability Act, the Hazardous Materials Release Response Plans and Inventory Law, and the Hazardous Waste Control Act.

PF-HHM-2. Demolition Plans

Prior to the start of construction, the contractor would prepare demolition plans for the safe dismantling and removal of roadways, building components, and debris. The demolition plans would also include plans for testing and abatement procedures for asbestos-containing materials, lead-based paint, and polychlorinated biphenyls, as well as handling and disposal of treated wood waste, such as creosote and arsenic-treated railroad ties, and universal waste in accordance with federal and state regulations, including the 1994 Federal Occupational Exposure to Asbestos Standards, SCAQMD Rule 1403 (Asbestos Emissions from Demolition/Renovation Activities), Title 22 of the California Code of Regulations Division 4.5 (Hazardous Waste), the U.S. Department of Housing and Urban Development Lead-Based Paint Guidelines, and Title 40 of the Code of Federal Regulations Part 761.

PF-HHM-3. Property Acquisition Phase II Site Investigation

Consistent with Metro's standards, a Phase II site investigation would be conducted during the preliminary engineering phase on sites that would be acquired/utilized for the project to determine whether the suspected contamination had resulted in soil, groundwater, or soil vapor contamination exceeding regulatory action levels. Aerially deposited lead testing would be included as part of the Phase II site investigation. If the Phase II site investigation concludes that the site is contaminated, remediation or corrective action (e.g., removal of contamination, in-situ treatment, capping) would be conducted prior to or during construction under the oversight of federal, state, and/or local agencies (e.g., United States Environmental Protection Agency [USEPA], Department of Toxic Substance Control [DTSC], Regional Water Quality Control Boards [RWQCB], Los Angeles County) and in full compliance with current and applicable federal and state laws and regulations. Additionally, Voluntary Cleanup Agreements may be used for parcels where remediation or long-term monitoring is necessary. Generally, recognized environmental conditions (REC), also known as sites of concern as identified in the Phase I Environmental Site Assessment (ESA), would be remediated by the property owner prior to acquisition of the property and construction on the site, depending on the arrangement negotiated during property acquisition.

PF-HHM-4. Soil, Soil Vapor, and Groundwater Management Plans

Prior to the start of construction, the contractor would retain a qualified environmental consultant to prepare a Soil Management Plan, Soil Reuse Management Plan, and/or a Soil, Soil Vapor, and Groundwater Management Plan. These plans would be completed to Metro's contractor specifications and submitted to Metro prior to any ground-disturbing activities for the Project.

The Soil and Soil Vapor Management Plan would establish provisions for the disturbance of contaminated materials (known and undocumented). Proper management and disposition of contaminated soils and gases would be determined in consultation with appropriate regulatory agencies and in accordance with applicable federal and/or state guidance (USEPA, DTSC, RWQCB, and other local agencies)]. The Soil Reuse Management Plan would establish provisions for the reuse of contaminated known or undocumented soils. Proper management and disposition of contaminated soils would be determined in consultation with appropriate regulatory agencies and in accordance with applicable federal and/or state guidance (USEPA, DTSC, RWQCB, and other local agencies). Contaminated soil shall be disposed of at a permitted landfill per the specifications of DTSC or RWQCB or other agencies overseeing the project construction.

The Groundwater Management Plan would establish provisions for encountering and managing contaminated groundwater (known and undocumented). Proper disposal of contaminated groundwater would be determined in consultation with appropriate regulatory agencies and in accordance with applicable federal and/or state guidance (USEPA, DTSC, RWQCB, and other local agencies).

Where open or closed regulatory release cases are already managed by a regulatory agency (e.g., USEPA, DTSC, RWQCB) and construction involves plans to alter the use of the site and/or disturb contaminated soil and/or groundwater onsite, Metro would notify the regulatory agency of the planned land use changes prior to ground-disturbing activities at the location of the open or closed regulatory release site. The regulatory agency would determine the level of investigation and/or remediation (performance standards) necessary on a case-by-case basis. A closure or no further action determination letter from the regulatory agency would be obtained when investigation and/or remediation is complete.

PF-HHM-5. Disposal of Groundwater

If disposal of contaminated groundwater is required during construction, Metro would consult with the RWQCB, and the Project would comply with permits required by the RWQCB. The RWQCB may require a National Pollutant Discharge Elimination System permit and/or Water Discharge Requirement (WDR) permit for dewatering and discharge activities. The County of Los Angeles Department of Public Works (LACDPW) would be contacted prior to discharging groundwater into their sewer or stormwater systems. The groundwater discharge and disposal requirements vary by agency, location, concentration, and contaminants of concern and are therefore developed in consultation with the agencies.

PF-HHM-6. Oil and Gas Wells

Prior to ground-disturbing activities, all oil wells (including abandoned or suspected wells) within 200 feet of the project would be identified, inspected, and addressed in accordance with the California Department of Conservation, California Geologic Energy Management Division (CalGEM) standards and in coordination with the well owners. Where the alignment cannot be adjusted to avoid well casings, CalGEM and a re-abandonment specialty contractor would be contacted to determine the appropriate method of re-abandoning the well. Oil well abandonment must proceed in accordance with California Laws for Conservation of Petroleum and Gas (1997), Division 3. Oil and Gas, Chapter 1. Oil and Gas Conservation, Article 4, Sections 3228, 3229, 3230, and 3232. The requirements include written notification to CalGEM, protection of adjacent property, and before commencing any work to abandon any well, obtaining approval by CalGEM. Abandonment work, including sealing off oil and gas bearing units, pressure grouting, etc., must be performed by a state-licensed contractor under the regulatory oversight and approval of CalGEM. If an unknown well is encountered during Project construction, the contractor will notify Metro, California OSHA, and CalGEM and proceed in accordance with state requirements.

HYDROLOGY AND WATER QUALITY PROJECT FEATURES

PF-HWQ-1. Stormwater Pollution Prevention Plan (SWPPP) Implementation per Construction General Permit and MS4 Permit

Construction of the project would disturb greater than one acre of ground surface and are thus subject to the Construction General Permit SWPPP requirements. The SWPPP would include BMPs designed to prevent impacts to water quality from occurring during construction. BMPs included would be the minimum BMPs required by the MS4 Permit for all construction sites and additional BMPs determined

necessary by the SWPPP developer. BMPs designed to prevent the introduction of chemicals, trash, and/or hazardous substances into waters may include but are not limited to fueling equipment offsite, secondary containment, drip pans, spill response plans, and designed waste receptacles on site. BMPs designed to prevent erosion, prevent sedimentation, and slow and capture runoff on the construction site may include but are not limited to stabilized construction entrances/exits, fiber rolls, silt fences, sandbags, water application for dust control, check dams, drainage inlet protections, infiltration basins, and hydroseeding. BMPs would be implemented before, during, and/or immediately after construction.

PF-HWQ-2. Groundwater Treatment and Discharge per RWQCB Waste Discharge Requirements (WDR) for Construction Dewatering

Per the requirements of the RWQCB WDR for Construction Dewatering, dewatered groundwater would be treated if necessary and then discharged in a pre-approved location specified by said requirements.

PF-HWQ-3. Trench Construction Groundwater Pressure Control (Trench Option)

During trench construction for the Trench Option, BMPs would be implemented that include but are not limited to installing wall drains and appropriate drainage at the top of the trench to help relieve groundwater pressure buildup along the trench walls (Metro 2022b). BMPs used for groundwater pressure control would minimize the potential for the introduction of pollutants into groundwater and surface flows, as well as the potential for erosion, siltation, and flooding to occur on or offsite.

PF-HWQ-4. Trench Construction Runoff Collection and Treatment (Trench Option and LPA)

During trench construction for the Trench Option or LPA, surface runoff flowing within the trench would be collected, pumped out of the trench, treated (if necessary), and discharged to a pervious area on site for infiltration into the soil. BMPs used for surface runoff collection, treatment, and discharge would minimize the potential for introduction of pollutants into surface runoff, as well as the potential for erosion, siltation, flooding, and exceedance of existing storm drain system capacities on or offsite. Surface runoff treatment and discharge would comply with RWQCB Basin Plan water quality requirements.

PF-HWQ-5. Temporary Storm Drain Inflow Rerouting (Trench Option, Hawthorne Option, and LPA)

Although no existing storm drain rerouting is proposed under the Trench Option or LPA, runoff from the Trench Option or LPA footprint may be directed to different discharge points than existing points to avoid adverse hydrology and water quality impacts. Hawthorne Option construction would involve the permanent rerouting of two major storm drains running parallel to the alignment and one minor storm drain crossing the alignment. While these new permanent storm drain routes are constructed, temporary rerouting of inflows would be necessary during Hawthorne Option construction.

For the Trench Option, Hawthorne Option, or LPA, stormwater inflows would be captured, treated (if necessary), rerouted around the construction site, and discharged into the existing storm drain system. Treatment and discharge of storm drain inflows to the existing storm drain system would be conducted per RWQCB Basin Plan water quality requirements.

PF-HWQ-6. Low Impact Development (LID) BMPs per Regional Requirements

The operational design of the project would include LID BMPs designed to retain the Stormwater Quality Design Volume (SWQDV) on site per regional LID requirements. Examples of potential LID BMPs that may be implemented include but are not limited to increasing runoff's flow path length of travel and providing on-site detention basins for retention and infiltration. Additional runoff (beyond the SWQDV) would continue to be discharged via new or existing tie-ins to the existing stormwater drainage system. In elevated portions of the alignment, runoff would be collected by down drains. Discharge locations of underdrains installed along the project would be the same as existing discharge locations. Although no existing storm drain rerouting is proposed under the Trench Option or LPA, runoff from the Trench Option or LPA footprint may be directed to different existing discharge points. Rerouted storm drains under the Hawthorne Option would be discharged to the same or similar discharge points as existing conditions. Existing catch basins on adjacent storm drains would be retained during operation to prevent debris and trash from entering the stormwater drainage system.

PF-HWQ-7. Trench Operation Runoff Collection and Treatment (Trench Option and LPA)

During Trench Option and LPA operation, runoff that exceeds the SWQDV in the trench would be collected via a sump drainage system (two sumps in the vicinity of Manhattan Beach Boulevard for the Trench Option only and 182nd Street for both) at the low point along the trenched alignment. Runoff collected in the sump would be treated as needed, and then would either be pumped or flow via gravity from the sump to the existing storm drain system in compliance with RWQCB Basin Plan water quality requirements.

PF-HWQ-8. City of Torrance Flood Zone Requirements

A small portion of the project temporary footprint would be located within the 100-year flood zone, where a temporary construction easement would be needed for removal of an existing spur track. Construction in this area would be required to comply with Division 7, Chapter 9 of the Torrance City Code, titled "Flood Hazard Insurance." This section establishes a development permit process for flood hazard areas, designates a floodplain administrator for the City, and establishes standards for construction within flood hazard areas.

UTILITIES AND SERVICE SYSTEMS PROJECT FEATURES

PF-US-1. Utility Identification and Coordination

Per Metro standard practice, as design progresses, Metro will continue to verify the locations of existing utilities potentially affected by construction activities. This will include coordinating with all existing utility providers for wet and dry utilities (water, sewer, gas, electric, and telecommunications) and with private utility owners to obtain documentation of existing utility locations. Field verification (i.e., potholing and other methods as appropriate) shall be conducted throughout the preliminary engineering and final design phases to document the locations of all utilities within proximity to the guideway and station foundations of the guideway and station foundations, and other project elements that may affect utilities. Based on the information from the field investigations, the final designer will develop layouts of pipe separations based on coordination with the appropriate utility owners/operators to determine specific setback requirements for each utility line and the need for any stabilization for protection in place or relocation measures. During the construction and prior to digging, the contractor will conduct additional field verifications, which include requirements such as contacting

a utility location service to verify the position of existing pipes, and conducting additional potholing so that the final design layouts can be confirmed or adjusted as needed.

PF-US-2. Service Interruption Notification

Per Metro standard practice, prior to the start of any demolition or construction activities, Metro will be responsible for coordinating with utility and service providers regarding potential utilities service interruptions due to relocation of existing utilities. Metro will develop a construction plan in coordination with utilities and service providers to minimize interruptions of utilities systems to the greatest extent feasible, including providing temporary connection for services that must be disconnected for extended periods of time. Further, Metro will develop a contingency plan in cooperation with the utility providers for emergency repairs of any utilities unexpectedly found or that disintegrated because of age during excavations. The public would be notified of areas where temporary utilities service interruptions are anticipated.

PUBLIC FACILITIES PROJECT FEATURES

PF-PS-1. Coordination with Torrance Refining Company and Emergency Responders

Before construction of the project and during the advanced design stages, Metro would work with the Torrance Refining Company and Torrance Logistics Company, BNSF Railway, the City of Torrance, and other City entities responsible for emergency response to coordinate emergency communication systems so that, in the event of an emergency relating to flaring or other refinery operations-related hazards, Metro could hold or detour trains to avoid traveling near the refinery.

Hawthorne Option: Key Issues and Responses September 2025

C LINE (GREEN) EXTENSION TO TORRANCE



Metro

Hawthorne Option: Key Issues and Responses

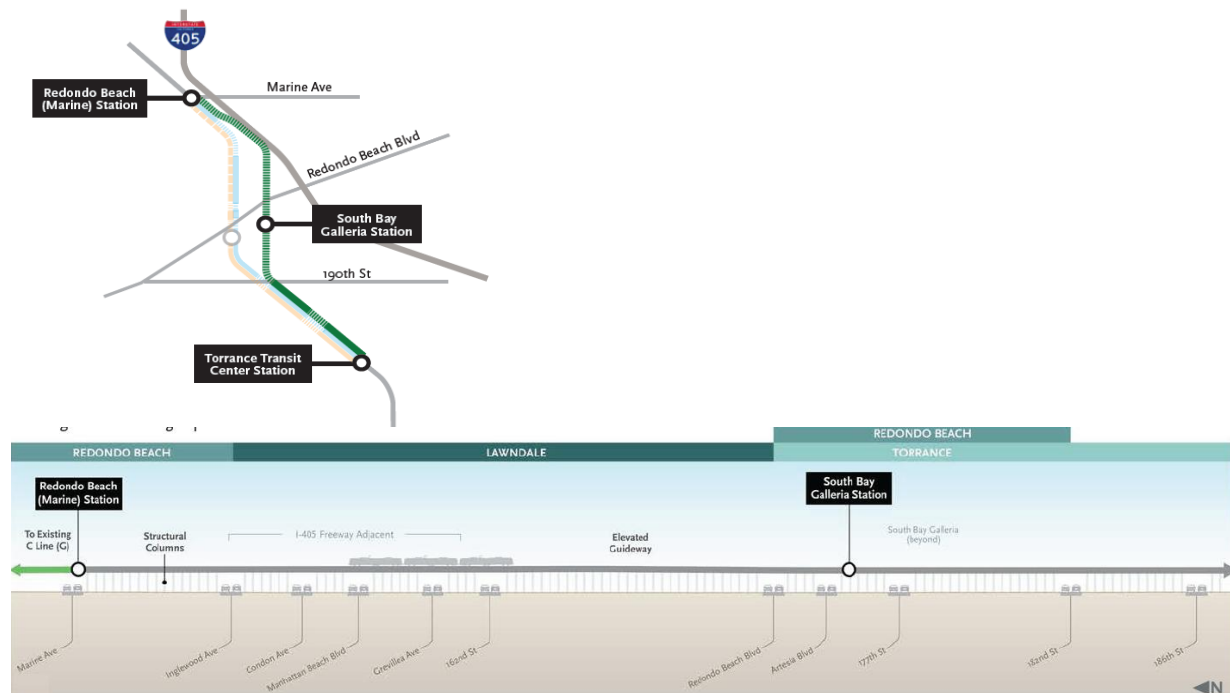
September 2025

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Overview

This document summarizes key issues and responses to comments received during the public comment period on the Draft Environmental Impact Report (EIR) regarding the Hawthorne Boulevard Option. This document organizes the written responses included in the Final EIR by topic area and includes exhibits from the Draft EIR and technical studies to make the information more accessible. For complete responses to public comments, see Chapter 5 of the Final EIR, available on the project website at www.metro.net/clineext.



Diagrams of Hawthorne Blvd Option (Urban Design Report, 2023)

Comparison of Station Area & Connectivity: Hawthorne Option vs. Metro ROW Alignments

Station Proximity to South Bay Galleria: Both Redondo Beach station locations studied in the Draft EIR would serve the South Bay Galleria and planned redevelopment area, which extends from Hawthorne Boulevard to Kingsdale Avenue and includes the existing Redondo Beach Transit Center (TC). The South Bay Galleria Station, associated with the Hawthorne Option, would be located near the northeastern corner of the redevelopment site, while the Redondo Beach TC Station, included in all three alignment options along the Metro right of way (ROW), including the locally preferred alternative (LPA), would be located near the southwestern corner of the redevelopment site, directly adjacent to the Redondo Beach TC. Both station locations would be within easy walking distance of the South Bay Galleria redevelopment area and South Bay Marketplace.

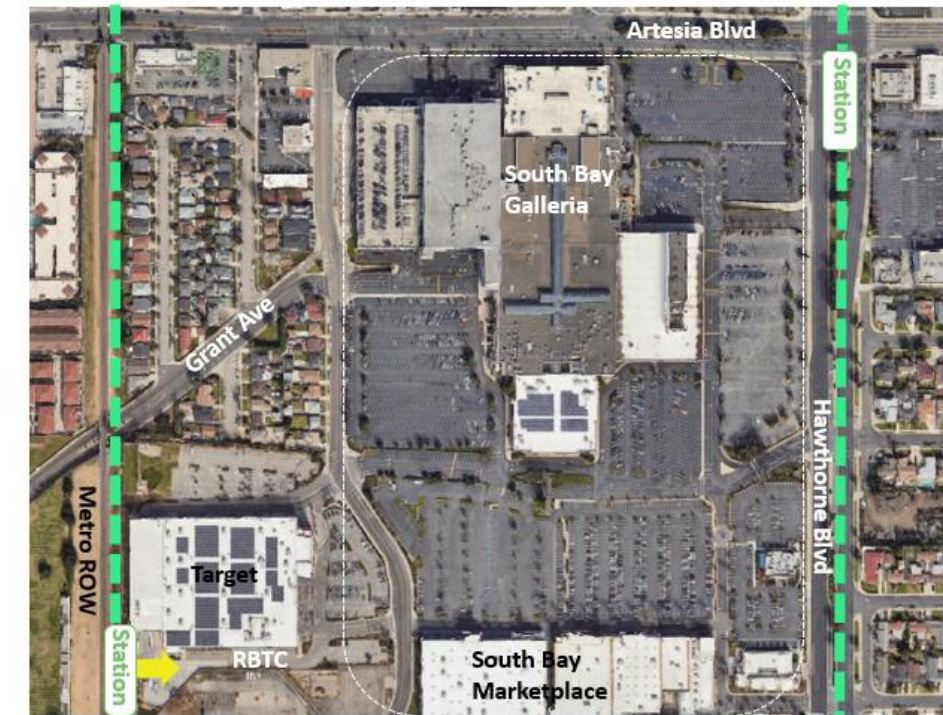
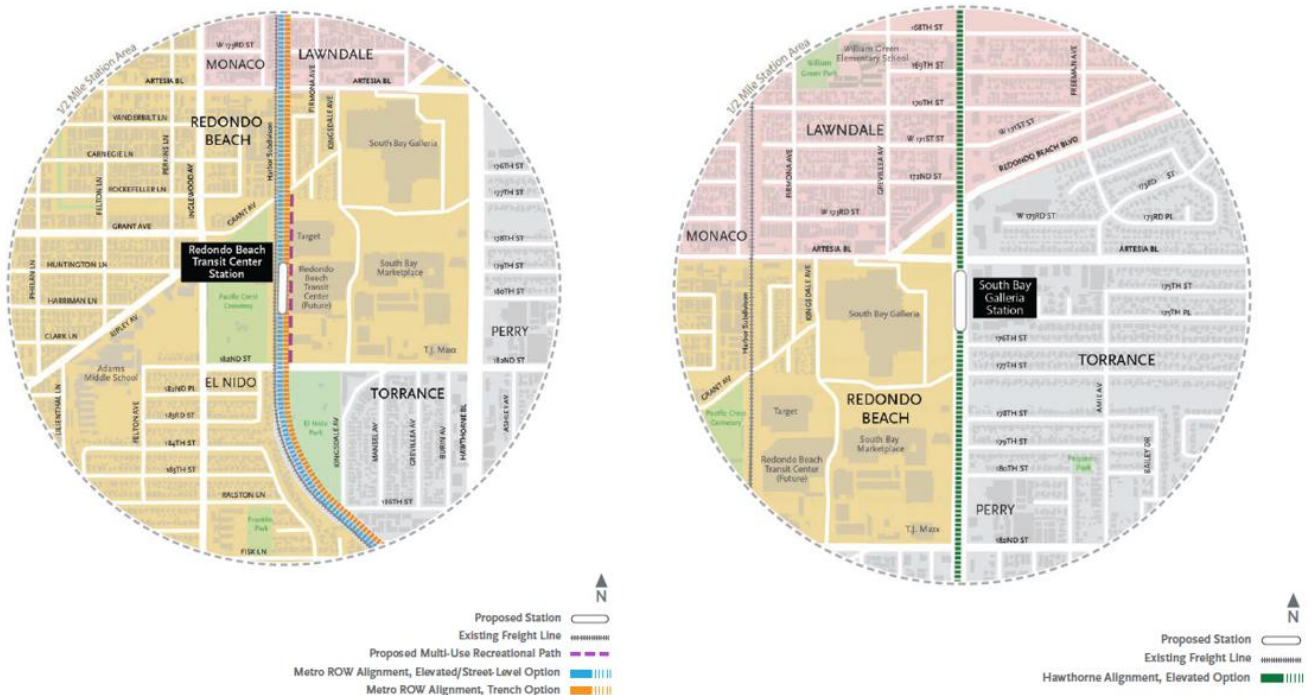


Diagram of proposed alignment options, stations, and surrounding uses in Redondo Beach (Metro, 2025)



Diagrams of Half-Mile Radius around Proposed Stations in Redondo Beach (Urban Design Report, 2023)

Connectivity to Transit Center: Both the South Bay Galleria Station (Hawthorne Option) and the Redondo Beach TC (all Metro ROW options, including LPA) would be within walking distance of the South

Bay Galleria. However, the Redondo Beach TC Station would be better suited to directly serve rail-to=bus transfers at the Redondo Beach TC and would provide a more convenient drop-off and pickup location than the South Bay Galleria Station. Accordingly, the regional connectivity benefits associated with the Hawthorne Option are also anticipated with the ROW alternatives, including the LPA, and the ROW alternatives could offer greater connectivity overall.



Diagram of pedestrian connection between proposed South Bay Galleria station and Redondo Beach Transit Center (Urban Design Report, 2023)

Connectivity to LAX and Travel Times: In Fall 2024, Metro implemented a new operating pattern for the Metro C and K Lines. Under this revised service plan, the project would operate as part of the K Line. Under this service plan, all alignments studied in the Draft EIR would connect directly to LAX via the K Line. Metro's modeling shows that travel times between the Torrance Transit Center and the LAX/Metro Transit Center Station would be the same for both the Metro ROW alignments and Hawthorne Option—approximately 19-minutes.

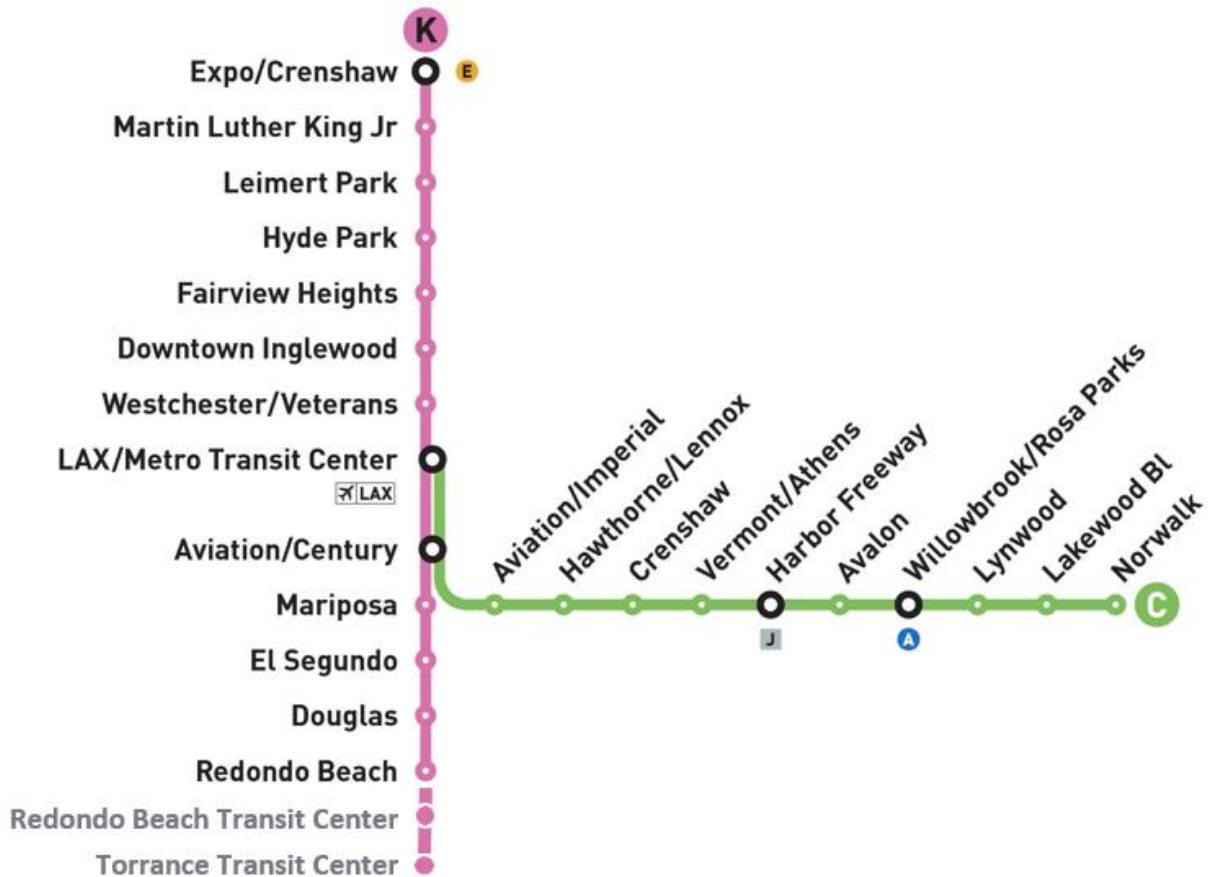
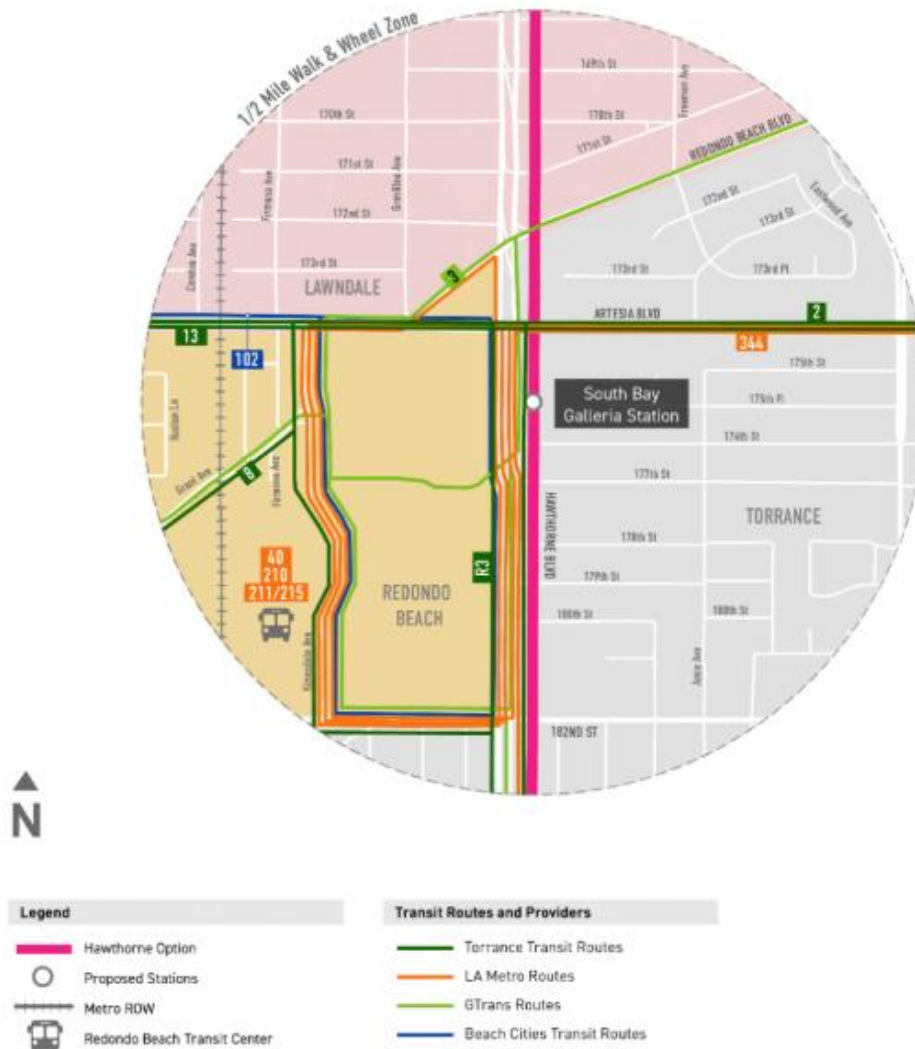


Diagram of Metro C and K Line stations with connections to LAX/Metro Center (Metro, 2025)

Bus Connectivity to Station: As shown in Figure 3.1-4 on page 3.1-19 of the Draft EIR, many existing bus transit services travel along Hawthorne Boulevard and pass by the proposed South Bay Galleria Station location on their way to the Redondo Beach Transit Center. Metro and other transit operators regularly adjust bus routes during construction of new rail stations and in response to rider demand and accessibility needs. The bus routes could be adjusted to add a stop close to the proposed South Bay Galleria Station and connect riders to the Redondo Beach Transit Center. By the time of construction of this project, the existing transit network would have the flexibility to adapt to ensure effective bus-rail connections.

Figure 3.1-4 Hawthorne Option Study Area Base Year Transit Lines (South Bay Galleria Station)



Source: Fehr & Peers, 2022; Metro, 2022; Cities of Torrance, Lawndale, Gardena, Redondo Beach, 2022

Figure 3.1-4 of the Draft EIR, showing transit routes and providers near the South Bay Galleria (Draft EIR, 2023)

Station Parking: The project would not add new parking at the Redondo Beach TC, and existing parking at this facility would remain available for transit users.

Based on Metro's system experience, the majority of rail passengers access stations by walking, bicycling, or transferring from buses rather than driving stations. Metro's annual On-Board Customer Satisfaction

Surveys show that even at stations with parking, most of that parking is typically underutilized under normal conditions. A similar pattern is expected for the proposed South Bay Galleria Station, with riders accessing the station by foot, bicycle, or bus.

First & Last Mile Connections: During the planning and design phases of major transit projects, Metro assists local jurisdictions in identifying potential First/Last Mile (FLM) improvements, such as crosswalks, bike lanes, landscaping, and pedestrian safety enhancements. However, implementation of these improvements is the responsibility of the local cities. If the project is approved, Metro would coordinate with the local jurisdictions to support FLM planning. The project would not interfere with existing bus service or prevent future bus service expansion (see Draft EIR Sections 3.1-4.1.1 and 3.1-4.1.2). Development of either the Redondo Beach TC Station (as part of Metro ROW alignments, including the LPA) or South Bay Galleria Station (as part of the Hawthorne Option), would improve bus-rail connections and provide convenient transit access to surrounding destinations.

Hawthorne Option: Land Use Planning

Community Division: The Hawthorne Option would be entirely elevated, running parallel to Interstate 405 (I-405) before continuing southbound in the median of Hawthorne Boulevard. Because the guideway would pass above the street, there would be no conflicts between light rail operations and roadway crossings, and no impediment to pedestrian movement across Hawthorne Boulevard. Crosswalks would be maintained, replaced, or added, as needed to preserve connectivity between both sides of the community. The primary changes to the roadway would involve reconfiguring intersections to relocate left-turn lanes and reducing median parking to accommodate the guideway's support columns. While these modifications may alter traffic flow, they would not prevent vehicles or pedestrians from crossing Hawthorne Boulevard, and therefore, they would not physically divide the community.

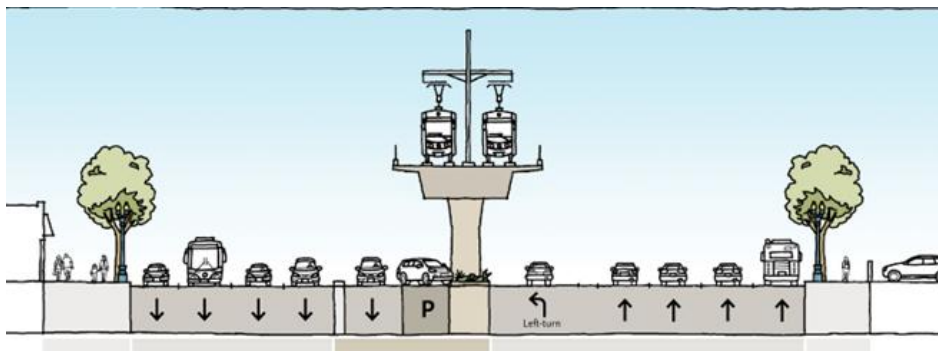


Diagram of Hawthorne Blvd Option between 171st Street and Redondo Beach Blvd (Draft EIR, 2023)

Hawthorne Blvd Corridor Specific Plan: The Final EIR incorporates additional information about the business and commercial goals of Hawthorne Boulevard Corridor Specific Plan, including the vision for the North Torrance District as a gateway and active commercial environment (see revisions to Draft EIR Section 3.2-1.3 and Table 3.2-5, as shown in Final EIR Section 4.6 of Chapter 4, Corrections and Additions). These additions do not alter the analyses or conclusions of the Draft EIR. As evaluated in Section 3.2-4.2.2 of the Draft EIR, the Hawthorne Option would not conflict with land use plans or policies adopted to avoid or mitigate environmental effects. To the contrary, light rail service along Hawthorne Boulevard and the proposed South Bay Galleria Station would support the Specific Plan's goals by offering an alternative to car travel and aligning with future population and employment growth.

Property Values and Impacts to Businesses under the Hawthorne Option

Business Outreach & Notifications: As part of the environmental review process, Metro notified all property owners along the proposed alignments, including those with properties potentially affected by the alignments studied in the Draft EIR. Business-specific outreach was also conducted along each alignment under study. In addition to public meetings, Metro accepted comments from business owners through all standard channels, including email, phone, and written submissions. All comments received are part of the public record and have been considered in the environmental review and decision-making process.

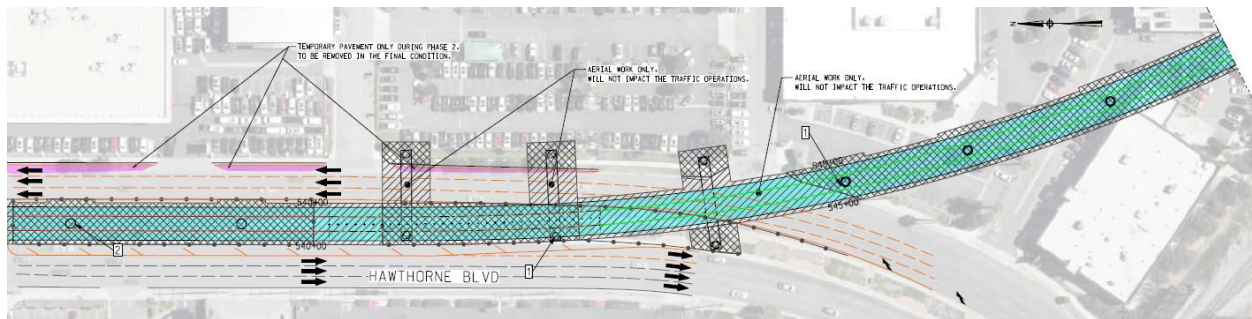
Businesses Along the Corridor: The Draft EIR and related analyses recognize that the Hawthorne Option would involve construction along a busy commercial corridor and regional throughfare that carries approximately 70,000 vehicles per day. Construction of the elevated light rail structure would require lane closures, which would affect traffic flow and potentially disrupt businesses. There are approximately 170 commercial properties supporting approximately 350 businesses along the Hawthorne Option alignment.

Real Estate & Potential Property Acquisitions: During advanced conceptual engineering, Metro sought to minimize impacts to private properties for all alignment options, including the Hawthorne Option. While it is possible to avoid displacement of residents, Metro determined that the Hawthorne Option could not be built or operated without permanent acquisition of non-residential properties, which would in turn affect associated businesses. Among the alignment options studied, the Hawthorne Option would require the greatest number of property acquisitions and result in the highest number of business displacements. Several commercial properties along Hawthorne Boulevard, including gas stations, auto repair shops, self-storage, furniture store, and auto dealerships, would need to be permanently acquired to accommodate the elevated alignment. In addition, temporary construction easements would be required, including an auto dealership and other businesses, to construct the support structures for the elevated structure. As discussed below, Metro's acquisition process prioritizes good-faith negotiations with property owners, with eminent domain considered only as a last resort. The properties affected by each alignment option are summarized in the 2023 Real Estate Acquisition Report.

Potentially Affected Auto Dealerships: As shown in Drawing RW-763 of Appendix 2-A of the Draft EIR, the Hawthorne Option is anticipated to require permanent acquisition of the Volvo Cars South Bay auto dealership (APN 4084-024-086) to allow the alignment to turn from Hawthorne Boulevard onto the Metro ROW. During advanced conceptual engineering, Metro sought to minimize property impacts along the transition from Hawthorne Boulevard to the Metro ROW; however, geometric and engineering constraints made it infeasible to fully avoid acquisitions where the alignment turns southeast toward the Metro ROW.

In addition to the acquisition of the Volvo Cars South Bay auto dealership, a permanent easement would be needed at Jerome's Furniture (APN 4084-024-026) to accommodate support structures, and at portions of the South Bay BMW/Mini auto dealership (APN 4084-024-023) for straddle bents to support the elevated structure while preserving visibility along Hawthorne Boulevard.

During construction, temporary easements would be required at South Bay BMW (APN 4084-024-023) and Penske South Bay Cadillac (APN 4084-024-063). However, most construction would occur within the street and public right-of-way under Caltrans jurisdiction for this segment of Hawthorne Boulevard.



Construction Staging Plan: Stage 2 (Draft EIR Select ACE Drawings, 2023)



Figure 3.3-82. Simulation View, looking south/southeast from Hawthorne Boulevard near 186th Street towards Jerome's Furniture Store and Auto Dealerships (Draft EIR, 2023)

Real Estate Process: Formal negotiations related to property acquisition would occur only if and when the project is approved, but Metro encourages stakeholder input throughout the environmental review process. The Metro Board of Directors (Metro Board) allocates funding for real estate, and any businesses displaced by the project would receive advance written notice along with information on their eligibility for relocation assistance and payments before being required to move.

While potential effects on sales, property, and business license tax revenues do not constitute significant environmental impacts under CEQA, Metro remains committed to minimizing property acquisitions and supporting the continued success of local businesses during and after construction.

Support to Local Businesses: Metro is also committed to helping small businesses remain viable during and after construction. Through initiatives like the Business Interruption Fund, Metro provides eligible businesses with assistance for certain operating expenses and marketing support to help them continue serving customers during construction. More information about these programs is available on the Metro website at <https://www.metro.net/about/business-interruption-fund/> and <https://eat-shop-play-lametro.hub.arcgis.com/>.

Property Values: Multiple studies (Shankar, P., Young, L., Haas, P., & Esling, P., 2019; Noh, Y., & Li, W., 2024; Rennert, L., 2022) show that residential and commercial properties located within a half-mile radius of transit stations tend to experience increased property values. This effect is typically attributed

to the enhanced accessibility provided by transit systems, offering greater access to destinations, such as employment centers, schools, and entertainment hubs. Proximity to transit stations also tends to improve community livability by fostering accessibility, which is increasingly valued in residential markets.

Revitalization of Corridor vs Station Areas: In response to comments regarding potential revitalization along Hawthorne Boulevard, studies show that revitalization effects are typically concentrated around station areas—generally within a quarter-mile to half-mile, or about a 5- to 10-minute walk. Both station options in Redondo Beach would include businesses along Hawthorne Boulevard within the station catchment area.

Ridership – Alignment Comparisons

Ridership Analysis: As a part of the project evaluation, Metro conducted a ridership analysis to forecast future boardings, travel patterns, time savings, and congestion benefits (measured as a reduction of vehicle miles traveled or “VMT”). The methodology and findings are documented in the 2023 Ridership Summary Report, published concurrently with the Draft EIR.

Metro’s travel demand model uses socioeconomic data from the Southern California Association of Governments (SCAG) projected for 2042. The model calculates projected ridership for a typical weekday and applies an “annualization factor” of 318 to compute annual ridership. An annualization factor of 318 corresponds to 245 days of typical weekday ridership, and 120 days of weekend/holiday ridership at around 60% of weekday ridership. Based on this modeling, ridership projections show that riders from the greater South Bay and Palos Verdes Peninsula would use the system to connect to the regional rail network.

Metro’s travel demand model also accounts for telecommuting, which accelerated during the COVID-19 pandemic. Preliminary testing using SCAG’s Activity Based Model (ABM) indicates that the long-term number of telecommuters will be lower than some early forecasts suggested, in part because many industries cannot support a large fraction of telework.

The ridership analysis is based on reliable data that captures realistic long-term travel trends. Section 3.5-3.3 of the Draft EIR discusses the pandemic’s temporary effects on commuting and transit use, including the 2020–2021 decline due to remote work and altered travel habits. That discussion also notes a recovery in commute frequency and transit ridership, suggesting a gradual return to pre-pandemic patterns. The analysis relies on the best transportation data available, including projections from the University of California, Davis (2022).

Metro ridership, which declined during the COVID-19 pandemic in 2020, has grown steadily in the last few years. In February 2025, Metro reported 311 million boardings in 2024—an 8% increase over 2023 and the highest annual ridership since before the pandemic. Metro will continue to monitor telecommuting and ridership data to inform the project to ensure future analyses appropriately reflect long-term trends.

Ridership Benefits in Relation to Construction Cost: The Hawthorne Option was projected to generate higher total project trips and new riders. However, the Metro ROW alignments achieved greater reductions in VMT and higher travel time savings per trip. When considered alongside construction cost estimates, the travel benefit-to-cost analysis found that the Elevated/At-Grade Alignment and LPA outperformed both the Hawthorne Option and Trench Option. See summary table below, which was provided to the Metro Board in the April and May 2024 Board Reports during the selection of the LPA.

Comparison	Metro ROW (Elevated/ At-Grade)	Trench Option (ROW)	Hybrid Alt (ROW)	Hawthorne Option	High Frequency Bus Alt
Annual Project Trips	~3.68M	~3.68M	~3.68M	~4.96M	~1.29M
Annual New Riders	~1.49M	~1.49M	~1.49M	~1.74M	~396K
Annual VMT Reduction	~19.51M	~19.51M	~19.51M	~19.39M	~2.28M
Travel Time Savings/Trip (minutes)	22	22	22	19.7	18.2
Cost/ Annual New Riders	\$1,318	\$1,905	\$1,497	\$1,695	\$338
Cost/ Annual Project Trips	\$534	\$772	\$607	\$595	\$103
Cost/Annual VMT Reduced	\$101	\$146	\$115	\$153	\$59

Source: Metro (2024)

Hawthorne Option Construction Considerations

Construction Impacts to Roadways: Hawthorne Boulevard serves as a major regional arterial and carries approximately 70,000 vehicle trips per day. Construction of the Hawthorne Option would entail lane closures and parking loss, which would exacerbate existing traffic congestion locally and across the South Bay during an extended five-to-seven-year construction period. Major utility relocations would also be required, including relocation of a major underground storm drain located beneath Hawthorne Boulevard, which would necessitate further lane closures. In addition, as discussed below, high-voltage overhead transmission lines that traverse the corridor would need to be elevated or relocated to accommodate the Hawthorne Option guideway. These factors contribute to the Hawthorne Option's estimated construction cost of \$2.96 billion (as estimated in 2022), the highest among the alignment options studied. As noted in the Metro Board Report for the Metro Board's May 23, 2024, regular meeting at which it selected the LPA, the Hawthorne Option also presents several implementation challenges, including encroachment into Caltrans ROW and the need for federal environmental review under the National Environmental Policy Act (NEPA), which could extend the project schedule by two to four years.

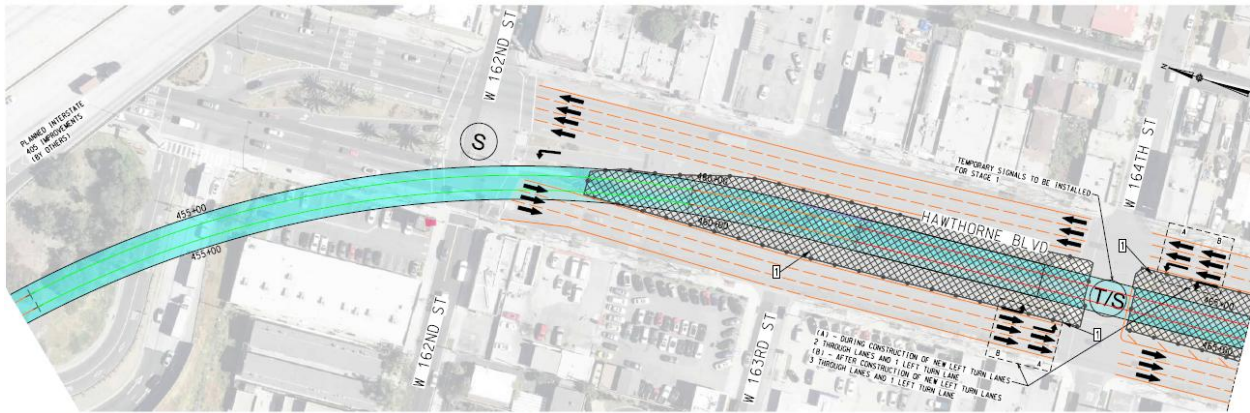
Jurisdiction: I-405, the San Diego Freeway, and portions of State Route 107 (SR 107) (Hawthorne Boulevard), remain under Caltrans' jurisdiction, except for the segment of SR 107 within the City of Lawndale, which Caltrans relinquished to the City in 2003. Metro would continue to coordinate with Caltrans to obtain permits required for design and construction of facilities that affect Caltrans facilities.

Construction Permits: Prior to initiating localized construction activities, Metro and its contractors would coordinate with relevant authorities, including Caltrans, consistent with standard practices and procedures, to obtain construction permits and coordinate plans for the timing and extent of lane closures.

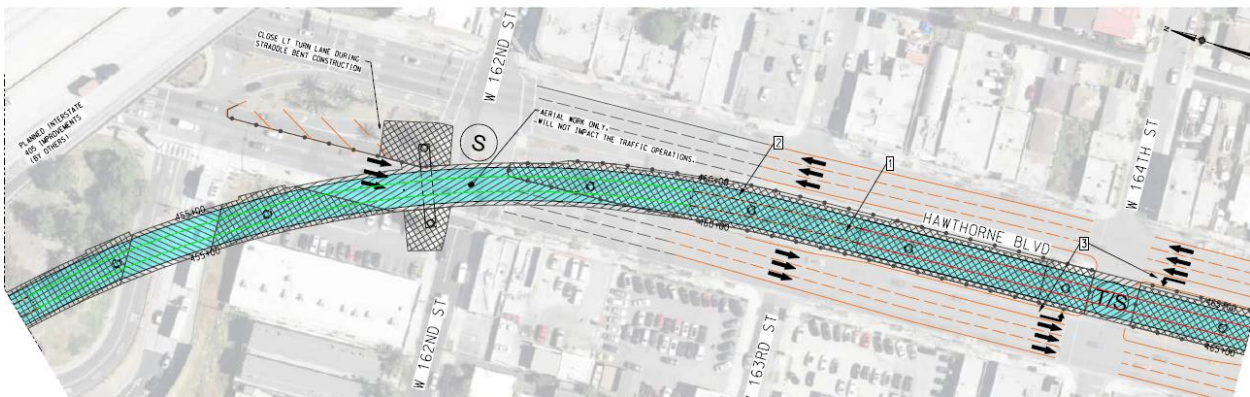
Construction Staging: As described in Appendix 2-A of the Draft EIR, construction for the Hawthorne Option is anticipated to be staged in three phases: modifying Hawthorne Boulevard lanes, constructing the light rail guideway, and completing median work. Phasing would be designed to minimize full closures and maintain access to all driveways during business hours. However, these staging plans reflect a conceptual level of design, and the precise nature and phasing of construction is not known or required to be determined during preparation of the EIR.

During construction, all alignment options would involve similar types of construction equipment, vehicles, signs, staging, and personnel presence. However, as noted in the Draft EIR (e.g., page 3.3-90), the Hawthorne Option would introduce a larger permanent visual change due to the elevated guideway in a highly visible corridor, and would therefore result in a higher degree of visual change.

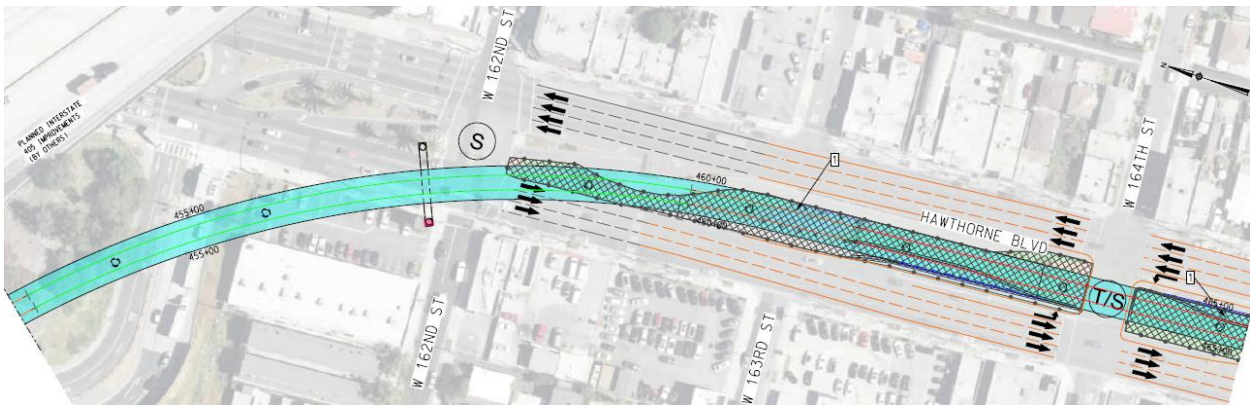
Apart from construction nighttime lighting impacts, the Draft EIR concluded that the impacts of the Metro ROW alignments and Hawthorne Option on aesthetic and visual resources would be less than significant. Mitigation Measure MM-AES-1: Construction Lighting, is provided for all options.



Construction Staging Plan: Stage 1 (Draft EIR Select ACE Drawings, 2023)



Construction Staging Plan: Stage 2 (Draft EIR Select ACE Drawings, 2023)



Construction Staging Plan: Stage 3 (Draft EIR Select ACE Drawings, 2023)

Construction Access to Properties: Temporary closures for construction would not fully preclude access to adjacent land use, although the exact nature of the disruption and temporary accommodations to maintain access cannot be known during the EIR phase. In similar past projects, Metro and its contractors have coordinated with local businesses and residents as well as relevant jurisdictions to manage access and the effects of temporary closures and identify reasonable accommodations or alternatives, which could include limiting construction hours, providing alternate routes or temporary easements, or other strategies. These are identified as part of the preliminary engineering work, and updated as necessary prior to the initiation of localized construction activities, in the development and implementation of the Construction Traffic Management Plan (CTMP), which is described as Project Feature PF-T-1: Construction Traffic Management Plan in the Final EIR.

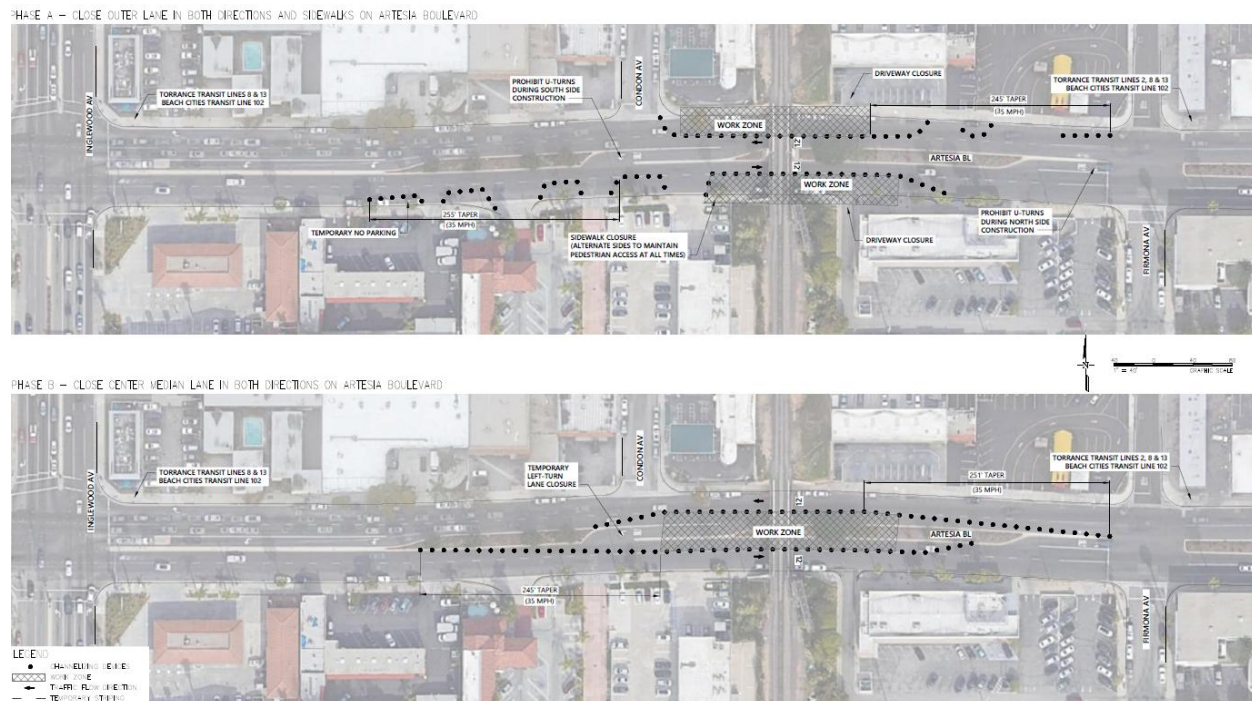


Diagram of Traffic Handling Concept at Artesia Blvd (Draft EIR Select ACE Drawings, 2023)

Construction Traffic Management Plan: As is typical for large infrastructure projects, the CTMP would be coordinated with the local jurisdiction, and for certain areas, with Caltrans, to meet the transportation needs of communities and manage any temporary traffic disruptions. Key measures included in the CTMP would ensure access for vehicles, pedestrians, and cyclists, detour routes during road or lane closures, emergency access protocols, and coordination with affected cities and Caltrans. The CTMP would be updated as the project progresses and new information about construction logistics becomes available.

Construction Impacts on Bus Stops: There are approximately eight pairs of bus stops located along Hawthorne Boulevard within the area to be directly affected by construction. Because construction would be phased to minimize disruption to Hawthorne Boulevard, not all bus stops would be temporarily closed or relocated simultaneously, but there is the possibility that more than one bus stop on the same side of the road, or on opposite sides in the same roadway segment, could be closed or relocated during the same period. It is probable that each of these bus stops would need at least some period of closure or relocation during construction.

Utility Relocation: As noted, major utility relocations would be required to implement the Hawthorne Option, including relocation of a major underground storm drain located beneath Hawthorne Boulevard, which would require lane closures to construct. In addition, the Hawthorne Option would require the high-voltage overhead transmission lines that traverse the corridor to be raised or relocated to meet the required safety clearance between the wires and light rail system. These factors contribute to the Hawthorne Option's estimated construction cost of \$2.96 billion (as estimated in 2022), the highest of the alignment options studied.



Photo of utility corridor with high voltage transmission lines that cross Hawthorne Blvd (Google street view) and diagram of major storm drain located in center of Hawthorne Blvd, to be relocated for Hawthorne Blvd Option (Metro, 2025)

Utility Coordination: Section 3.11, Utilities and Service Systems, of the Draft EIR, includes details on utility relocations, including those required for the Hawthorne Option. Project Feature PF-US-1: Utility Identification and Coordination (Draft EIR page 3.11-10) requires proper utility identification and coordination prior to construction activities. As per Metro standard practice, the construction contractor would verify the locations of all existing utilities potentially affected by construction and demolition activities through coordination with utility providers for both wet and dry utilities (e.g., water, sewer, gas, electric, and telecommunications). This coordination would include obtaining documentation of existing utility locations and conducting field verification, such as potholing and geotechnical investigations. Based on these investigations, the contractor would coordinate with the respective utility providers to determine the necessary setbacks, protections, or relocations for each utility line, including stabilization measures for high-voltage power lines near the freeway under the Hawthorne Option. This process would ensure that all required utility relocations or protections are fully assessed and implemented, preventing impacts on essential services and infrastructure.

Geology / Soil Impacts: The 2023 Geotechnical Data Report, prepared to support the Draft EIR engineering plans, reviewed past geotechnical investigations, including a Caltrans boring log near Hawthorne Boulevard and 166th Street. This historic log indicates the soil types are similar to the soils along the Metro ROW, which are loose to medium sandy materials at upper depths and clayey sands farther down. There is no evidence to suggest that soil conditions along the Hawthorne Option are materially more stable than those along the Metro ROW. Some commenters suggested that operation of the former Red Car along Hawthorne Boulevard demonstrates greater soil stability there. However, the comparison is not apt, as the Red Car was an at-grade system, whereas the Hawthorne Option would be entirely elevated and therefore subject to different structural requirements regardless of underlying geologic conditions. Moreover, soils beneath the Metro ROW have performed without issues under the freight trains, which are considerably heavier than light rail trains.

Hawthorne Option: Permanent Changes to Roadways, Traffic Delay and Level-of-Service (LOS)

Although Level-of-Service (LOS) is no longer used in CEQA to determine environmental impacts, Metro separately published the 2023 Transportation Detail Report to analyze local traffic conditions. This report describes present traffic conditions, evaluates future conditions with and without the project, and assesses how the alignment options would affect traffic circulation, bus route integration and public on-street parking. These issues were studied to ensure the project design takes into consideration local traffic operations, road safety, and access for emergency services, regardless of CEQA requirements.

Some comments related to the Hawthorne Option raised concerns about intersection operations along the segment of Hawthorne Boulevard between Redondo Beach Boulevard and 182nd Street, where additional traffic signals and roadway modifications are proposed. Primary changes proposed to the streets for the Hawthorne Option include:

- > Modification to left turn lanes on Hawthorne Boulevard from 164th Street through 186th Street to accommodate support columns for the elevated light rail structure.
- > Signalization of the intersection of Hawthorne Boulevard and 164th Street.
- > Installation of a new mid-block crossing approximately 360 feet south of Artesia Blvd to provide access to proposed station.
- > Reduction of the northbound left turn pocket on Hawthorne Boulevard at 177th Street from two turn lanes to one turn lane.
- > Signalization of the intersection of Hawthorne Boulevard and 179th Street.
- > Closure of the median at Hawthorne Boulevard and 180th Street to prevent unsafe left turns, which would permanently detour to 179th Street (northbound) or 182nd Street (southbound) to reverse direction.

All of these Hawthorne Option-related changes to traffic operations at signalized and unsignalized intersections are addressed in the 2023 Transportation Detail Report. That analysis used a detailed transportation microsimulation model to analyze changes to automobile traffic on roadways to provide detailed LOS and vehicle queueing metrics. The 2023 Transportation Detail Report used forecast peak hour traffic volumes, which is customary for traffic studies, and accounted for potential traffic rerouting resulting from the Hawthorne Option's modifications to the median access.

Complete Streets: The project would not preclude Caltrans from carrying out the Complete Streets Directive for projects it funds or oversees, including those on Hawthorne Boulevard. The project includes Complete Streets-supportive elements, such as the implementation of new signalized pedestrian crossings that reduce the interval between safe crossings on Hawthorne Boulevard between residential and retail land uses.



Diagram of proposed South Bay Galleria Station along Hawthorne Blvd and pedestrian access (Final EIR, 2025)

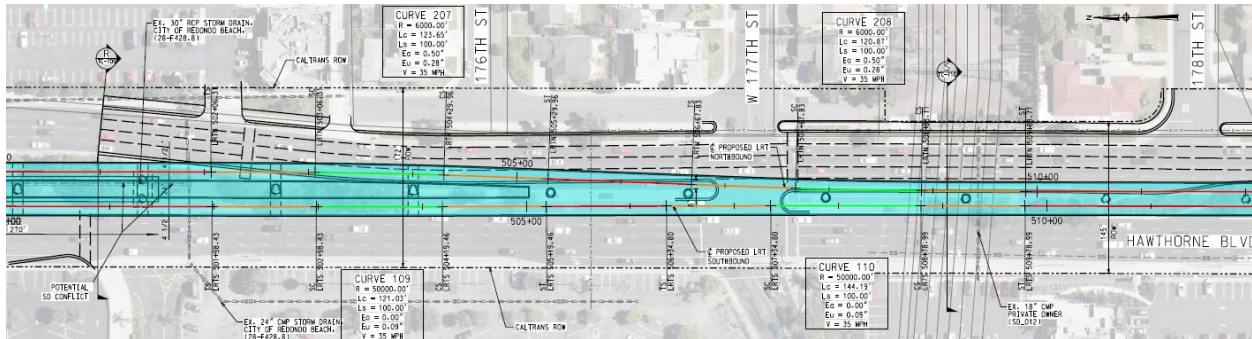
Mid-Block Crossings: Both the Draft EIR and the 2023 Transportation Detail Report, which evaluates non-CEQA issues and was published concurrently with the Draft EIR, include consideration of the mid-block pedestrian crossing at the south end of the South Bay Galleria Station (Hawthorne Option). The mid-block pedestrian crossing is intended to provide safe, convenient pedestrian access to the station, particularly for residents approaching from the south and the neighborhood east of Hawthorne Boulevard, thereby supporting the project's goal of providing a viable alternative to continual growth in traffic volumes.

The project seeks to reduce the risk of unsafe crossing behavior by providing safe crossing locations as close to the station as possible. Additional signalized crossings, as proposed by the Hawthorne Option, would help reduce the distance between safe pedestrian crossings on Hawthorne Boulevard between Artesia Boulevard and 182nd Street, better supporting pedestrian access and redistributing some vehicular traffic. The proposed crossing would be signalized and would be located approximately 360 feet south of the existing signal at Hawthorne Boulevard and Artesia Boulevard. Without a signalized crossing at the south end of the station, transit passengers approaching the station from the south (near 177th Street) would be more likely to attempt to unsafely cross Hawthorne Boulevard because of the long distance (over 1,000 feet) between signalized crossings at Artesia Boulevard and 177th Street.

Under existing conditions, there are approximately 1,000 feet between existing signals. To avoid these longer walks, pedestrians might choose to cross at unsignalized locations, which is allowed under California Vehicle Code Section 275, but increases the risk of vehicle-pedestrian collisions. The additional signalized crossings proposed by the Hawthorne Option would improve overall pedestrian safety by enhancing designated crossing facilities and reducing the risk of collisions.

This is also supported by the analysis of vehicle-pedestrian collisions along the corridor, as shown in Figure 3.1-14 of the Draft EIR. For instance, in the segment of Hawthorne Boulevard between approximately 162nd Street and Artesia Boulevard (which has more crossings between 400 to 600 feet apart), there were far fewer collisions total than in a comparable distance from Artesia Boulevard south to 182nd Street (which has fewer crossings).

177th Street: For the proposed crossing associated with the Hawthorne Option, the northbound left-turn pocket on Hawthorne Boulevard approaching 177th Street would be reduced from two lanes to one. This change would be managed through a combination of increased storage space (lengthening the turn lane) and adjustments to signal timing and phasing to maintain acceptable traffic flow. Signal operations could be further adjusted as needed to respond to evolving traffic patterns and reduce the risk of queues exceeding available storage in between signal cycles.

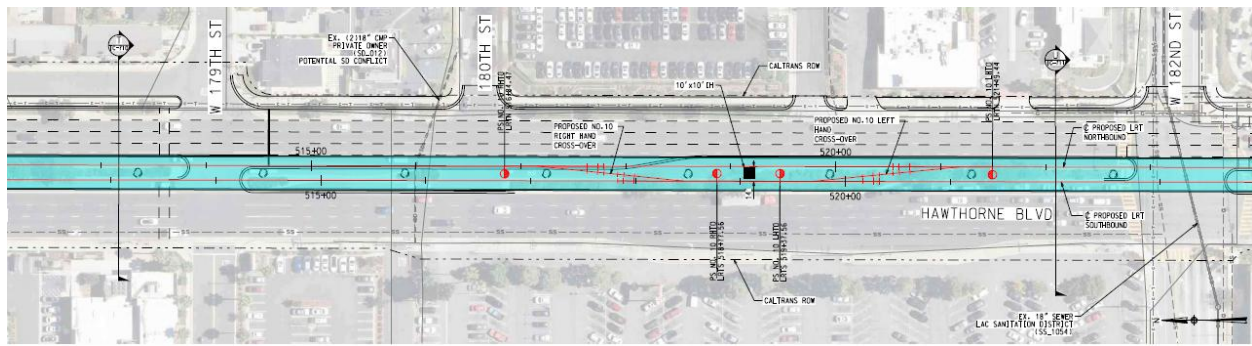


Hawthorne Blvd & 176th, 177th and 178th Streets (Draft EIR Select ACE Drawings, 2023)

179th Street: A new traffic signal is proposed at 179th Street to facilitate safe vehicle turns and pedestrian access, as the location is presently unsignalized. This improvement would help accommodate traffic that would otherwise make left turns at the existing unsignalized median opening at 180th Street, which would be closed under the Hawthorne Option. To support this change, the northbound left turn lane on Hawthorne Boulevard approaching 179th Street would be extended up to 230 feet. This added storage would help prevent left-turning vehicles from spilling into through lanes, maintaining efficient traffic flow. The proposed signal would preserve access for local neighborhoods and businesses affected by the median closure. Signal warrant analysis would be provided for new signals in the next phase of engineering should the Hawthorne Option be approved by the Metro Board following certification of the Final EIR.

180th Street to 182nd Street: The Hawthorne Option would permanently close the median at this location and require left turning traffic to either continue north to the newly signalized intersection at 179th Street, or south to the existing signalized intersection at 182nd Street. Both locations permit drivers to make a U-turn to access 180th Street or the shopping plaza. This closure is required because the column placement through this segment would otherwise create visual obstructions that would prevent drivers from seeing oncoming traffic in an unsignalized left.

According to the 2023 Transportation Detail Report, the 179th Street/Hawthorne Boulevard intersection is expected to handle the diverted traffic effectively, as it would be signalized under the Hawthorne Option, though adjustments to signal timing would be made to optimize flow and further minimize queues. Similarly, southbound drivers who would have previously turned left at 180th Street would be directed to continue to 182nd Street for left turns or U-turns. This change may impact the PM peak LOS at 182nd Street, but additional signal timing adjustments could further manage traffic flow at that location.



Hawthorne Blvd & 179th, 180th, 182nd Streets (Draft EIR Select ACE Drawings, 2023)

Potential Delays to Vehicles: The analysis concluded that, at major intersections, average delay would generally increase compared to the 2042 No Project scenario. At some intersections, vehicle queues may also increase. The location of the most substantial increase was the northbound left-turn queue at Hawthorne Boulevard and 179th Street. The increase in queues is caused by the closure of the median at 180th Street, which causes some northbound turn volumes to divert to 179th Street, which would become a signalized intersection. Similarly, queues would increase at the southbound left turn lane at 182nd Street as a result of the 180th Street median closure. At most other intersections, vehicle queues would either increase or decrease by a proportionate number of vehicles, depending on where traffic shifts occur.

Left-turn queues are managed through a combination of available storage space (such as lane and turn pocket lengths) and traffic signal timing. Signal timing and phasing could be adjusted over time in response to evolving traffic patterns, helping to ensure that left-turn queues do not exceed the available storage space between signal cycles. This operational flexibility allows for efficient traffic management and minimizes potential congestion at intersections.

Parking Loss: The 2023 Transportation Detail Report identifies approximately 20 median parking spaces that would be lost to accommodate the columns for the elevated light rail structure within the City of Lawndale. Within the City of Torrance, the Hawthorne Option would require widening a segment of Hawthorne Boulevard between 175th Street and 179th Street (and narrowing the parallel frontage road) which would result in the loss of approximately 12 overnight parking spaces. These changes are limited in scope and are necessary to accommodate the elevated structure within the existing public right-of-way and avoid acquisition of private properties.

Landscaping: Metro would coordinate with Caltrans as needed for the removal and replacement of any trees on Caltrans facilities required by the project in accordance with applicable requirements from the Office of Stormwater and Landscape Architecture.

Pursuant to Metro's Tree Policy (2022b), trees would be preserved where feasible and replaced at a ratio of 2:1 (or 4:1 if the tree is considered a heritage tree). Additionally, new landscaping, shade trees, and other design elements would be introduced to enhance the natural character of the corridor and support a unified, visually appealing environment. Metro's Tree Policy has been incorporated into this Final EIR as Project Feature PF-BIO-1. Metro Tree Policy.

Comparison of Aesthetic Considerations: Hawthorne Option vs. Metro ROW Alignments

Proposed Design of Elevated Light Rail along Hawthorne Boulevard: The height and width of the elevated structure would vary along the alignment, but the elevated guideway would generally be about 30 feet high, and the Overhead Contact System (OCS) on top would be about 15 feet tall. The depth of elevated structure piles could range between 90 to 150 feet, depending on existing geotechnical and groundwater conditions. The exact depths of any structural piles required for the project would be determined during preliminary design, when geotechnical investigations would be completed.

As described in Section 3.3, Aesthetics of the Draft EIR, the project corridor is already highly urbanized, with a mix of residential, industrial, and commercial land uses, as well as the existing freight rail infrastructure. There are no designated scenic vistas or notable natural landscapes within the project's vicinity. Due to existing development and infrastructure, the existing visual quality in the area is generally low for vividness, intactness, and unity.

As part of this analysis, the Draft EIR considered changes associated with the elevated structure, including its scale, form, and relationship to adjacent land uses. The Hawthorne Option would not create a "tunnel-like" feeling for motorists, as the elevated structure would be located within the median, and motorists would primarily be driving parallel to the guideway, rather than underneath it, except when making a left turn or crossing through an intersection. The structure would span intersections and would not fully enclose the roadway. As a result, the Hawthorne Option would not create the physical characteristics of a tunnel, or result in a substantial degradation of existing visual quality.

The elevated guideway would run parallel to the Interstate-405 Freeway, and it would generally have a similar scale and massing to surrounding structures. In addition, the components of the Hawthorne Option would be designed to comply with applicable design standards and would incorporate architectural treatments and landscaping to provide a unified design. Furthermore, it would not block long range views of any prominent visual features.

Moreover, the project is not anticipated to conflict with any local zoning or other policies governing scenic quality. Metro's commitment to thoughtful, high-quality design would help ensure that the project remains visually compatible with surrounding neighborhoods.

In summary, while the project would introduce new transit infrastructure, the visual impact analysis confirms that these changes would not degrade the existing visual character or quality of the community.



Figure 3.3-73. KOP 15 – Simulation View, looking north from Grevillea Avenue towards I-405 (Draft EIR, 2023)



Figure 3.3-77. KOP 19 – Simulation View, looking northwest from 166th Street (Draft EIR, 2023)

Shadows: As stated on page 3.3-53 of the Draft EIR, shadow-sensitive uses generally include routinely useable outdoor spaces associated with residential, recreational, or institutional land uses; commercial uses, such as pedestrian-oriented outdoor spaces or restaurants with outdoor eating areas; plant nurseries; and existing solar collectors/panels. Shadows tend to be cast in a clockwise direction from west/northwest to east/northeast throughout the day across all seasons.

For the northern portion of the Hawthorne Option, where some residential properties are located to the southwest of the alignment and the I-405 is positioned to the northeast, the elevated rail structure and proposed plexiglass soundwalls would not substantially cast shadows over residential properties due to the standard shadow patterns, as discussed in Section 3.3-4.4.2 of the Draft EIR. Shadows from the elevated guideway, including soundwalls, would instead primarily fall onto the I-405 corridor to the northeast. Additionally, the elevated guideway's location within the median of Hawthorne Boulevard and the width of the roadway would prevent significant shading of residential areas to the east. Overall, the proposed Hawthorne Option would not result in substantial shadow impacts on residential properties.



Figure 3.3-78. KOP 20 – Simulation View, looking north/northwest from Redondo Beach Blvd (Draft EIR, 2023)



Figure 3.3-81. KOP 22B– Simulation View, looking east from Hawthorne Blvd near 178th Street (Draft EIR, 2023)

Roadway/Safety Signage: Metro would follow all applicable safety laws, and structures would not block roadway signage or safety-related signage. The KOP simulations illustrate the general visual changes that would be expected to occur, and the exact location of columns and any required relocated signage would be refined during final design, with coordination with all applicable jurisdictional agencies to ensure that street signs, safety signage, and plaza signage remain visible and compliant with applicable standards.

Methodology for Construction Cost Estimates

Cost Estimates: In 2022, Metro prepared cost estimates and published the C Line (Green) Extension to Torrance Cost Estimates Summary concurrent with the Draft EIR in January 2023. As stated, Metro follows the Federal Transit Administration (FTA)'s guidelines for cost estimating, and the estimate underwent peer review prior to publication. The cost estimate is based on the advanced conceptual design available for the Draft EIR, and it includes the construction costs (which were prepared in 2022 dollars), an escalation factor to account for future inflation and market fluctuations, and a contingency to accommodate potential known and unknown risks that could increase costs during construction. In accordance with FTA guidelines, the cost estimates include multiple categories such as track guideway, stations, sitework, utility relocations, potential environmental investigations, right-of-way acquisitions, and systems. The contingency is approximately 40% based on the current level of design, in accordance with FTA guidelines. As the project design advances, the contingency would be adjusted.

Metro has refined cost estimates, posted to the project website, to share with the Metro Board as part of the consideration to approve the project and certify the Final EIR.

Selection of the Hybrid Alternative as the LPA

Based on this extensive public engagement and input, Metro staff recommended that the Metro Board of Directors select the 170th/182nd Grade-Separated Light Rail Transit Alternative, also referred to as the “Hybrid Alternative,” as the LPA. At the May 23, 2024 Regular Board Meeting, the Metro Board adopted staff’s recommendation and selected the Hybrid Alternative as the LPA. Being identified as the LPA means that the design of the Hybrid Alternative has been refined and advanced in the Final EIR. However, the other options and alternatives studied in the Draft EIR remain under consideration, and the final decision on the project will not be made until after the Final EIR is issued and the Metro Board holds a final public meeting on whether to certify the Final EIR and approve the project, including any of the options or alternatives evaluated in the EIR.

The LPA addresses many of the public’s concerns by eliminating the two at-grade light rail crossings by placing the light rail tracks below grade at 170th Street and 182nd Street. This, in turn, eliminates the Elevated/At-Grade Alignment’s potentially significant and unavoidable noise impact caused by light rail crossing gate bells. It also avoids any potential for delays to emergency responders and prevents conflicts between light rail trains and pedestrians and cyclists, including along school routes. The LPA also avoids the construction-related significant impact to air quality generated by the Trench Option, which, if constructed, would require extensive excavation and truck hauling to remove soils. For the LPA, trench excavation would be limited to the two areas where short trenches would be constructed to grade separate 170th and 182nd Street. Relative to the Elevated/At-Grade Alignment, the LPA also eliminates the need to build a new freight bridge over Grant Avenue and avoids shifting the existing freight track closer to homes south of Artesia Boulevard, including Breakwater Village.

Similar to the Elevated/At-Grade Alignment and the Trench Option, construction of the LPA would be largely confined to the Metro ROW, which minimizes the real estate acquisitions needed to construct and operate the project north of 190th Street associated with the Hawthorne Option. The LPA identifies up to four non-residential parcels as permanent full acquisitions to locate Traction Power Substations (TPSS). Like the other alignments studied in the Draft EIR, the LPA is designed to avoid displacement of residents. The LPA would result in a construction duration approximately one year longer compared to the Elevated/At-Grade Alignment, but the overall construction duration would be within the five-to-seven year construction schedule range described in the Draft EIR.

The LPA is projected to attract about 4,690 new riders and 11,500 total daily project trips by 2042 (which also applies to the Elevated/At-Grade Alignment and Trench Option). Further, the LPA’s projected cost of \$2.23 billion (as estimated in 2022) is significantly lower (\$730 million less) than that of the Hawthorne Option. For more information, see MR-21: Cost Estimates and Schedule.

Metro recognizes the permanent nature of this project and its potential to shape the community for generations. The Metro Board will continue to carefully weigh all relevant factors as they review the Final EIR and make a final decision on whether to certify the Final EIR and approve one of the alignment options under consideration.

References

2023 Draft EIR & Advanced Conceptual Engineering Plans (2023), Appendix B of Draft EIR

2023 Transportation Detail Report

2023 Real Estate Acquisitions Report

2023 Ridership Report

2023 Cost Estimate Summary

2023 Urban Design Study

May 2024 Metro Board Report at <https://boardagendas.metro.net/board-report/2024-0272/>

2025 Final EIR

2025 Real Estate Acquisitions Report

ATTACHMENT F C LINE EXTENSION TO TORRANCE PROJECT

SUMMARY OF RECENT ENGAGEMENT FOLLOWING LPA SELECTION (2024-2025)

Overview of Engagement Activities Since LPA Selection (May 2024) to Release of Final EIR (September 2025)

- Partnership with seven local and regional Community Based Organizations (CBOs) to ensure effective strategies for broad and inclusive engagement.
- Preparation of educational materials on the Final EIR and project next steps including a factsheet, online [Storymap](#), FAQs, and video.
- Development of a user-friendly web platform to make the Final EIR and related documents easy to navigate
- Coordination meetings with utility owners, property owners, city staff, public agencies, and stakeholders to inform responses to comments and design refinements.
- Board office briefings to solicit feedback on communications and engagement.

Notifications for Final EIR (September 2025)

- Mailed letters to agencies, affected property owners, and commenters on the Draft EIR, which included the Final EIR on a USB memory card and printed executive summary accompanying the letter.
- Distributed 32,000 door-to-door flyers and mailed postcards to over 47,000 residents and property owners.
- Made tools available on the Project Website and interactive Project [StoryMap](#) through an interactive [PlanEngage](#) platform for readers to easily navigate the contents of the Final EIR.
- Sent e-blasts to project database of over 2,500 contacts and through Metro's regional newsletter of 52,000.
- Shared on social media with approximately 309,000 reached
- Advertised online ads, which reached about 170,000 people.
- Posted on Metro's blog, The Source.
- Provided notification of the Final EIR availability in a Metro Board Box.
- Included advertisements in local and regional newspapers through media ads and legal ads.

CBO Engagement

ATTACHMENT F C LINE EXTENSION TO TORRANCE PROJECT

SUMMARY OF RECENT ENGAGEMENT FOLLOWING LPA SELECTION (2024-2025)

Metro partnered with Community-Based Organizations (CBOs) that represent the South Bay area and broader region to leverage their expertise in connecting with communities in and around the project study area.

The CBOs include: Downtown Torrance Business Association, Harbor Interfaith Services, Los Angeles County Bicycle Coalition, Los Angeles Walks, Mundo Maya Foundation, Streets for All and South Bay Forward. Through this partnership, staff worked to provide project information to Metro's defined Equity Focus Communities (EFC) and other areas served by the CBO partners. Seven CBOs joined with Metro to help inform communities about the release of the Final EIR, how to access it, and how to submit comments to the Metro Board. Each CBO conducted outreach to communities through their existing channels and activities tailored to meet the communities they serve, such as families, older adults, low-income groups, youth/children, small businesses, people with disabilities and ethnic/racial minorities. This work helped build trust between the project team and communities within the South Bay.

CBO Engagement work included:

- Posting on organizations' social media channels, website and newsletters,
- Publishing blog posts, videos and promotional materials,
- Emailing notices to organization databases,
- Distributing flyers to residential and business corridors,
- Making phone calls and sending text messages to contact lists,
- Hosting meetings and events to inform communities about the availability of the Final EIR,
- Tabling at existing events or transit stops to inform communities about the availability of the Final EIR, and
- Including project information at organizations' existing recurring meetings or events.

Attachment G

C Line Extension to Torrance Project

Implementation, Potential Sequencing and Risk Reduction

Since the LPA selection, the Project Team has completed a real estate property boundary survey, conducted title report research for potentially affected sites, and continues to hold coordination meetings with property owners, utility owners, and other third parties, including BNSF. This effort has improved the information used to develop risk management strategies. In September 2025, the Project team met with the Metro Early Intervention Team to further discuss cost and schedule refinement, proposed delivery methods, and funding and financing strategies.

At this early stage in design, Metro is exploring a sequenced implementation approach, which would organize project delivery into two phases of work, similar to the approach Metro is conducting for the Southeast Gateway Line. The first phase would involve early earthwork including relocating utilities and freight tracks, which are high risk construction activities, followed by a separate contract for light rail construction.

As part of the first phase of work, Metro would explore the potential to deliver a set of community benefits in the near-term, including the quiet-zone-ready corridor freight improvements and the neighborhood paths, as feasible. This would provide safety and noise reduction improvements to the adjacent neighborhoods. By tackling these activities first, Metro can better control costs and minimize high-risk activities for future implementation of the light rail construction contract, while providing community benefits as soon as possible. A sequenced approach would also help manage escalation-related costs by advancing some elements of the Project while Metro identifies additional funds.

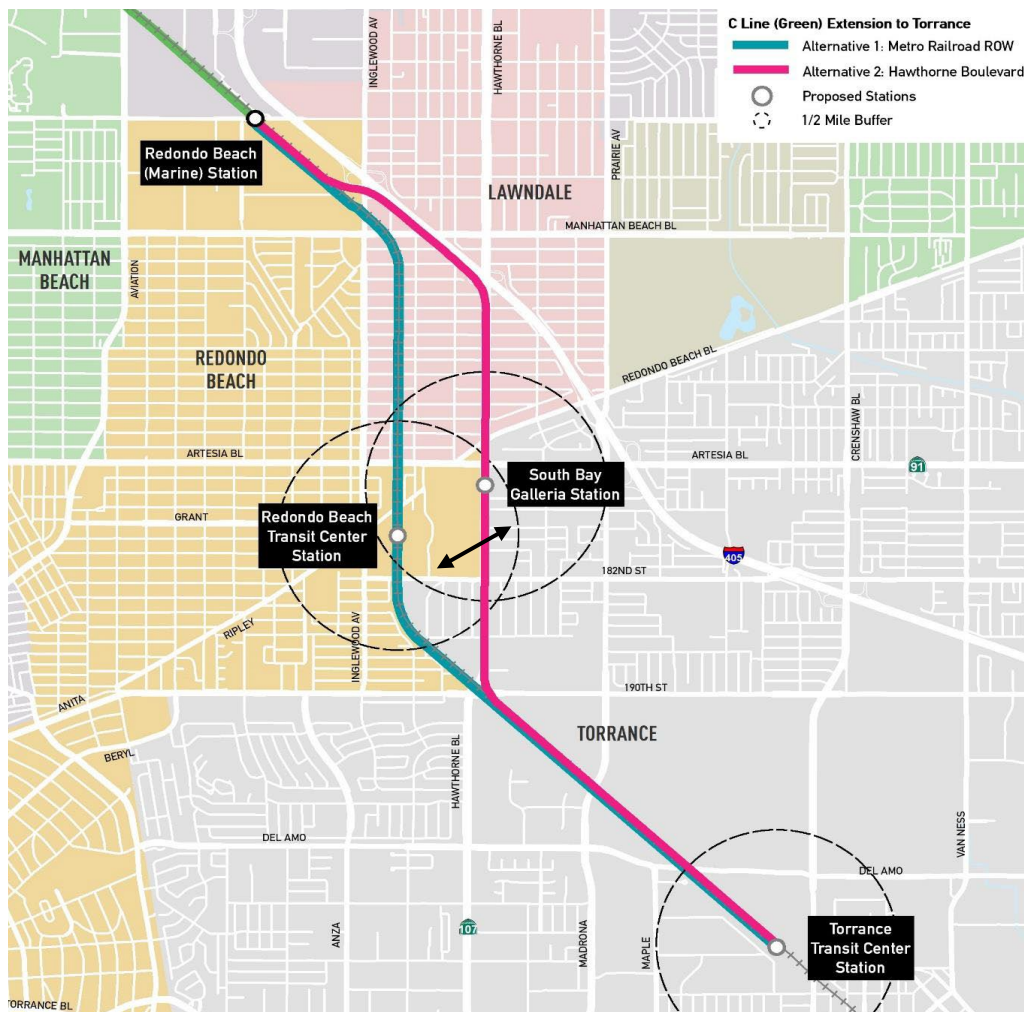
As part of the second contract, a light rail contractor would have a clear path to construct stations, tracks, and related infrastructure and equipment. Should the Board approve the Project as recommended, Metro staff would advance design to 30% preliminary engineering, at which point staff would provide updated cost estimates and recommend a construction delivery approach and schedule. This strategy mitigates contracting risk and acts as a cost management strategy by allowing the Project to remain on schedule. Metro's cost estimating team calculated that each month of delay increases the cost of the LPA by \$12.7 million (over \$150 million/year) due to projected escalation.

C LINE EXTENSION TO TORRANCE PROJECT

Metro Cost Benefit Analysis (CBA)

In July 2025, the Board adopted a CBA framework for evaluating project alternatives, including assessing the regional economic impacts of investment and identifying benefits relative to the costs of investment. The CBA includes two components – Weighted Benefits Analysis and Benefit-Cost Ratio – as described below and used to evaluate the Locally Preferred Alternative (LPA), which travels along the Metro-owned Right of Way (ROW) and the Hawthorne Option, which travels along the I-405, Hawthorne Blvd, and Metro ROW, for the C Line Extension to Torrance Project (Project). The evaluation is based on data collected during the environmental review process, including recent cost estimate refinements made in 2025.

Figure 1. LPA and Hawthorne Option Alignments



Weighted Benefits Analysis: A points-based evaluation comparing the alignments across five goals that are weighted per Metro-adopted CBA methodology. This considers relevant quantitative and qualitative performance indicators (KPIs) within each of the five goals that are scored relative to each other on a 7-point scale with seven being the highest/best performing.

Table 1. Weighted Benefits Analysis Scores

Goals	LPA	Hawthorne Option	Key Performance Indicators Evaluated
	Average Score by Goal (Unweighted)		
Mobility & Accessibility (Weight: 40%)	5.7 / 7	5.6 / 7	Travel time, project trips, new riders, travel time savings, connections to transit, proximity to Metro Equity Focused Communities (EFC), proximity to educational facilities
Safety & Health (Weight: 15%)	6.2 / 7	5.3 / 7	Light rail grade separation, freight crossing safety improvements, improved access to healthcare, exposure to noise (light rail proposed, existing freight), quiet zone corridor, new walk/bike paths, proximity to parks and recreational facilities, proximity to Healthy Places Index (HPI)
Environmental Sustainability (Weight: 15%)	5.4 / 7	5.3 / 7	GHG emissions reductions, vehicle trip displacement, net total operational energy, proximity to CalEnviroScreen 4.0 communities, shade preservation, opportunities for pervious surfaces, habitat land avoided
Operational Sustainability & Delivery (Weight: 15%)	6.4 / 7	4.2 / 7	Estimated construction costs, date to anticipated opening, need for additional environmental review and approvals per NEPA, permanent changes to streets and parking, construction disruption to traffic/parking, permanently affected parcels, complexity of coordination for utility relocation and construction, degree of Metro operational and maintenance control
Economic Impact (Weight: 15%)	6.3 / 7	6.8 / 7	Proximity to activity centers, connectivity to housing and neighborhoods, amount of nearby vacant and underutilized buildable area, planned development potential, housing development potential, estimated regional jobs created, estimated regional economic output
Total Weighted Score*	5.9 / 7	5.5 / 7	Project provides significant benefits for both alignment options. LPA performs better than Hawthorne Option.

**7-point scale with 7 as the highest/best performing*

The Weighted Benefits Analysis component of the CBA finds that the Project provides significant benefits locally and regionally for both alignment options. The LPA performs better than the Hawthorne Option, with a weighted total score of 5.9 versus 5.5, respectively. Although 85% of the score (4 out of 5 goals) favors the LPA, the difference between the LPA and Hawthorne Option weighted total score is less than a point. This can be attributed to the overall similarities between the two alignments and the proximity of the proposed alignment stations.

Benefit-Cost Ratio (BCR): Compares monetized costs of the Project, including capital and operating costs, to the monetized benefits of the Project, including travel time savings, traffic safety, active transportation health benefits, and regional economic benefits over a 20-year operating period. A higher ratio of benefits to costs means that there are more monetized benefits for every dollar spent. However, it is important to note that many costs and benefits cannot be monetized. The results of this analysis are presented in Table 2.

Table 2. Benefit-Cost Ratio Findings

Alignment	Benefit Cost Ratio (BCR)*
LPA	11.7
Hawthorne Option	10.0

** BCRs are unique to each project and not to be compared across projects, due to specific construction and operation years being considered, travel demand modeling years, and other factors.*

The BCR component of the CBA finds that the regional economic benefits of both alignments are relatively similar -- \$16.4 for the LPA and \$16.2B for the Hawthorne Option in regional gross domestic product (GDP) growth over 20 years, following completion of construction. This similarity is expected, as the mid-line station locations (Redondo Beach Transit Center on Metro ROW and South Bay Galleria Station on Hawthorne Blvd) are close together and the terminus station in Torrance is the same. When all monetized benefits, including GDP benefits, are evaluated relative to costs, the LPA is expected to produce \$11.70 in monetized benefits per dollar invested in the Project over a 20-year operating period, compared to the Hawthorne Option, which produces \$10.00 per dollar invested in the Project.

Overall Project Benefits: The CBA shows that the Project, for either alignment, offers significant benefits across the following five indicators:

- **Economy:** Every \$1 of project investment generates ~\$10-12 of monetized benefits over a 20-year period.
- **Mobility:** A 4.5-mile extension will expand access to jobs, communities and schools from some of the furthest reaches of LA County such as Gateway Cities and San Fernando Valley.
- **Safety/Health:** 43,000+ average weekday VMT reduction leads to ~\$12 million in safety benefits (avoided medical costs, vehicle repair costs, etc.).
- **Environment:** Project improves air quality and reduces energy and GHG emissions and energy to meet local and regional climate commitments.
- **Operational Sustainability & Delivery:** Builds upon multiple investments already secured (transit centers, freight ROW, grant funding).



ECONOMIC BENEFITS

Every \$1 of project investment generates ~\$12 of monetized benefits



SAFETY BENEFITS

43,000+ avg. weekday VMT reduction generates ~\$12 million in safety benefits

The “No Project” alternative would forego these benefits and fail to meet regional and local plans and commitments to mobility, air quality and climate, as well as result in the loss of a \$231M state TIRCP grant.



← To Crens

Next stop: more rail in the South Bay.

C LINE (GREEN) EXTENSION TO TORRANCE

Metro Rail & Busway

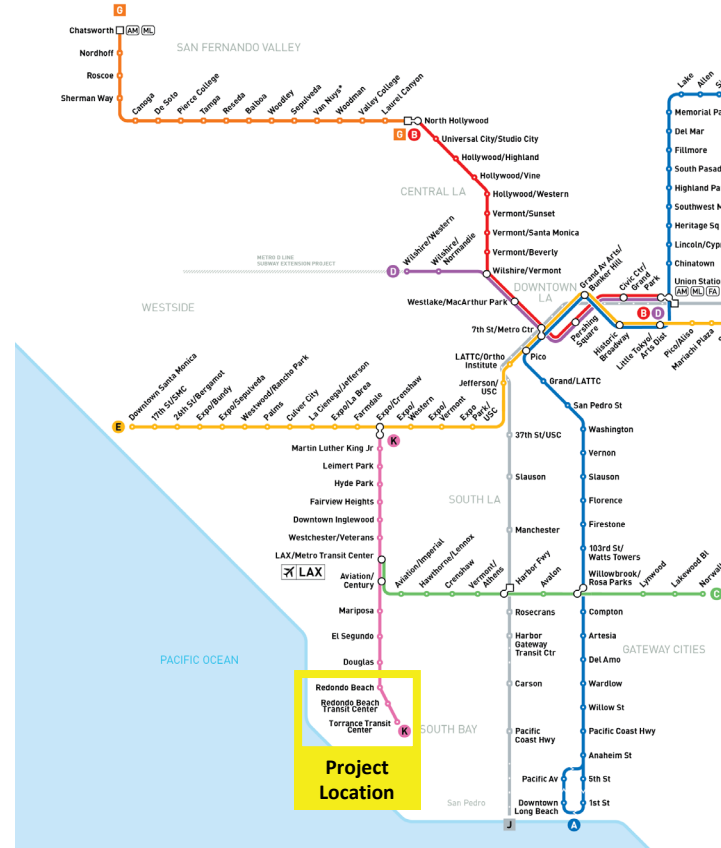


Metro Board of Directors
C Line Extension To Torrance Project Final
Environmental Impact Report Certification
January 22, 2026 | File ID: 2025-0818

Recommendations for the Metro Board

CONSIDER:

- A. APPROVING the Board selected Locally Preferred Alternative (LPA), a 4.5-mile fully grade-separated light rail extension of the C Line Extension to Torrance (now K Line) with two stations in Redondo Beach and Torrance as the Project (Project);
- B. CERTIFYING, in accordance with the California Environmental Quality Act (CEQA), the Final Environmental Impact Report (EIR);
- C. ADOPTING, in accordance with CEQA, the:
 - 1. Findings of Fact and Statement of Overriding Considerations, and
 - 2. Mitigation, Monitoring and Reporting Program (MMRP);
- D. AUTHORIZING the Chief Executive Officer (CEO) to file a Notice of Determination (NOD) with the Los Angeles County Clerk and the State of California Clearinghouse.



Project Need & Purpose

South Bay Mobility Need

- Major jobs center
- Severe congestion
- Long travel times
- Infrequent bus service
- High cost of housing

Project Benefits

- Offers alternative to congested I-405 and arterials
- Connects to LAX, Metro E & C Lines and regional bus centers
- Provides fast, reliable access to jobs
- Serves equity focus communities
- Reduces travel times
- Reduces vehicle miles traveled (VMT), air pollution and greenhouse gas emissions



1.5 million new riders / year



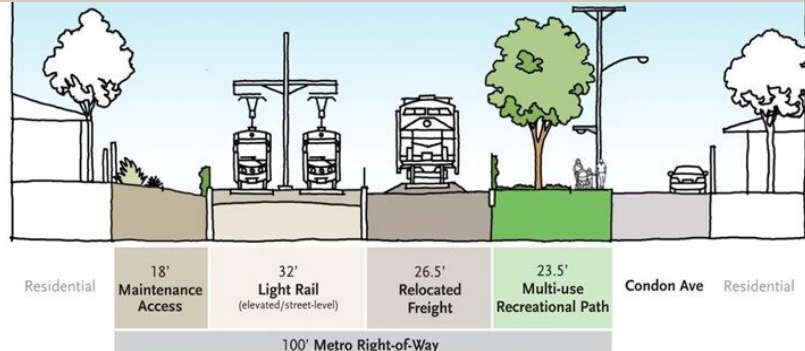
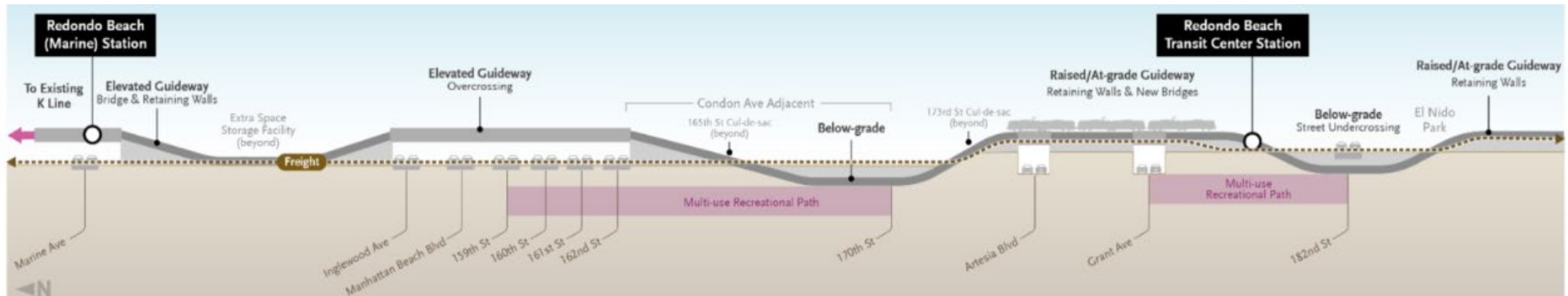
~ 14.9 million fewer
VMT / year

	Travel Time From Torrance Transit Center via Project (Light Rail in 2042)	Travel Time From Torrance Transit Center by Vehicle (Afternoon Peak in 2023)
LAX (AMC/96 th St)	19 minutes	30-66 minutes
Downtown Inglewood	23.5 minutes	25-55 minutes
Metro E Line (Expo/Crenshaw)	34.5 minutes	30-66 minutes
Downtown LA (7 th /Metro Center)	58.5 minutes	40-85 minutes
Downtown Santa Monica	63.5 minutes	45-110 minutes

Source: AECOM, STV, 2020, Travel time by vehicle-based on Google maps driving times in 2023.

Locally Preferred Alternative (LPA)

- LPA travels along the Metro-owned Right-of-Way (ROW)
- Includes two rail stations that connect to new bus centers
- Features walking paths, landscaping, sound walls and freight improvements to reduce existing noise and enhance safety
- Fully grade separates light rail with elevated segments and two under-crossings for optimal service and safety



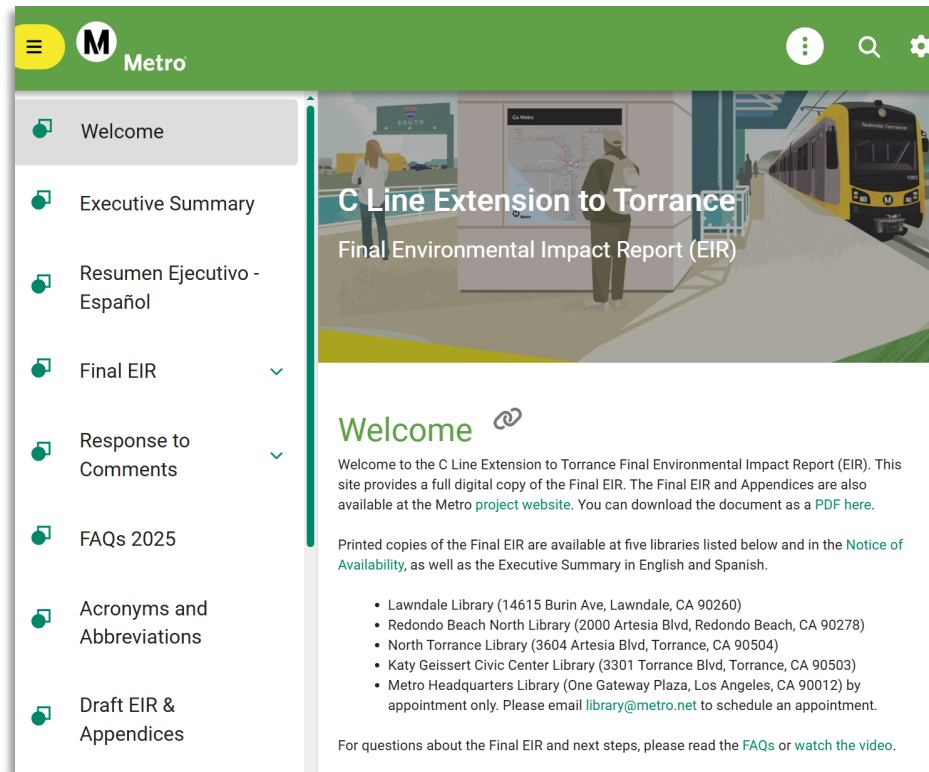
Final EIR & Studies Per Metro Board Direction

Per Metro Board Motion by Director Butts on May 23, 2024, Metro has:

- Continued CEQA process and prepared Final EIR, released on September 11th to public.
- Responded fully to all public comments on all alignments in the Draft EIR including the ROW and Hawthorne Alternatives.
- Refined cost estimates and funding plan.

In addition to Final EIR, Metro published:

- Refined conceptual engineering plans for LPA
- Summary reports on real estate, construction cost, outreach, key issues and responses to Hawthorne Option
- FAQs, videos, and cost-benefit analysis (CBA)



<https://us.planengage.com/clineextension>

Extensive Community Engagement During EIR

Between 2021 and 2025

- 4,700+ comments received and 20,000 views of the Project StoryMap sites (2021-2025)
- 2,100+ attendees at meetings and events
- 3 Scoping Meetings in 2021: 387 attendees
- 12 Neighborhood Walks in Spring 2022: 400 attendees
- 4 Open Houses in Summer 2022: 600 attendees
- 5 Draft EIR Public Hearings in 2023: 421 attendees
- 8 Transit Rider Intercepts: 150 transit riders
- 2 Community Events with Director Mitchell in Winter 2023/2024: 300 attendees
- 8 Pop-up events
- 560 businesses engaged through door-to-door outreach
- Dozens of coordination meetings with stakeholders
- Partnership with seven community based organizations (CBOs) to raise project awareness and extend reach of engagement



*Not all attendees signed into meetings and overall attendance exceeds listed amount.

Metro has Successfully Built Near Homes



A Line, San Dimas (LRT + Freight)
~20' property line to LRT centerline
~78' LRT + Freight corridor



A Line, South Pasadena (LRT)
~7' to 9' property line to LRT centerline
~30' LRT corridor

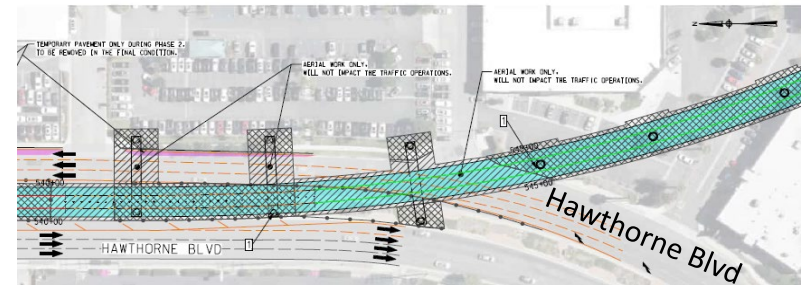
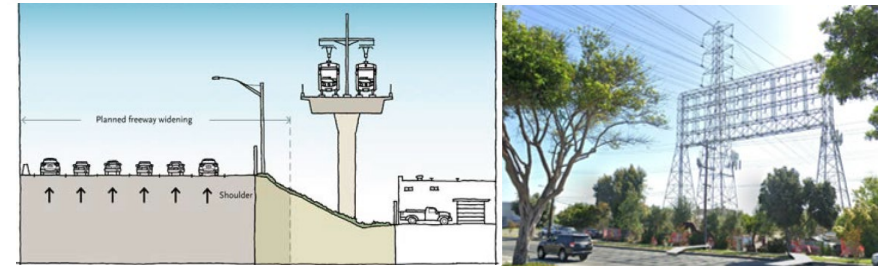
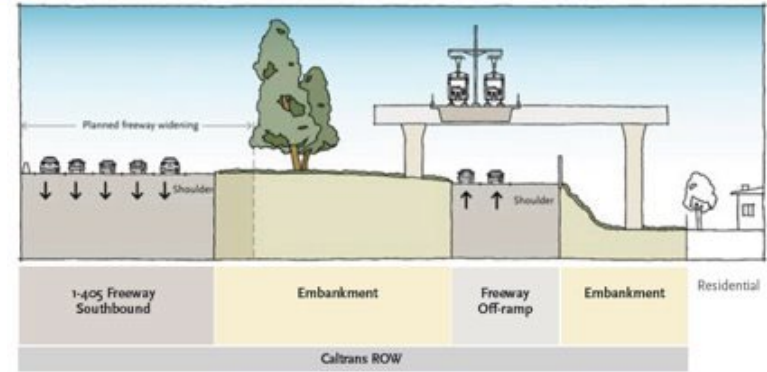


C Line Extension to Torrance (LRT + Freight)
~13-27' property line to LRT centerline
~75-100' LRT + freight corridor

Challenges for Hawthorne Option

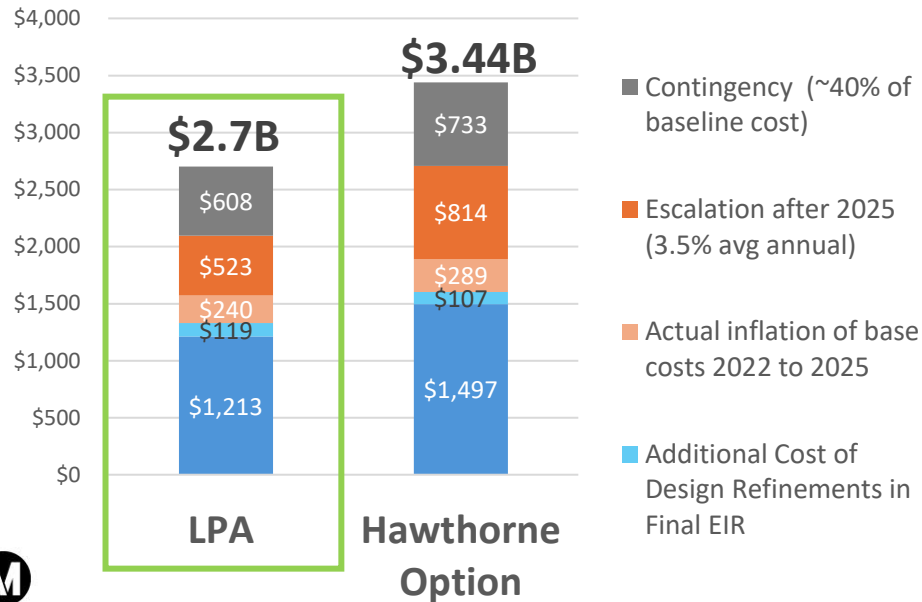
Highest cost at \$3.44B with ~\$2B funding gap

- Federal agency review and NEPA required due to encroachment into I-405 and Hawthorne Blvd (SR 107)
- Anticipated to take 2 to 4-years, increasing risk/cost
- Requires longitudinal **encroachment permit** and long-term **joint use agreement** for maintenance and ops from Federal Highway Administration (FHWA) & Caltrans
- Requires relocation of major storm drain and high tension SCE power lines
- Requires **lane closures** over 5 to 7-years along I-405 and Hawthorne Blvd (major regional highways) with disruptions to ~350 businesses
- Requires **permanent acquisitions** of ~13 commercial properties = loss of local sales tax revenues
- Does **not** connect to new bus transit center
- Does **not** deliver walking paths and freight safety improvements to neighborhoods
- Results in loss of street parking and street trees



Refined Construction Cost & Funding Plan

Project has over 50% funding secured from local and state sources for LPA and would pursue additional funds, **if approved**. Project is not eligible for federal funding and not prioritized for federal funds by Metro Board.



Funding Plan & Sources	LPA
Secured Funding	\$1,414.8
Measure R	\$272.0
Measure M*	\$821.4
3% Local Match Requirement**	\$81.1
TIRCP Grant	\$231.3
SB1 – Local Partnership Program	\$9.0
Not Secured	\$1,288.2
Other Local Funding	\$1,038.2
Other State Funding	\$250.0
Other Federal Funding	\$0.0
TOTAL	\$2,703.0

*includes inflation adjustment as allowed under the Measure M Ordinance.

**The current cost estimate is based on 15% design completed for the EIR

Next Steps if Board Certifies Final EIR & Approves Project



If approved, Metro would:

- File a Notice of Determination (NOD) with County Clerk and CA State Clearinghouse.
- Implement communications plan to guide next phase of work.
- Return to the Metro Board to authorize contract modification for preliminary engineering and PMSS contract.