

# West Santa Ana Branch Transit Corridor

Final Safety and Security Impact Analysis Report



Metro®



# WEST SANTA ANA BRANCH TRANSIT CORRIDOR PROJECT

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## Final Safety and Security Impact Analysis Report

*Prepared for:*



**Metro**<sup>®</sup>

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Metropolitan Transportation Authority

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### APPENDIX B – ACCIDENT DATA FOR EXISTING GRADE CROSSINGS



## ACRONYMS AND ABBREVIATIONS

Acronym	Definition
AA	Alternatives Analysis
ADA	Americans with Disabilities Act
BRT	bus rapid transit
C3	County-City-Community
Caltrans	California Department of Transportation
CCTV	closed-circuit television
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CPTED	Crime Prevention through Environmental Design
CPUC	California Public Utilities Commission
EIS/EIR	environmental impact statement/environmental impact report
EPP	emergency preparedness plan
FHWA	Federal Highway Administration
FRA	Federal Railroad Administration
FTA	Federal Transit Administration
GO	General Order
I-	Interstate
LA	Los Angeles
LACoFD	Los Angeles County Fire Department
LACSD	Los Angeles County Sheriff's Department
LADPW	Los Angeles Department of Power and Water
LAFD	Los Angeles Fire Department
LAPD	Los Angeles Police Department
LBPD	Long Beach Police Department
LPA	Locally Preferred Alternative
LRT	light rail transit
LRTP	Long Range Transportation Plan
LRV	light rail vehicle
Metro	Los Angeles County Metropolitan Transportation Authority
MRDC	Metro Rail Design Criteria

Acronym	Definition
MSF	maintenance and storage facility
MUTCD	Manual of Uniform Traffic Control Devices
MWD	Metropolitan Water District
NEPA	National Environmental Policy Act
NFPA	National Fire Protection Association
NOP	Notice of Preparation
OCS	overhead catenary system
OSHA	Occupational Safety and Health Administration
PEROW	Pacific Electric Right-of-Way
PHA	Preliminary Hazard Analysis
Project	West Santa Ana Branch Transit Corridor Project
ROW	right-of-way
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
SCAG	Southern California Association of Governments
TCRP	Transit Cooperative Research Program
TPSS	traction power substations
TSA	Transportation Security Administration
TSB	Transit Services Bureau
TVA	Threat and Vulnerability Assessment
UFC	Uniform Fire Code
UPRR	Union Pacific Railroad
USACE	U.S. Army Corps of Engineers
USDOT	United States Department of Transportation
WSAB	West Santa Ana Branch

# 1 INTRODUCTION

## 1.1 Study Background

The West Santa Ana Branch (WSAB) Transit Corridor (Project) is a proposed light rail transit (LRT) line. In January 2022, the Los Angeles County Metropolitan Transportation Authority (Metro) Board of Directors identified the Locally Preferred Alternative (LPA), which will extend approximately 14.5 miles from the northern terminus in the City of Los Angeles/Florence-Firestone community of Los Angeles (LA) County to the southern terminus in the City of Artesia, traversing densely populated, low-income, and heavily transit-dependent communities. The Project will provide reliable, fixed-guideway transit service that will increase mobility and connectivity for historically underserved, transit-dependent, and environmental justice communities; reduce travel times on local and regional transportation networks; and accommodate substantial future employment and population growth.

## 1.2 Alternatives Evaluation, Screening, and Selection Process

A wide range of potential alternatives have been considered and screened through the alternatives analysis processes. In March 2010, the Southern California Association of Governments (SCAG) initiated the Pacific Electric Right-of-Way (PEROW)/WSAB Alternatives Analysis (AA) Study (SCAG 2013) in coordination with the relevant cities, the Orangeline Development Authority (renamed to Eco-Rapid Transit, which has since been dissolved), the Gateway Cities Council of Governments, Metro, the Orange County Transportation Authority, and the owners of the right-of-way (ROW)—Union Pacific Railroad (UPRR), BNSF Railway, and the Ports of Los Angeles and Long Beach. The AA Study evaluated a wide variety of transit connections and modes for a broader 34-mile corridor from Union Station in downtown Los Angeles to the City of Santa Ana in Orange County. In February 2013, SCAG completed the PEROW/WSAB Corridor Alternatives Analysis Report<sup>1</sup> and recommended two LRT alternatives for further study: West Bank 3 and the East Bank.

Following completion of the AA, Metro completed the *West Santa Ana Branch Transit Corridor Project Technical Refinement Study* (Metro 2015) in 2015 focusing on the design and feasibility of five key issue areas along the 19-mile portion of the WSAB Transit Corridor within LA County:

- Access to Union Station in downtown Los Angeles
- Northern Section options
- Huntington Park Alignment and Stations
- New C (Green) Line Station
- Southern Terminus at Pioneer Station in Artesia

In September 2016, Metro initiated the WSAB Transit Corridor Environmental Study (Environmental Study) with the goal of environmentally clearing the Project under the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA).

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<sup>1</sup> Initial concepts evaluated in the SCAG report included transit connections and modes for the 34-mile corridor from Union Station in downtown Los Angeles to the City of Santa Ana. Modes included low-speed magnetic levitation (maglev) heavy rail, light rail, and bus rapid transit.

Metro issued a Notice of Preparation (NOP) on May 25, 2017, with a revised NOP issued on June 14, 2017, extending the comment period to 60 days. In June 2017, Metro held public scoping meetings in the Cities of Bellflower, Los Angeles, South Gate, and Huntington Park. Metro provided project updates and information to stakeholders with the intent to receive comments and questions through a comment period that ended in August 2017. A total of 1,122 comments were received during the public scoping period from May through August 2017. The comments focused on concerns regarding the Northern Alignment options, with specific concerns related to potential impacts to Alameda Street with an aerial alignment. Given potential visual and construction issues raised through public scoping, additional Northern Alignment concepts were evaluated.

In February 2018, the Metro Board of Directors approved further study of the alignment in the Northern Section due to community input during the 2017 scoping meetings. A second alternatives screening process was initiated to evaluate the original four Northern Alignment options and four new Northern Alignment concepts. The *Final Northern Alignment Alternatives and Concepts Updated Screening Report* was completed in May 2018 (Metro 2018a). The alternatives were further refined and, based on the findings of the second screening analysis and the input gathered from the public outreach meetings, the Metro Board of Directors approved Alternatives E and G for further evaluation.

On July 11, 2018, Metro issued a revised and recirculated CEQA NOP, thereby initiating a scoping comment period. The purpose of the revised NOP was to inform the public of the Metro Board's decision to carry forward Alternatives E and G into the Draft Environmental Impact Statement/Environmental Impact Report (EIS/EIR). During the scoping period, one agency and three public scoping meetings were held in the Cities of Los Angeles, Cudahy, and Bellflower. The meetings provided project updates and information to stakeholders with the intent to receive comments and questions to support the environmental process. The comment period for scoping ended on August 24, 2018; more than 250 comments were received.

Following the July 2018 scoping period, a number of project refinements were made to address comments received, including additional grade separations, removing certain stations with low ridership, and removing the Bloomfield extension option. The Metro Board adopted these project refinements at its November 2018 meeting.

### 1.3 Draft Environmental Impact Statement/Environmental Impact Report

The Draft EIS/EIR and corresponding technical studies included evaluation of a No Build Alternative, four Build Alternatives, two station design options, and two site options for a maintenance and storage facility (MSF):

- Alternative 1: Los Angeles Union Station to Pioneer Station
  - Design Option 1: Los Angeles Union Station – Metropolitan Water District
  - Design Option 2: Addition of Little Tokyo Station
- Alternative 2: 7th St/Metro Center to Pioneer Station
- Alternative 3: Slauson/A Line (Blue) to Pioneer Station
- Alternative 4: I-105/C Line (Green) to Pioneer Station

- Paramount MSF site option
- Bellflower MSF site option

Figure 1-1 illustrates the Build Alternatives evaluated in the Draft EIS/EIR.

Figure 1-1. Draft EIS/EIR Build Alternatives



Source: Metro 2020

The Draft EIS/EIR was released for public review and comment in July 2021 for 45 days, which was then extended to a 60-day public review period through September 28, 2021, to provide additional time for the public to respond. Notices of the Draft EIS/EIR release were done in accordance with CEQA and NEPA regulations and included two rounds of notices to announce details of the release of the Draft EIS/EIR, as well as to provide information on the public hearings and comment methods. The Notice of Availability was distributed to 261 agencies via USB drives, which included an electronic copy of the Draft EIS/EIR.

During the 60-day public review period, Metro hosted four virtual public hearings, four virtual community information sessions, and over 19 pop-up booths for in-person engagement at locations throughout the project corridor. In addition, Metro held approximately 20 briefings to key stakeholders, elected officials, corridor cities, and other agencies. In total, approximately 450 submissions were received during the public review and comment period. In January 2022, the Metro Board of Directors identified Alternative 3 as the LPA. The LPA extends from a northern terminus at the Slauson/A Line Station located in the City of Los Angeles/Florence-Firestone unincorporated area of LA County to a southern terminus at the Pioneer Station located in Artesia for a total of 14.5 miles. With identification of the LPA, the Metro Board also identified the MSF site option located in the City of Bellflower as a component of the LPA.

### 1.4 Report Purpose and Structure

The purpose of this report is to evaluate existing safety and security conditions within the Affected Area and analyze potential safety and security impacts of the LPA. This report presents the environment/existing conditions of the Affected Area as well as the regulatory settings, impact criteria/thresholds, impact analysis, mitigation, and CEQA determination related to safety and security impacts. For this evaluation, the Affected Area is defined as the area within 100 feet of the LPA, including the proposed traction power substation (TPSS), alignment, stations, parking facilities, and the MSF site as the LPA passes through a series of 12 jurisdictions.

This Impact Analysis Report examines the environmental effects of the LPA as it relates to safety and security. The report is organized into nine sections:

- Section 1 – Introduction
- Section 2 – Project Description
- Section 3 – Regulatory Framework
- Section 4 – Affected Environment/Existing Conditions
- Section 5 – Environmental Impacts/Environmental Consequences
- Section 6 – CEQA Determination
- Section 7 – Construction Impacts
- Section 8 – Project Measures and Mitigation Measures
- Section 9 – References

### 1.5 General Background

The construction and operation of the LPA could result in safety and security impacts within the Affected Area. The Affected Area is defined as the area within 100 feet of the LPA, including the alignment, stations, parking facilities, and the MSF site. The 12 jurisdictions of the Affected Area are the Cities of Los Angeles, Vernon, Huntington Park, Bell, Cudahy,

South Gate, Downey, Paramount, Bellflower, Artesia, and Cerritos, and the unincorporated community of Florence-Firestone of LA County.

Implementation of the LPA could result in new safety and security issues for pedestrians, bicyclists, motorists, LRT passengers, and employees, and a change in response times for emergency services (police, fire, and ambulance).

Safety and security must also be considered during construction of the LPA. Depending on the type of construction and construction sequencing, temporary barricades may be necessary to prevent unauthorized personnel from entering construction areas, especially after hours and when there is no construction activity. This is especially important when construction activities expose underground utilities or open excavated trenches. Coordination with police and fire service providers regarding construction schedules and how emergency service providers would serve the area during construction must occur prior to and continually through construction.

### 1.5.1 Safety

System safety refers to the prevention of accidents to transit passengers, employees, or others present at or adjacent to Metro transit facilities, which include stations, tracks, pedestrian walkways, TPSSs, and trains.

In this report, safety is divided into sub-topics, including transit system safety and pedestrian and bicyclist safety. Transit system safety is defined as identifying, eliminating, and controlling safety hazards related to the Project's systems and equipment, including signalization, traction power, overhead catenary system (OCS), stations, alignment, track, and communication. The safety assessment also includes consideration of potential safety conflicts with pedestrians, bicyclists, transit passengers, and motorists along the Project.

Impact criteria and thresholds for safety issues are described in Section 1.5.3. To evaluate these potential issues, safety and security conditions within Metro's existing LRT system were reviewed. In addition, lessons learned from other studies such as the *SCAG Pacific Electric Right-of-Way/West Santa Ana Branch Corridor Alternatives Analysis Report* (SCAG 2013) and the *West Santa Ana Branch Transit Corridor Technical Refinement Study* (Metro 2015), among others, were used. Best practices in safety and security analysis relative to LRT systems were evaluated using guidance contained in the *Transit Cooperative Research Program (TCRP) Report 17 – Integration of Light Rail Transit into City Streets* (Korve Engineering, Inc. 1996) and the *TCRP Report 69 – Light Rail Service: Vehicular and Pedestrian Safety* (Korve Engineering, Inc. 2001). In addition, information and input at public meetings and during scoping were considered.

Additional factors related to construction and operations of the LPA were evaluated at intersections, proposed stations, the MSF site, proposed parking facilities, and near important generators of pedestrian movements such as community centers, parks, and schools along the LPA. In addition, fire services, emergency response factors, station, track design, and operational procedures pertinent to emergency response efficiency were also considered.

Other data reviewed included the following:

- Traffic queuing at selected locations
- Sight distance at intersections and along the proposed LRT alignment

- Type and availability of pedestrian/patron stacking or queuing areas
- Overall area geometrics
- Proposed signage and pavement markings readability/delineation
- Overall operational observations
- Freight interface at crossings and shared corridors

### 1.5.2 Security

Security relates to protection of people from intentional acts that could result in injury or harm, and protection of property from deliberate acts of vandalism. This includes crime prevention, law enforcement, and protection against terrorism. The LPA, including proposed station areas, parking facilities, the MSF site, TPSSs, and guideway, were evaluated to determine potential security risks.

A Threat and Vulnerability Assessment (TVA) will be conducted during preliminary engineering activities for the LPA. The TVA will follow Federal Transit Administration (FTA) Project Management Guidelines (FTA 2007, 2016) and Metro protocols or equivalent, such as the Metro Rail Design Criteria (MRDC) (Metro 2020b) and Metro Fire/Life Design Criteria (Metro 2010a). The TVA process will provide a more refined and detailed analysis of the security environment, identifying potential domestic and international security threats and potential vulnerabilities and shortcomings in the transit system, and making recommendations to reduce identified vulnerabilities to acceptable levels.

The TVA analysis of crime prevention and security issues will focus on the potential for violent crimes, property theft, fare evasion, vandalism, quality of life offenses, and terrorist attacks. Terrorism is defined by the Homeland Security Act of 2002 as acts that are dangerous to human life or potentially destructive of critical infrastructure or key resources. Examples of quality of life offenses include disorderly conduct, littering, excessive noise, and loitering. To evaluate security risks, Metro security personnel will be consulted, and information related to security issues on Metro and other similar transit systems will be reviewed. The process for determining vulnerabilities begins with the identification and grouping of transit agency assets based on their criticality to transit operations, their attractiveness as targets for security breaches or terrorist attacks, and their vulnerability to the consequences of a successful breach or act of terrorism.

Critical assets are defined as the specific assets most critical to Metro's ability to provide transit service and to protect people. Threat types will be identified using existing crime statistics for the area as well as threat information received from local, state, and federal law enforcement sources. Each critical asset will be assessed for its vulnerability to each potential threat, coupled with the frequency probability of each threat actually occurring. Severity of consequences for each threat will be given a rating ranging from catastrophic to negligible. This information will be put into a criticality matrix that organizes the resulting consequences into categories of high, serious, and low. The matrix will help prioritize consequences and focus available resources on the most serious potential threats requiring resolution while effectively managing the available resources. The TVA will identify the design and procedural mitigation to reduce the likelihood of terrorist activity.

Strategies will be identified for incorporation into security planning during the conceptual design, environmental clearance, preliminary engineering, and final design to minimize potential impacts associated with the LPA.

Security risks and potential threats will also be evaluated for possible impacts during construction activities. Mitigation strategies will be developed to help minimize identified impacts.

### 1.5.3 Impact Criteria and Thresholds

A safety or security impact would occur if:

- Construction would expose workers or others to hazards that are not addressed by standard safety procedures mandated by local, state, or federal regulations
- Construction and operation could result in motor vehicle accident rates that would be greater than current motor vehicle accident rates
- Operation would introduce a new hazard without adequate safety measures designed to prevent accidents
- Operation would introduce a hazardous situation, such as providing a circuitous route for pedestrians
- Operation would create conditions with a moderate to high likelihood of criminal activity

Safety and security elements and corresponding potential for adverse effects, if any, from the LPA are discussed in the following safety and security subtopics in Section 5 of this report:

- Transit system safety
- Freight safety
- Pedestrian and bicyclist safety
- Motorist safety
- Emergency response services
- Seismic safety
- Security and prevention of crime and terrorism

In accordance with Appendix G of the CEQA Guidelines (2016), the LPA would have a significant impact related to safety and security if the LPA would:

- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan
- Result in substantial adverse physical impacts associated with the provision of 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 and police protection services, schools, parks, or other public facilities
- Substantially increase hazards due to a design feature or incompatible uses

In determining the level of significance, the analysis assumed that construction and operation of the LPA will comply with all applicable federal, state, and local laws and regulations.

### 1.6 Methodology

To satisfy NEPA requirements, the Affected Area for safety and security is defined as the area within 100 feet of the LPA and its components (e.g., TPSSs). For emergency response, the Affected Area is expanded to the area within 2 miles of the LPA to capture the service areas of local hospital, fire, and police services. The Affected Area for emergency service was determined based on the service area of hospital, fire, and police services. The 100-foot distance was used based on project understanding and to capture potential impacts related to pedestrians, bicyclists, and motor vehicles. This distance captures the safety and security evaluations of the light rail vehicles (LRVs), stations, substations, parking facilities, and the MSF, including all proposed stations, facility building footprints, at-grade intersections, and crossing locations between intersections.

The analysis in this report focuses on the safety and security impacts to transit system safety, pedestrian and bicyclist safety, motorist safety, emergency service provider safety, seismic safety, and security and prevention of crime and terrorism resulting from the construction and operation of the LPA in the 12 jurisdictions in the Affected Area for safety and security. Safety and security resources were identified through field visits to the Affected Area, desktop reviews, and online database searches.

Appendix G of the CEQA Guidelines does not have specific thresholds for safety and security impacts; however, impacts regarding safety and security are addressed through the following CEQA thresholds:

- Would the Project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?
- Would the Project result in substantial adverse physical impacts associated with the provisions of new or physically altered government facilities, need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, to maintain response times or other performance objectives for fire and police protection services?
- Would the Project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

## 2 PROJECT DESCRIPTION

This section describes the No Build Alternative and the LPA studied in the WSAB Transit Corridor Final EIS/EIR, including station locations, and the MSF. The LPA was developed through a comprehensive alternatives analysis process and meets the purpose and need of the Project.

The No Build Alternative and LPA are generally defined as follows:

- **No Build Alternative:** Reflects the transportation network in the 2042 horizon year without the LPA. The No Build Alternative includes the existing transportation network along with planned transportation improvements that have been committed to and identified in the constrained *Metro 2009 Long Range Transportation Plan (2009 LRTP)* (Metro 2009) and SCAG's *2016-2040 RTP/SCS (SCAG 2016)*, as well as additional projects funded by Measure M that would be completed by 2042.
- **LPA:** The LPA consists of a 14.5-mile LRT line that will extend from the northern terminus in the City of Los Angeles/Florence-Firestone community of LA County to a southern terminus in the City of Artesia.

Figure 2-1 illustrates the LPA. The northern terminus of the LPA will be located just south of the intersection of Long Beach Avenue and Slauson Avenue, connecting to the current Slauson/A Line Station. South of Slauson Avenue, the LPA will follow the UPRR-owned La Habra Branch<sup>2</sup> ROW east along Randolph Street. At the Ports-owned San Pedro Subdivision ROW, the LPA will turn southeast to follow the San Pedro Subdivision ROW and then transition to the PEROW south of the I-105 freeway. The LPA will then follow the Metro-owned PEROW to the southern terminus at the Pioneer Station in Artesia. Figure 2-2 depicts the alignment sections that will require freight track relocation. The LPA will be grade separated where warranted, as indicated on Figure 2-1.

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<sup>2</sup> The La Habra Branch may also be referred to as the La Habra Subdivision. La Habra Branch is used within this document.

Figure 2-1. Locally Preferred Alternative Alignment by Grade



Source: WSP and TAHA 2023

Figure 2-2. Existing Rail Right-of-Way Ownership



Source: WSP and TAHA 2023

## 2.1 No Build Alternative

For the NEPA evaluation, the No Build Alternative is evaluated in the context of the existing transportation facilities in the project corridor (the corridor extends approximately 2 miles from each side of the four alternatives evaluated in the Draft EIS/EIR) and other capital transportation improvements and/or transit and highway operational enhancements that are reasonably foreseeable. Because the No Build Alternative provides the background transportation network against which the LPA's impacts are identified and evaluated, the No Build Alternative does not include the Project.

The No Build Alternative reflects the transportation network in 2042 and includes the existing transportation network along with planned transportation improvements that have been committed to and identified in the constrained Metro 2009 LRTP and the SCAG 2016 RTP/SCS, as well as additional projects funded by Measure M, a sales tax initiative approved by voters in November 2016. The No Build Alternative includes Measure M projects that are scheduled to be completed by 2042.

The required environmental baseline socioeconomic growth projections, including the reasonably foreseeable transportation network in 2042, were established in July 2017 when the preparation of the Draft EIS/EIR began. The SCAG 2016-2040 RTP/SCS was the adopted current regional growth forecast at the time the Draft EIS/EIR baseline was established. Specifically, the baseline year 2017 and future year 2042 population, housing, and employment are derived from the Transportation Analysis Zone-level estimates from the SCAG 2016-2040 RTP/SCS.

Table 2.1 lists the existing transportation network and planned improvements included as part of the No Build Alternative based on the Metro 2009 LRTP and SCAG 2016 RTP/SCS.

**Table 2.1. No Build Alternative – Existing Transportation Network and Planned Improvements**

Project	To / From	Location Relative to Study Area
<b>Rail (Existing)</b>		
Metro Rail System (LRT and Heavy Rail Transit)	Various locations	Within Study Area
Metrolink (Southern California Regional Rail Authority) System	Various locations	Within Study Area
<b>Rail (Under Construction/Planned)<sup>1</sup></b>		
Metro Westside D Line Extension	Wilshire/Western to Westwood/VA Hospital	Outside Study Area
Metro C Line Extension <sup>2</sup> to Torrance	96th Street Station to Torrance	Outside Study Area
Metro C Line Extension	Norwalk to Expo/Crenshaw	Outside Study Area
Metro East-West Line/Regional Connector/Eastside Phase 2	Santa Monica to Lambert Road Santa Monica to Peck Road	Within Study Area
Metro North-South Line/Regional Connector/Foothill Extension to Claremont Phase 2B	Long Beach to Claremont	Within Study Area
Metro Sepulveda Transit Corridor	Metro G Line to Metro E Line	Outside Study Area

Project	To / From	Location Relative to Study Area
Metro East San Fernando Valley Transit Corridor	Sylmar to Metro G Line	Outside Study Area
Los Angeles World Airport Automated People Mover	96th Street Station to LAX Terminals	Outside Study Area
Metrolink Capital Improvement Projects	Various projects	Within Study Area
California High-Speed Rail	Burbank to LA LA to Anaheim	Within Study Area
Link US <sup>3</sup>	LAUS	Within Study Area
<b>Bus (Existing)</b>		
Metro Bus System (including BRT, Express, and local)	Various locations	Within Study Area
Municipality Bus System <sup>4</sup>	Various locations	Within Study Area
<b>Bus (Under Construction/Planned)</b>		
Metro G Line (BRT)	Del Mar (Pasadena) to Chatsworth Del Mar (Pasadena) to Canoga Canoga to Chatsworth	Outside Study Area
Vermont Transit Corridor (BRT)	120th Street to Sunset Boulevard	Outside Study Area
North San Fernando Valley BRT	Chatsworth to North Hollywood	Outside Study Area
North Hollywood to Pasadena	North Hollywood to Pasadena	Outside Study Area
<b>Highway (Existing)</b>		
Highway System	Various locations	Within Study Area
<b>Highway (Under Construction/Planned)</b>		
High Desert Multi-Purpose Corridor	SR-14 to SR-18	Outside Study Area
I-5 North Capacity Enhancements	SR-14 to Lake Hughes Road	Outside Study Area
SR-71 Gap Closure	I-10 to Rio Rancho Road	Outside Study Area
Sepulveda Pass Express Lane	I-10 to US-101	Outside Study Area
SR-57/SR-60 Interchange Improvements	SR-57/SR-60	Outside Study Area
I-710 South Corridor Project (Phases 1 and 2)	Ports of Long Beach and LA to SR-60	Within Study Area
I-105 Express Lane	I-405 to I-605	Within Study Area
I-5 Corridor Improvements	I-605 to I-710	Outside Study Area

Source: Metro 2018, WSP 2019

Notes: <sup>1</sup> Where extensions are proposed for existing Metro rail lines, the origin/destination is defined for the operating scheme of the entire rail line following completion of the proposed extensions and not just the extension itself.

<sup>2</sup> The Metro C Line extension to Torrance includes new construction from Redondo Beach to Torrance; however, the line will operate from Torrance to 96th Street.

<sup>3</sup> Link US rail walk times included only.

<sup>4</sup> The municipality bus network system is based on service patterns for Bellflower Bus, Cerritos on Wheels, Cudahy Area Rapid Transit, Get Around Town Express, Huntington Park Express, La Campana, Long Beach Transit, Los Angeles Department of Transportation, Norwalk Transit System, and the Orange County Transportation Authority.

BRT = bus rapid transit; LA = Los Angeles; LAUS = Los Angeles Union Station; LAX = Los Angeles International Airport; LRT = light rail transit; SR = State Route; VA = Veterans Affairs

## 2.2 Locally Preferred Alternative

### 2.2.1 Refinements to the Locally Preferred Alternative

The LPA evaluated in this report is Alternative 3 from the Draft EIS/EIR with refinements to address stakeholder coordination and comments on the Draft EIS/EIR. Refinements to the LPA include the following:

- Shift the Slauson/A Line aerial station platform south and add a second set of vertical circulation and pedestrian circulation elements between the Slauson/A Line Station and the existing A Line Station. Additionally, a set of stairs was added between the A Line station and street level.
- Swap the location of the freight and LRT tracks within the La Habra Branch ROW compared to the Draft EIS/EIR design. Freight tracks will be located on the north side of the ROW and LRT tracks on the south side to accommodate potential freight connectivity to an existing industrial track on the north side of the ROW.
- Open or close at-grade crossings and implement left-turn restrictions over the LRT tracks in the City of Huntington Park:
  - Open crossings previously proposed for closure at Albany Street and Rugby Boulevard
  - Close crossings previously proposed to remain open at Malabar Street and Arbutus Avenue
  - Implement left-turn restrictions at Santa Fe Avenue, Pacific Boulevard, Miles Avenue, and State Street
- Modify roadway design at the southeast corner of Florence Avenue and California Avenue to avoid partial acquisition of infrastructure related to a water well.
- Redesign a freight spur track connection north of Rayo Avenue on the west side of the freight tracks to avoid impacts to a spur track.
- Close the private at-grade crossing at Miller Way. The private business will be displaced by the Project.
- Extend the LRT viaduct north of Imperial Highway to avoid impacts to a spur track and full acquisition of a property.
- Reconfigure the I-105/C Line Station parking facility by removing dedicated transit parking on the west side of the freight tracks and expanding the parking facility on the east side of the freight tracks to the north; also add a new driveway entrance to the parking facility at Century Boulevard.
- Eliminate demolition and reconstruction of the Arthur Avenue and Façade Avenue bridges; modify Façade Avenue to an emergency exit only from the I-105/C Line infill station (rather than a station entrance and exit).
- Modify the replacement freight bridge at I-105 to a four-span structure, consistent with the current bridge, rather than the previously proposed two-span structure.
- Replace the proposed pedestrian undercrossing with a pedestrian bridge at Paramount High School that will span the entire rail ROW.
- Realign the MSF site entrance on Somerset Boulevard to align with Bayou Avenue to allow for a signalized pedestrian crossing of Somerset Boulevard.
- Add protected left turn and a traffic signal on Clark Avenue at Los Angeles Street to accommodate dedicated turning movements to the community.

- Modify alignment of the LRT tracks and soundwall at the Bellflower Mobile Home Park to minimize parking loss and provide replacement parking elsewhere on the property to maintain the existing number of parking spaces.
- Redesign retaining walls on the southeast side of the 183rd Street/Gridley Road crossing from retained fill to columns.
- Incorporate the Artesia Historic District Recreation Trails as an existing, rather than future, condition in the Final EIS/EIR plan set.
- Add a design option that will close 186th Street but keep 187th Street open to traffic in the City of Artesia, and turn Corby Avenue into a cul-de-sac with an access driveway for the existing business.
- Modify the entrance to the Pioneer Station parking structure to align with Solana Place and shift structure north to provide alley egress resulting in an additional level on the Pioneer parking structure to maintain the number of parking spaces identified in the Draft EIS/EIR.
- Extend the median located north of the LRT tracks at the Pioneer Boulevard grade crossing to prohibit left turns from a shopping center driveway along the east side.
- Incorporate Mitigation Measures NOI-4 (Crossing Signal Bell Shrouds) and NOI-5 (Gate-Down-Bell-Stop Variance), recommended in the Draft EIS/EIR to further reduce noise at grade crossings, as Project Measure NOI PM-1 and NOI PM-2 in the Final EIS/EIR to be implemented as part of the LPA.
- Add Project Measure VA PM-8 (Residential Screening for Aerial Structures), which requires privacy screening along portions of the aerial structure adjacent to the rear of residential properties in the Cities of Paramount, Bellflower, and Cerritos if the soundwall in those locations will not be sufficiently tall to provide similar privacy screening.
- Add Project Measures BIO PM-1 (Invasive Plant Species Best Management Practices) and BIO PM-2 (Prohibition of Invasive Plant Species in Landscape Plans) to provide options to minimize the spread of invasive species during construction and prohibit the inclusion of invasive species in landscape plans; add Project Measure BIO PM-3 (LA Metro Tree Policy) to require adherence to LA Metro Tree Policy, adopted by Metro in October 2022.
- Add Project Measure CR PM-1 (Secretary of the Interior Standards Design Review), which requires review and approval of the design of the new LRT bridge and C Line station that will be constructed within the Century Freeway-Transitway Historic District and extension of the Union Pacific LA River Rail Bridge's existing concrete piers by a professional who meets the Secretary of the Interior's Professional Qualification Standards in architectural history, history, or architecture.

Refinements also included the following modifications to construction laydown/staging areas:

- Relocate the construction laydown area near State Street and Randolph Street to east of State Street in the railroad ROW.
- Relocate the laydown area at the southeast corner of Imperial Highway and Garfield Place to north of Imperial Highway within the San Pedro Subdivision ROW.
- Locate a construction laydown/staging area on the east side of the ROW between Rayo Avenue and Southern Avenue.

Additionally, refinements included changes to traction power substations (TPSS) site locations:

- Relocate TPSS Site 14 from the northwest corner of Randolph Street and State Street to the east within railroad ROW.
- Eliminate optional TPSS Sites 16E and 12E in the City of Huntington Park.
- Add Optional TPSS Site 7E within the reconfigured parking facility east of the tracks at the I-105/C Line Station parking facility.
- Relocate the proposed TPSS Site 2 from the northwest side of the intersection of 183rd Street/Gridley Road to the southeast side.

### 2.2.2 Alignment Configuration

This section summarizes the LPA alignment. The general characteristics of the LPA are summarized in Table 2.2. Figure 2-3 illustrates the freeway crossings along the alignment. Additionally, the LPA will require relocation of existing freight rail tracks within the ROW to maintain existing operations where freight tracks will be in a shared corridor with the LRT tracks. Figure 2-2 depicts the alignment sections that will require freight track relocation.

**Table 2.2. Summary of LPA Components**

Component	Quantity
Alignment length	14.5 miles
Length of at-grade and aerial	12.1 miles at-grade; 2.4 miles aerial <sup>1</sup>
Station configurations	9 along WSAB alignment, 1 at-grade infill station along C Line 3 aerial; 6 at-grade
Parking facilities	5 total: 4 surface lots and 1 parking structure (approximately 2,800 spaces)
At-grade crossings	30
Elevated street crossings	15
Freight crossings	6
Freeway crossings	4 (1 aerial/overcrossing at I-105; 3 freeway undercrossings <sup>2</sup> at I-710, I-605, SR 91)
Freight realignment	8.7 miles
River crossings	3 (Rio Hondo, LA River and San Gabriel)
TPSS facilities	17
Maintenance and Storage Facility site	1 (City of Bellflower)

Source: WSP 2023

Notes: <sup>1</sup> Alignment configuration measurements count retained fill embankments as at-grade.

<sup>2</sup> The light rail tracks crossing beneath freeway structures.

LA = Los Angeles; TPSS = traction power substation; WSAB = West Santa Ana Branch

Figure 2-3. Freeway Crossings



Source: WSP 2023

The total alignment length of the LPA will be approximately 14.5 miles, consisting of approximately 12.1 miles of at-grade and 2.4 miles of aerial alignment. The LPA will include nine new LRT stations along the WSAB alignment, of which six will be at-grade and three will be aerial. Additionally, the Project will add one new infill station along the C Line at I-105 to allow transfers between the WSAB alignment and the C Line. Five of the stations will include parking facilities, providing a total of approximately 2,800 dedicated transit parking spaces. Four of the parking facilities will be surface lots and the fifth will be a parking structure. The alignment will include 30 at-grade crossings, 4 freeway crossings (3 freeway undercrossings and 1 aerial freeway crossing), 3 river crossings, 15 aerial road crossings, and 6 freight crossings. The following further describes the LPA along the alignment.

**Northern terminus (City of Los Angeles/Florence-Firestone community of LA County):** The northern terminus of the LPA will begin at the Slauson/A Line Station, which will serve as a transfer point to the Metro A Line. Transfers between the Slauson/A Line Station and the existing Metro A Line will be accommodated via two pedestrian bridges between the two station platforms. The pedestrian bridges will be located at the southern and northern ends of the platforms and will be accessed by stairs, escalators, and/or elevators. Stairs, escalators, and/or elevators will also connect with the street level on the north side of the station, while stairs will connect with the street level on the south side of the station. An additional set of stairs will be added to the existing A Line Station providing access to street level. Tail tracks<sup>3</sup> accommodating layover storage for a three-car train will extend approximately 1,000 feet north from the station.

**La Habra Branch ROW<sup>4</sup> (City of Huntington Park):** South of the Slauson/A Line Station, the alignment will turn east along the existing UPRR owned La Habra Branch ROW in the median of Randolph Street. The alignment will be on the south side of the La Habra Branch ROW, and the freight tracks will be realigned but remain in the northern portion of the ROW. The alignment will transition to an at-grade configuration west of Alameda Street and will proceed east along the Randolph Street median. Wilmington Avenue, Regent Street, and Malabar Street will be closed to traffic crossing the ROW, altering the intersection design to a right-in, right-out configuration. The Pacific/Randolph Station will be located just east of Pacific Boulevard. From the Pacific/Randolph Station, the alignment will continue east at-grade. Arbutus Avenue and Rita Avenue will be closed to traffic crossing the ROW, altering the intersection design to a right-in, right-out configuration.

**San Pedro Subdivision ROW (Cities of Huntington Park, Bell, Cudahy, South Gate, Downey, and Paramount):** At the San Pedro Subdivision ROW, the alignment will transition to an aerial configuration and turn south to cross over Randolph Street and the freight tracks, returning to an at-grade configuration north of Gage Avenue. The alignment will be located on the east side of the existing San Pedro Subdivision ROW freight tracks, and the existing track(s) will be relocated to the west side of the ROW. The alignment will continue at-grade within the San Pedro Subdivision ROW to the at-grade Florence/Salt Lake Station south of Florence Avenue.

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<sup>3</sup> Tail tracks are additional tracks that extend beyond the end of the mainline tracks and can be used for temporarily parking, storing, or reversing the direction of trains. While the tracks are designed to allow for layover if needed, trains will not sit at the end of the line.

<sup>4</sup> The La Habra Branch may also be referred to as the La Habra Subdivision. La Habra Branch is used within this document.

The alignment will continue southeast from the at-grade Florence/Salt Lake Station within the San Pedro Subdivision ROW, crossing Otis Avenue, Santa Ana Street, and Ardine Street at-grade. The alignment will be located on the east side of the existing San Pedro Subdivision freight tracks, and the existing tracks will be relocated to the west side of the ROW. South of Ardine Street, the alignment will transition to an aerial structure to cross over the existing UPRR tracks and Atlantic Avenue. The Firestone Station will be located on an aerial structure between Atlantic Avenue and Firestone Boulevard. The Firestone Station will include a dedicated transit parking facility providing approximately 600 parking spaces with a vehicle underpass under the freight tracks to access the parking facility.

The alignment will then cross over Firestone Boulevard and transition back to an at-grade configuration prior to crossing Rayo Avenue at-grade. The alignment will continue south along the San Pedro Subdivision ROW, crossing Southern Avenue at-grade and continuing at-grade until it transitions to an aerial configuration to cross over the LA River. The LRT bridge will be constructed next to the existing freight bridge. South of the LA River, the alignment will transition to an at-grade configuration, then passing under the I-710 freeway through a new box tunnel structure. The alignment will then return to an aerial structure to cross over the Rio Hondo Channel. South of the Rio Hondo Channel, the alignment will transition to an aerial structure to cross over a realigned spur track, Imperial Highway and Garfield Avenue. South of Garfield Avenue, the alignment will transition to an at-grade configuration and serve the Gardendale Station north of Gardendale Street.

From the Gardendale Station, the alignment will continue south in an at-grade configuration, crossing Gardendale Street and Main Street to serve the I-105/C Line Station, which will be located at-grade north of Century Boulevard. The I-105/C Line Station will include a dedicated transit parking facility providing approximately 340 to 360 parking spaces, depending on the location of the TPSS. The alignment will continue at-grade, crossing Century Boulevard, then will cross over the I-105 freeway in an aerial configuration within the existing San Pedro Subdivision ROW bridge footprint. A new Metro C Line Station will be constructed in the median of the I-105 freeway. The I-105/C Line Station will be connected to the new infill C Line Station in the middle of the freeway via a pedestrian walkway on the new LRT bridge. Vertical pedestrian access will be provided from the LRT bridge to the new C Line Station platform via stairs, escalators, and/or elevators. Emergency egress from the C Line Station will also be provided at Façade Avenue via stairs and elevators. To accommodate construction of the new station platform, the existing Metro C Line tracks will be widened and, as part of the I-105 Express Lanes Project, the I-105 lanes will be reconfigured.

**PEROW (Cities of Paramount, Bellflower, Cerritos, and Artesia):** South of the I-105 freeway, the alignment will continue at-grade within the San Pedro Subdivision ROW. In order to maintain freight operations and allow for freight train crossings, the alignment will transition to an aerial configuration as it turns southeast and enter the PEROW. The existing freight track will cross beneath the aerial alignment and align on the north side of the PEROW east of the San Pedro Subdivision ROW. The Paramount/Rosecrans Station will be located in an aerial configuration west of Paramount Boulevard and north of Rosecrans Avenue. The existing freight track will be relocated to the northeast side of the alignment adjacent to the viaduct structure. The Paramount/Rosecrans Station will include a dedicated transit parking facility providing approximately 490 parking spaces located south of the alignment between Los Angeles Department of Water and Power property and Rosecrans Avenue.

The alignment will continue southeast in an aerial configuration over the Paramount Boulevard/Rosecrans Avenue intersection and descend to an at-grade configuration. The alignment will return to an aerial configuration to cross over Downey Avenue descending back to an at-grade configuration north of Somerset Boulevard. The existing Paramount High School pedestrian bridge will be reconstructed over the LPA and freight tracks to maintain the connection between Paramount High School and the athletics fields. One of the adjacent freight storage tracks at the World Energy facility will be relocated to accommodate the new LRT tracks and maintain storage capacity. There are no active freight tracks south of the World Energy facility (Somerset Boulevard).

The alignment will cross Somerset Boulevard at-grade. South of Somerset Boulevard, the at-grade alignment will parallel the existing Bellflower Bike Trail that is currently aligned on the south side of the PEROW. The alignment will continue at-grade crossing Lakewood Boulevard, Clark Avenue, and Alondra Boulevard. The at-grade Bellflower Station will be located west of Bellflower Boulevard. The Bellflower Station will include a dedicated transit parking facility providing approximately 260 parking spaces.

East of Bellflower Boulevard, the Bellflower Bike Trail will be realigned to the south side of the PEROW to accommodate an existing historic building located near the southeast corner of Bellflower Boulevard and the PEROW. The realigned bike trail will then match the existing bike trail east of the historic building near Bellflower Boulevard. The LRT alignment will continue southeast within the PEROW and transition to an aerial configuration near Cornuta Avenue, crossing over Flower Street and Woodruff Avenue. The alignment will return to an at-grade configuration south of Woodruff Avenue. South of Woodruff Avenue, the Bellflower Bike Trail will be realigned along the north side of the PEROW. Continuing southeast, the LRT alignment will cross under the SR-91 freeway in an existing undercrossing. The alignment will cross over the San Gabriel River on a new bridge, replacing the existing abandoned freight bridge. South of the San Gabriel River, the alignment will transition back to an at-grade configuration before crossing Artesia Boulevard at-grade.

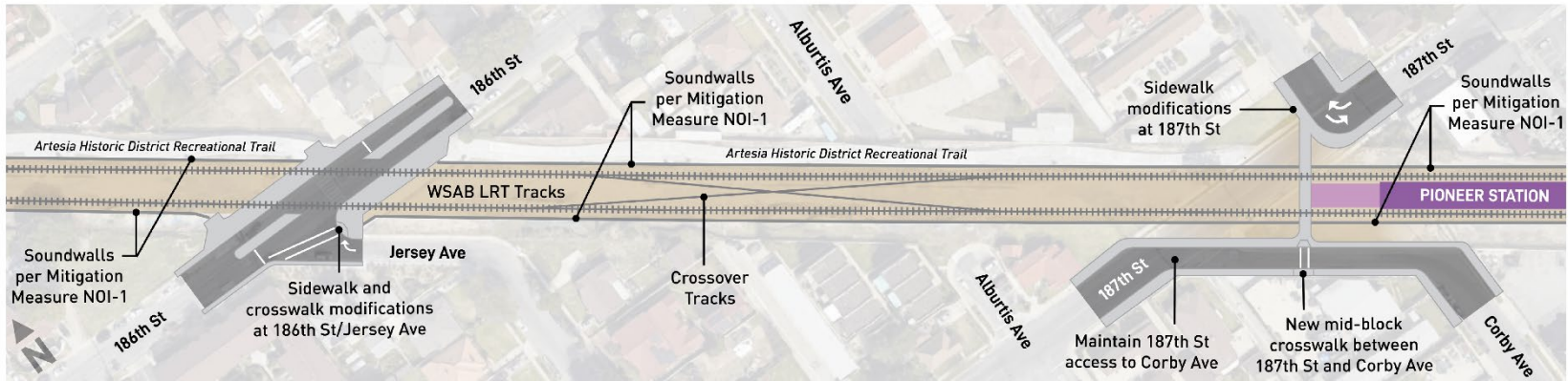
East of Artesia Boulevard, the alignment will cross beneath the I-605 freeway in an existing underpass. Southeast of the underpass, the alignment will continue at-grade, crossing Studebaker Road. North of Gridley Road, the alignment will transition to an aerial configuration to cross over 183rd Street and Gridley Road. The alignment will return to an at-grade configuration and cross 186th Street and 187th Street at-grade. The alignment will then pass through the Pioneer Station on the north side of Pioneer Boulevard at-grade. The Pioneer Station will include a dedicated transit parking facility providing approximately 1,100 parking spaces. Tail tracks accommodating layover storage for a three-car train will extend approximately 1,000 feet south from the station, crossing Pioneer Boulevard and terminating north of South Street.

### 2.2.3 Design Option – Close 186th Street

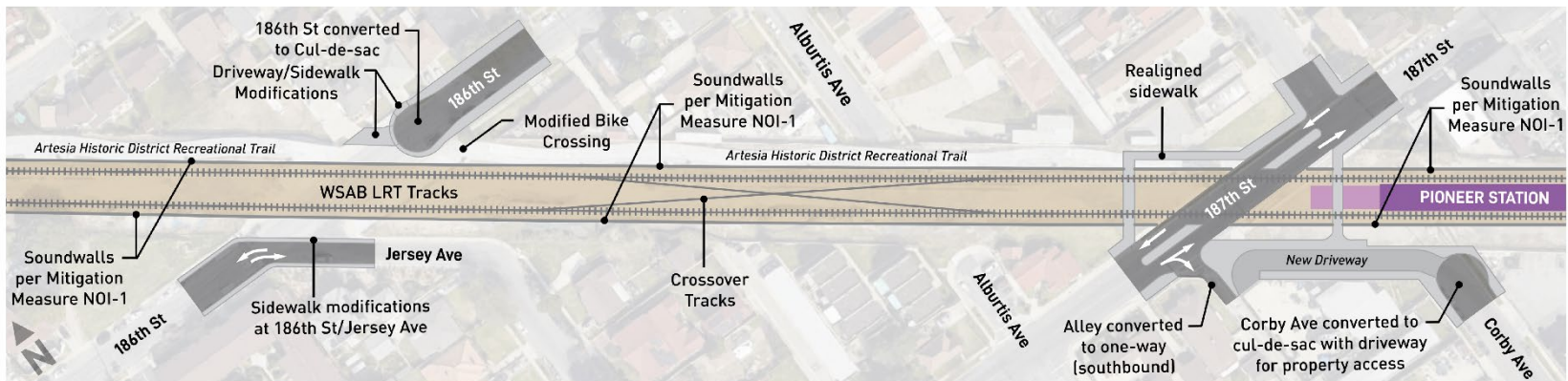
The LPA includes one design option:

- **Design Option:** Close 186th Street – The design option would close 186th Street but keep 187th Street open to traffic in the City of Artesia. Corby Avenue would become a cul-de-sac with an access driveway for the existing business (Figure 2-4).

Figure 2-4. Locally Preferred Alternative and Design Option: Close 186th Street



Locally Preferred Alternative



Design Option 1: Close 186th Street

Source: Cityworks Design and WSP 2023

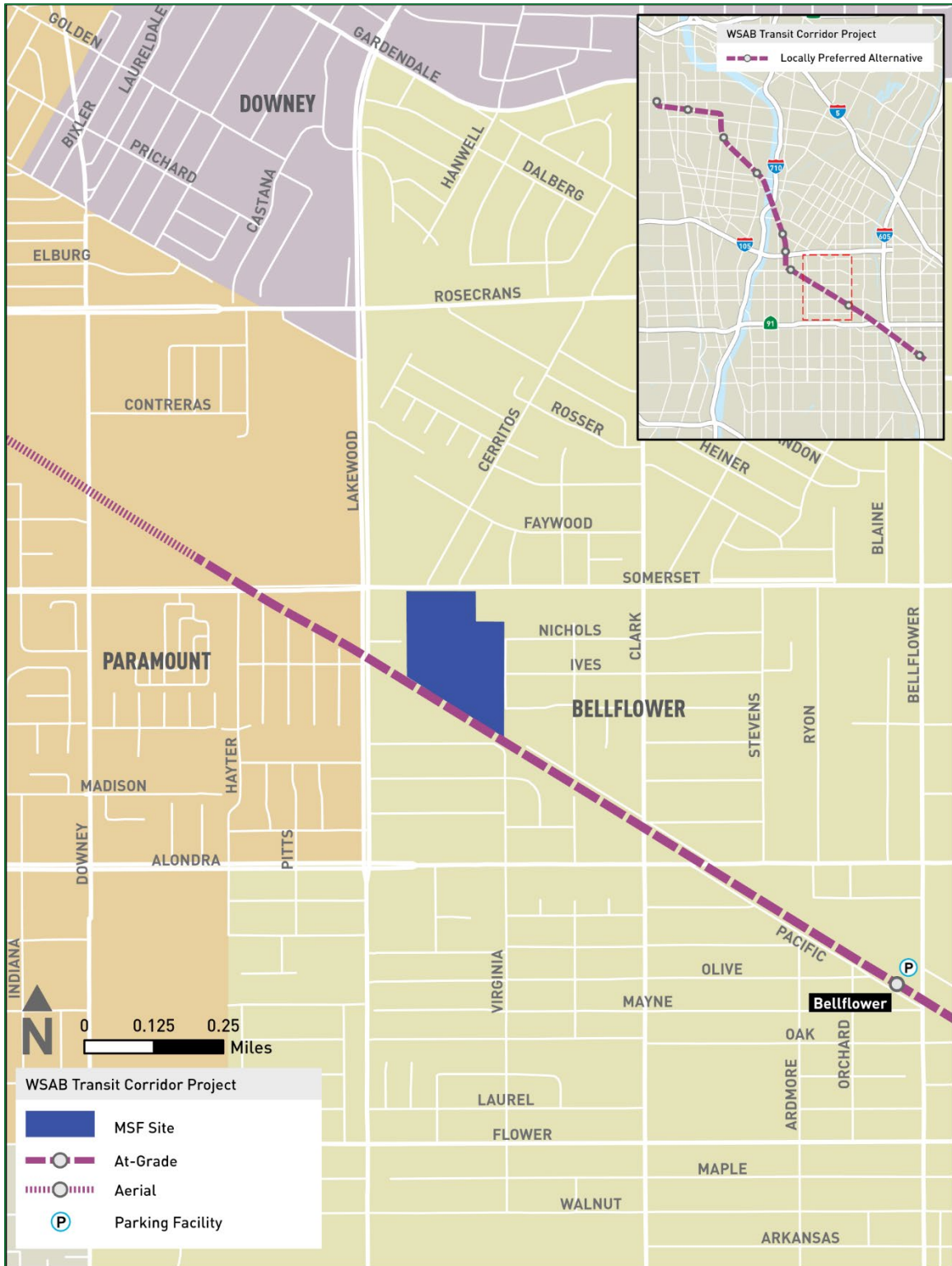
### 2.2.4 Maintenance and Storage Facility

Generally, each LRT project requires an MSF facility to provide daily servicing and cleaning, inspection and repairs, and storage of light rail vehicles (LRVs). Activities may take place in the MSF throughout the day and night depending upon train schedules, workload, and the maintenance requirements.

In January 2022, the Metro Board identified the Bellflower MSF as the WSAB Project's MSF site. The MSF site is located in the City of Bellflower and is bounded by a mobile home community and industrial facilities to the west, Somerset Boulevard and apartment complexes to the north, residential homes to the east, and the PEROW and Bellflower Bike Trail to the south. Access to the site will be via a signalized driveway at Somerset Boulevard and Bayou Avenue (Figure 2-5). In total, the MSF site is approximately 21 acres and could accommodate up to 80 LRVs to serve the Project's operations plan.

The MSF will have storage tracks, each with sufficient length to store three-car train sets and a maintenance-of-way vehicle storage. The facility will include a main shop building with administrative offices, a cleaning platform, a TPSS, employee parking, a vehicle wash facility, a paint and body shop, and other facilities as needed. The east and west yard leads (i.e., the tracks leading from the mainline to the facility) will have sufficient length for a three-car train set.

Figure 2-5. Maintenance and Storage Facility Site



Source: WSP and TAHA 2023



## 3 REGULATORY FRAMEWORK

The following describes the regulatory context under which safety and security of the LPA are managed at the federal and state levels. In addition, a summary is provided of applicable regional agencies and local plans, ordinances, and codes applicable to safety and security of the LPA.

### Federal:

- Design Criteria (Americans with Disabilities Act [ADA])
- Safety Management System (Public Transportation Agency Safety Plan)

### State:

- California Public Utilities Commission
- California Code of Regulations
- California Building Code
- California Department of Transportation

### Regional:

- Los Angeles County Metropolitan Transportation Authority
- Los Angeles County

### Local:

- City of Los Angeles
- City of Vernon
- City of Huntington Park
- City of Bell
- City of Cudahy
- City of South Gate
- City of Downey
- City of Paramount
- City of Bellflower
- City of Artesia
- City of Cerritos

### Other:

- Fire Services (Uniform Fire Code and National Fire Protection Association)

## 3.1 Federal

### 3.1.1 Design Criteria

#### 3.1.1.1 28 Code of Federal Regulations (CFR) 36, Americans with Disabilities Act

28 CFR 36 implements the Americans with Disabilities Act of 1990 (ADA). It sets guidelines for accessibility to places of public accommodation and commercial facilities by individuals with disabilities. These guidelines are to be applied during the design, construction, and alteration of such buildings and facilities to the extent required by regulations issued by federal agencies, including the Department of Justice, under the ADA.

#### 3.1.2 Safety Management System

##### 3.1.2.1 Public Transportation Agency Safety Plan

In 2018, the final rule regarding the Public Transportation Agency Safety Plan was published by the FTA. This final rule requires transit agencies that receive federal funds under FTA's Urbanized Area Formula Grants to develop safety plans. The safety plan must include the processes and procedures to implement Safety Management Systems safety performance targets. The safety plan must be updated and certified annually.

### 3.2 State

#### 3.2.1 California Public Utilities Commission

Federal law (49 CFR 659) requires every state to identify a state safety oversight agency to oversee safety requirements for fixed-guideway systems. In California, the California Public Utilities Commission (CPUC) has been identified as the state safety oversight agency. The CPUC has adopted General Order (GO) 164-E as its safety program standard, the Safety Rules and Regulations Governing Rail Transit State Safety Oversight in California. GO 164-E identifies the safety and security planning requirements for operating light rail, including preparing safety and security plans, establishing a hazard management program, and implementing a safety certification process.

The CPUC has also adopted GO 143-B, the Safety Rules and Regulations Governing Light Rail Transit in California. The order describes the general requirements for LRT, including braking, lighting, operating speeds, ROW standards, and maintenance of LRVs. In accordance with GO 143-B, LRV equipment shall be maintained in safe and proper working condition. Once an LRT carrier/operator establishes operating rules and procedures, including grade crossings, the CPUC has final review and approval of the operating plan. The following are the major rules set forth in GO 143-B (CPUC 1991) applicable to the LPA:

- Title 5, Section 01 – Headlights. Every LRV that operates on separate ROW shall be equipped with a headlight or headlights that are capable of revealing a person or motor vehicle in clear weather at a distance of 600 feet. Every LRV that operates on a public street or road shall be equipped with a headlight or headlights that are capable of revealing a person or motor vehicle in clear weather at a distance of 350 feet and shall be designed and adjusted so as not to interfere with the vision of drivers of motor vehicles. Headlights may be dimmed or extinguished under conditions where their use could pose a safety hazard to motorists in adjacent traffic lanes.
- Title 7, Section 01 – Basic Speed Rule. The operator of an LRV shall at all times operate at a safe speed that is consistent with weather, visibility, track conditions, traffic signal indications, and the indication of Automatic Train Protection systems where used.
- Title 7, Section 08 – Crossing of Street and Highways at Grade. LRT systems that cross streets, roads, and highways at-grade shall install and maintain automatic gate crossing signals to control motor vehicle traffic and automatic warning signals to control pedestrian traffic. When LRV operation is on a street or highway that permits motor vehicle traffic, all intersections shall be controlled by traffic control devices.

- Title 7, Section 09 – Audible Warning. The LRV operator shall sound an audible warning:
  - When approaching at-grade crossings protected by automatic crossing signals conforming to the requirements of GO 75-C to control vehicle and pedestrian traffic
  - At other locations specifically identified in the LRT system’s operating rules
  - Whenever the operator believes it is necessary and in accordance with the LRT system’s operating rules and regulations
- Title 9, Section 03 – Installation of Curbs, Fences, and Barriers. Concrete curbs, fences, or barriers shall be installed along sections of the separate ROW of an LRT system when there is likelihood that motor vehicles or pedestrians may leave the traveled way of any nearby street or highway and encroach on a mainline track.
- Title 9, Section 04 – Alignment Classification. Classifications are as follows:
  - **Exclusive:** A ROW without at-grade crossings that is grade-separated or protected by a fence or substantial barrier, as appropriate to the location (includes subways and aerial structures).
  - **Semi-Exclusive:** (1) Fully exclusive ROW with at-grade crossings, protected between crossings by a fence or substantial barrier, if appropriate to the location; and (2) within the street right-of-way, but protected by 6-inch-high curbs and safety fences between crossings (the safety fences should be located outside the tracks).
- Title 9, Section 05 – Emergency Walkways. An unobstructed emergency walkway at least 30 inches wide and accessible to persons getting off disabled trains shall be provided along all tracks in subways and tunnels, on bridges, and on alignment Classifications 9.04a, 9.04b(1), and 9.04b(2). Walkways shall have a reasonably regular surface and shall not have a slope exceeding 1 foot vertical to 6 feet horizontal. A single walkway may serve more than one track.
- Title 11, Section 01 – Fire Protection Requirements. All LRT systems shall establish fire protection requirements to control potential fire hazards. The minimum requirements shall be established by the LRT system based on a documented engineering analysis of the factors affecting fire hazards and fire risks using National Fire Protection Association (NFPA) 130 as a guide.

In addition to GO 164-E and 143-B, the following GOs shall apply:

- GO 26-D—Clearances on Railroads and Street Railroads as to Side and Overhead Structures, Parallel Tracks, and Crossings
- GO 33-B—Construction, Reconstruction, Maintenance, and Operation of Interlocking Plants of Railroads
- GO 52—Construction and Operation of Power and Communication Lines for the Prevention or Mitigation of Inductive Interference
- GO 72-B—Standard Types of Pavement Construction at Railroad Grade Crossings
- GO 75-D—Regulations Governing Standards for Warning Devices for At-Grade Highway-Rail Crossing
- GO 88-B—Rules for Altering Public Highway-Rail Crossings
- GO 95—Overhead Electric Line Construction

- GO 108—Filing of Railroad Operating Department Rules
- GO 110—Radio Communications in Railroad Operations
- GO 118—Construction, Reconstruction, and Maintenance of Walkways and Control of Vegetation Adjacent to Railroad Tracks
- GO 128—Construction of Underground Electric Supply and Communication Systems
- GO 131-D—Planning and Construction of Facilities for the Generation of Electricity and Certain Electric Transmission Facilities
- GO 135—The Occupancy of Public Grade Crossings by Railroads

#### 3.2.2 California Code of Regulations

Safety orders established by Title 8 of the California Code of Regulations are discussed in the following subsections.

##### 3.2.2.1 Subchapter 4, Construction Safety Orders

Subchapter 4, Construction Safety Orders, establishes minimum safety standards whenever employment exists in connection with the construction, alteration, painting, repairing, construction maintenance, renovation, removal, or wrecking of any fixed structure or its parts. These orders also apply to all excavations not covered by other safety orders for a specific industry or operation.

##### 3.2.2.2 Subchapter 5, Electrical Safety Orders

The purpose of the Electrical Safety Orders is to provide minimum safety requirements and to assist in the elimination of accidents that may result from the operation, installation, removal, use, and maintenance of electrical equipment and tools.

#### 3.2.3 California Building Code

California Code of Regulations Title 24, the California Building Code, provides a compilation of building standards. State fire regulations are set forth in Section 13,000 et seq. of the California Health and Safety Code and include regulations for building standards (as also set forth in the California Building Code), fire protection and notification systems, fire protection devices such as extinguishers and smoke alarms, and fire suppression training. This code, in particular Chapter 4, Section 443-Fixed Guideway Transit and Passenger Rail Systems, applies to the design criteria for the safety of the LPA.

#### 3.2.4 California Department of Transportation

The California Department of Transportation (Caltrans) Highway Design Manual (Caltrans 2016) applies to the LPA. It establishes uniform policies and procedures to carry out the state's highway design functions. The *California Manual of Uniform Traffic Control Devices Revision 2* (MUTCD) (Caltrans 2014) applies to the LPA to provide uniform standards and specifications for all official traffic control devices in California.

### 3.3 Regional

#### 3.3.1 Los Angeles County Metropolitan Transportation Authority

Metro is responsible for compliance with all FTA and CPUC regulations governing the safe operation of its transit systems, both for patrons and employees. In operating LRT, subways and bus transit throughout LA County, Metro has established departments to address specific issues.

Metro Emergency Response Policies are incorporated into Metro’s standard operating procedures and were established to address the potential for emergencies to occur and the ways in which Metro employees are to respond. Excerpts from both of these policies are provided in the following sections.

### 3.3.1.1 Metro Grade Crossing Policy for Light Rail Transit

The Metro *Grade Crossing Policy for Light Rail Transit* (Metro 2010c) provides a structured process for evaluating potential grade separations versus at-grade operation along light rail lines. The policy describes a three-step process:

- **Step 1: Initial Screening.** A preliminary planning-level assessment of roadway crossings based upon readily available, planning-level data for roadway volumes and proposed train frequencies leading to an initial categorization of roadway crossings into three groups: “At-Grade Should be Feasible,” “Possible At-Grade Operation,” and “Grade Separation Usually Required.”
- **Step 2: Detailed Analysis.** This milestone is a detailed evaluation of operations, considering peak-period movement-by-movement analysis of roadway traffic in conjunction with an assessment of potential impacts to rail operations due to priority control. It provides a more refined assessment of feasibility of at-grade operation and identifies operational trade-offs between roadway traffic conditions and rail operations. This review includes an initial assessment of safety issues based on site-specific evaluation of geometric conditions and observed and/or projected use of proposed crossings. It results in a preliminary determination of locations that may be operated at-grade versus grade-separated.
- **Step 3: Verification.** This step includes the process of developing consensus regarding the proposed design solution with local constituencies, including other involved agencies and the community as appropriate. This step may include preliminary engineering studies and cost estimates for alternative treatments. It may also include refinement of projected traffic volumes and validation of traffic and rail operations using simulation modeling. Finally, it may include additional analysis of safety issues and countermeasures. At the conclusion of this milestone, it is expected that all technical studies will have been completed leading to a final recommendation by Metro for the crossing configuration.

### 3.3.1.2 Metro Rail Emergency Response Policy

The *Metro Emergency Response Plan Policy* (Metro 2010b) establishes guidelines for standard operating policies and procedures for the mobilization of Metro employees and resources during an emergency situation. The policy is shared with other public safety resources and agencies to provide a fast, controlled, and coordinated response to the various emergencies that may occur on the Metro rail system. The goal of this policy is to establish guidelines that would impact the fewest number of responders, allowing the emergency situation to be mitigated with as little impact to the system as practicable and with service restored as quickly as possible. To this end, only the personnel who are essential to respond to a particular emergency situation should be called. As an incident grows, the list of responders may also grow to conduct investigations and provide recovery efforts necessary to restore service.

Certain objectives must be met to implement guidelines in the Emergency Response Policy such as:

- Minimizing potential danger to passengers, employees, and others during emergency incidents
- Maximizing the effectiveness of Metro during an emergency incident
- Ensuring there is proper investigation into the cause of the incident
- Restoring service or provide alternative service at the earliest possible time

#### 3.3.1.3 Metro Rail Design Criteria

Section 12 of the MRDC (Metro 2020b) identifies the methods by which Metro will construct, maintain, and monitor the safety of its transit facilities. It provides specific direction regarding the categorization of potential hazards and the actions, including suspension of LRT operations, if a potential safety and security risk should arise. The MRDC require the preparation of a Functional Hazard Analysis that analyzes the potential for a loss or malfunction of each and every LRT operational function and categorizes its effect on the equipment, personnel, patrons, and general public to determine the associated hazard level (Category I, II, III or IV) as defined in the American Public Transit Association *Manual for the Development of Rail Transit System Safety Program Plans* (1999). The MRDC also outline four basic methods of resolving or addressing any potential safety and security concerns:

- Elimination through design/redesign
- Minimization through the provision of additional safety features
- Installation of warning devices to detect the condition and to generate an adequate warning signal to correct the hazard or to provide for operating personnel/public reaction
- Specialized procedures and training

It should be noted that, to resolve a potential safety risk, a combination of any of the four methods may be used, as determined by the results of the Functional Hazards Analysis. In addition, the MRDC follow the principles of Crime Prevention through Environmental Design (CPTED).

#### 3.3.1.4 Fire/Life Safety Design Criteria

Metro's Fire/Life Safety Design Criteria (Metro 2010a) are designed to address specific fire protection requirements for design and construction of the Metro transit systems and equipment. The criteria establish minimum requirements to provide a reasonable degree of safety from fire and its related hazards. Fire safety on an LRT system is achieved by integrating facility design, operating equipment, hardware, procedures, and software subsystems to provide protection of life and property from the effects of fire. The criteria identify and discuss fire safety as they relate to the following specific design criteria:

- Station and guideway facilities
- Passenger vehicles
- Vehicle and maintenance yards
- System fire/life safety procedures
- Communications
- Rail operations control
- Inspection, maintenance, and training

In addition to the Fire/Life Safety Design Criteria, Metro has adopted the most current version of the NFPA standards (NFPA 130) as its standard for all rail projects.

### 3.3.1.5 Homeless Task Force

The homelessness crisis is pervasive in all corners of LA County, including the Metro system. The Los Angeles Homeless Services Agency counts as many as 58,000 individuals in LA County who are homeless, two-thirds of whom are unsheltered. Some of these unsheltered people use Metro’s system and properties as temporary shelter.

In February 2016, both the County and City of Los Angeles adopted homeless strategies. In both plans, increasing comprehensive and coordinated outreach services was prioritized. The outreach efforts involve “County-City-Community” (C3) teams consisting of a nurse, a substance abuse counselor, a mental health clinician, a formerly homeless individual, and an outreach worker. In spring 2016, at the direction of Metro’s Chief Executive Officer, Metro created a Homeless Task Force to address the presence of the homeless on Metro’s system and properties due to the LA County homeless crisis. In February 2017, Metro finalized its Metro Homeless Action Plan, which focuses on enhancing the customer experience and providing a safe and secure system, while aligning itself to the resources under Measure H<sup>5</sup> and Measure HHH<sup>6</sup>. Under the action plan, Metro created a pilot program to hire multi-disciplinary homeless outreach teams to engage the homeless and get them into services. The Homeless Action Plan is based on a four-step approach:

- Research
  - Conduct demographic surveys of homeless individuals and families
  - Collect data from outreach teams
  - Conduct a cost-benefit analysis of Metro’s current investment in clearing homeless encampments
  - Review and analyze data specific to Metro from the Greater Los Angeles Homeless Count and Metro Customer Surveys
- Education
  - Develop materials and information for Metro staff and passengers on reporting transit homelessness and how they should respond or assist
  - Develop a curriculum and implement formalized training for Metro staff and law enforcement
  - Formalize the “Transit Homelessness” concept and integrate it into implementation plans
- Coordination
  - Work with LA County, City of Los Angeles, and City of Long Beach to align and integrate with adopted homeless strategies
  - Participate in committees and work groups related to the homeless system

<sup>5</sup> Measure H is a sales tax measure authorizing a 0.25 percent county sales tax for 10 years to fund homeless services and prevention, approved in March 2017.

<sup>6</sup> Measure HHH is a bond issuance of \$1.2 billion in bonds to fund housing and services for homeless people for the City of Los Angeles and was approved in November 2016.

- Partner and collaborate with partners on encampment protocols
- Partner with the County and City of Los Angeles on critical initiatives related to homelessness
- Outreach
  - Implement and integrate the C3 outreach teams
  - Develop uniform outreach standards
  - Implement specialized outreach teams
  - Lead and coordinate homeless outreach and law enforcement teams
  - Partner with agencies on homeless connect days
  - Work with Veteran outreach teams
  - Align Metro workforce development efforts

Thus far, this pilot program has resulted in roughly 12 percent of the homeless contacted going into permanent housing solutions. Metro is working with LA County to obtain additional outreach services for the homeless and is considering expanding its existing pilot program for homeless engagement.

#### 3.3.2 Los Angeles County

The Los Angeles County Department of Public Works (LACDPW) Standard Plans Manual (LACDPW 2000) apply to design improvements within county right-of-way. The Los Angeles County 2035 General Plan (Los Angeles County Department of Regional Planning 2015) includes policies that affect police and fire services in the Affected Area, including:

- Police Services:
  - Policy PS 8.1 promotes phased development, whereby land use proposals are developed in conjunction with approved law enforcement capabilities.
- Fire Services:
  - The LA County Fire Code and the General Plan Safety Element establish the standards, policies, and goals for fire suppression facilities within the county. In addition, the General Plan includes policies (such as Policy PS 7.1) that promote phased development, whereby land use proposals are developed in conjunction with approved fire protection capabilities.

#### 3.4 Local

The cities within the Affected Area each have public safety elements in their General Plans and municipal code provisions that address safety, security, and emergency response. In addition, the County of Los Angeles has a role in emergency response and evacuation. Local jurisdictions and their applicable regulations and general plan policies are listed in Table 3.1.

Table 3.1. General Plan Goals and Policies Relating to Safety and Security

City	Police Services	Fire Services
City of Los Angeles (1996)	General Plan Safety Element Policy 2.1.5	General Plan Safety Element Policy 2.1.6
City of Los Angeles Southeast Los Angeles Community Plan (2000b)	Land Use Policies and Programs III-20 (Police Protection)	Land Use Policies and Programs III-22 (Fire Protection)
City of Vernon (2007)	General Plan Safety Element Goal S-3	General Plan Safety Element Policy S-3.8
City of Huntington Park (1991)	General Plan Safety Element Goal 6.0	General Plan Safety Element Policy 3.2 Safety Element Policy 3.4
City of Bell (Blodgett/Baylosis Associates 2014)	General Plan Safety Element Policy 3	General Plan Safety Element Policy 2 Safety Element Policy 3
City of Cudahy (2010)	General Plan Public Safety Element Policy 1.6 Public Safety Element Policy 2.2 Public Safety Element Policy 3.1	General Plan Public Safety Element Policy 1.4 Public Safety Element Policy 1.6 Public Safety Element Policy 2.2
City of South Gate (Raimi + Associates 2009)	General Plan Public Facilities and Services Element Policy 1.1.1 Public Facilities and Services Element Policy 1.1.3 Public Facilities and Services Element Policy 1.2.1 Public Facilities and Services Element Policy 2	General Plan Public Facilities and Services Element Policy 2.1.1 Public Facilities and Services Element Policy 2.1.2 Public Facilities and Services Element Policy 2.1.3 Public Facilities and Services Element Policy 2.2.4
City of Downey (2005)	General Plan Safety Element Policy 5.4.1 Safety Element Policy 5.4.2	General Plan Safety Element Policy 5.3.1 Safety Element Policy 5.3.2
City of Paramount (2007)	General Plan Health and Safety Element Policy 24 Health and Safety Element Policy 25 Health and Safety Element Policy 26	General Plan Health and Safety Element Policy 15 Health and Safety Element Policy 16 Health and Safety Element Policy 17
City of Bellflower (1994)	General Plan Safety Element Policy 4.2 Safety Element Policy 4.4	General Plan Safety Element Policy 2.2 Safety Element Policy 2.3

City	Police Services	Fire Services
City of Artesia (2010)	General Plan Safety Element Policy 5.1.1 Safety Element Policy 5.1.2	General Plan Safety Element Policy 6.1 Safety Element Policy 6.1.1
City of Cerritos (RBF Consulting 2004)	General Plan Safety Element Policy SAF-6.1 Safety Element Policy SAF-6.4 Safety Element Policy SAF-7.1 Safety Element Policy SAF-7.4	General Plan Policy SAF-8.1 Policy SAF-8.3 Policy SAF-8.4 Policy SAF-8.6

Source: Metro 2023

### 3.5 Other

Other regulations and guidelines applicable to the LPA include those from the Uniform Fire Code (UFC) and the NFPA.

#### 3.5.1 Fire Services

The UFC contains applicable regulations related to the construction and maintenance of buildings and premise usage. Issues addressed in the UFC and relevant to the LPA include fire department access, fire hydrants, automatic sprinkler systems, fire alarm systems, fire and explosion hazards safety, hazardous materials storage and use, provisions intended to protect and assist fire responders, and many other general and specialized fire safety requirements for new and existing buildings and their surrounding premises. The UFC contains specialized technical regulations related to fire and human safety that will also be applicable.

Regulations relating to fire life safety include NFPA 101 Life Safety Code and NFPA 130: *Standard for Fixed Guideway Transit and Passenger Rail Systems* (2017), which have been adopted by Metro, and are discussed further in Section 3.3.1.

## 4 AFFECTED ENVIRONMENT/EXISTING CONDITIONS

The assessment of existing conditions establishes a baseline for impacts by describing the current safety and security conditions as they relate to pedestrians, bicyclists, LRT passengers and employees; existing emergency services (police, fire, and ambulance); available crime and security statistics; and other relevant data for the Affected Area. The Affected Area is defined as the area within 100 feet of the LPA, including the alignment, stations, parking facilities, and the MSF site. The 11 cities in the Affected Area are Los Angeles, Vernon, Huntington Park, Bell, Cudahy, South Gate, Downey, Paramount, Bellflower, Artesia, Cerritos, and the unincorporated Florence-Firestone community of LA County.

In the context of this analysis and as referenced in Section 1.5, safety refers to the prevention of accidents that may occur and involve a suite of user groups present on Metro transit facilities. Security refers to the protection of people from intentional acts that could injure or harm them, and protection of property from deliberate acts of vandalism.

### 4.1 Safety

Metro is the regional agency that serves as transportation planner and coordinator, designer, builder, and regional operator of transit services in LA County. Metro is regulated by the CPUC. In operating LRT, subways, and bus transit (including dedicated bus transit-ways) throughout LA County, Metro has established departments, such as the Transit Education Programs Department, to address specific issues. This department implements programs to educate the public on proper safety practices with respect to LRT.






For the safety of passengers and pedestrians, Metro operates all transit-related vehicles according to the guidelines established by the CPUC. Regulations established by the CPUC for LRVs include requirements for rear view mirrors, audible warning devices, and grab handles for standing passengers. The CPUC also regulates LRV braking, lighting, and operating speeds (GO 143-B). As a result, Metro has a proven track record in safety with only two derailments for over 120 million vehicle revenue miles since 2008, according to the National Transit Database (2017).

Metro is continually working to improve vehicular and pedestrian safety along its current rail lines. Metro has established a variety of programs to inform rail users and nonusers alike about proper safety precautions around operating transit vehicles. For example, the Metro transit safety team offers courses aimed at improving passenger and bystander safety. In addition, photos and video from existing stations and rail crossings along the Metro A (Blue), L (Gold), and E (Expo) Lines are used to illustrate safety around rail alignments and rail crossings.

Additionally, the Rail Safety Orientation Tour Program offers guided tours for students, with safety and system information and limited rides on the Metro L (Gold), B (Red), and A (Blue) Lines. While most of the education and training is geared toward elementary and middle school students, the transit safety team also works with community organizations to educate local residents on the proper safety procedures and precautions around LRT corridors and LRVs.

The efforts described previously have contributed to the latest statistics for accidents between trains/motor vehicles and trains/pedestrians for Metro’s rail lines during Fiscal Year 2020, as summarized in Table 4.1.

**Table 4.1. Metro Rail Line Fiscal Year 2020 Train/Auto and Train/Pedestrian Accidents**

Metro Rail Line	FY20 Q1	FY20 Q2	FY20 Q3	FY20 Q4
 A (Blue) Line	2	7	0	0
 B (Red)/D (Purple) Line	0	0	0	0
 C (Green) Line	0	0	0	0
 L (Gold) Line	2	1	0	0
 E (Expo) Line	4	5	0	0

Source: Metro 2021

Notes: FY = fiscal year; Q = quarter

#### 4.1.1 Existing Crossings

Metro has established the Grade Crossing Policy for Light Rail Transit (Metro 2010c) that establishes a three-step analysis, as described in Section 3.3.1.1, to determine the required grade crossing (at-grade or grade-separated) along light rail alignments. Separating the tracks from street level reduces the potential for conflict between vehicles and trains; however, full grade separations are not always required or feasible. For reference, Table 4.2 lists the existing grade crossings along the LPA. Appendix A lists the safety and physical features of the existing street intersections potentially affected by the LPA. Appendix B provides the available accident data for existing grade crossings. Additional programs, such as the Metro Rail Safety Education Program, inform local residents, specifically children, on safety around existing grade crossings within rail corridors and the interaction with LRVs.

**Table 4.2. Summary of Existing Grade Crossings**

Grade Crossing	Jurisdiction	Existing Active/Inactive
Slauson Avenue	Los Angeles/ Florence Firestone	Existing – Active Freight
Randolph Street/Holmes Avenue	Florence-Firestone	Existing – Active Freight
Randolph Street/Wilmington Avenue	Florence-Firestone/ Huntington Park	Existing – Active Freight
Randolph Street/Alameda Street	Huntington Park	Existing – Active Freight
Randolph Street/Regent Street	Huntington Park	Existing – Active Freight
Randolph Street/Albany Street	Huntington Park	Existing – Active Freight
Randolph Street/Santa Fe Avenue	Huntington Park	Existing – Active Freight
Randolph Street/Malabar Street	Huntington Park	Existing – Active Freight
Randolph Street/Rugby Avenue	Huntington Park	Existing – Active Freight

Grade Crossing	Jurisdiction	Existing Active/Inactive
Pacific Boulevard/Randolph Street	Huntington Park	Existing – Active Freight
Randolph Street/Rita Avenue	Huntington Park	Existing – Active Freight
Randolph Street/Seville Avenue	Huntington Park	Existing – Active Freight
Randolph Street/Miles Avenue	Huntington Park	Existing – Active Freight
Randolph Street/Arbutus Avenue	Huntington Park	Existing – Active Freight
Randolph Street/State Street	Huntington Park	Existing – Active Freight
Randolph Street/San Pedro Subdivision	Huntington Park	Existing – Active Freight
Gage Avenue/Salt Lake Avenue	Huntington Park/Bell	Existing – Active Freight
Bell Avenue/Salt Lake Avenue	Bell	Existing – Active Freight
Florence Avenue/Salt Lake Avenue	Huntington Park/Bell	Existing – Active Freight
Otis Avenue/Salt Lake Avenue	Huntington Park/Cudahy	Existing – Active Freight
Santa Ana Street/Salt Lake Avenue	Huntington Park/ Cudahy/South Gate	Existing – Active Freight
Ardine Street/Salt Lake Avenue	South Gate/Cudahy	Existing – Active Freight
Atlantic Avenue	South Gate	Existing – Active Freight
Firestone Boulevard	South Gate	Existing – Active Freight
Rayo Avenue	South Gate	Existing – Active Freight
Southern Avenue/Salt Lake Avenue	South Gate	Existing – Active Freight
Frontage Road	South Gate	Existing – Active Freight
Miller Way	South Gate	Existing – Active Freight
Imperial Highway/Garfield Place	South Gate	Existing – Active Freight
Garfield Avenue	South Gate	Existing – Active Freight
Gardendale Street/Dakota Avenue	Downey/South Gate	Existing – Active Freight
Main Street/Dakota Avenue	Downey/South Gate	Existing – Active Freight
Century Boulevard	South Gate/Paramount	Existing – Active Freight
Paramount Boulevard/Rosecrans Avenue	Paramount	Existing – Active Freight
Downey Avenue	Paramount	Existing – Active Freight
Somerset Boulevard/Hayter Ave	Paramount	Existing – Inactive
Lakewood Boulevard	Paramount/Bellflower	Existing – Inactive
Clark Avenue	Bellflower	Existing – Inactive
Alondra Boulevard	Bellflower	Existing – Inactive
Bellflower Boulevard	Bellflower	Existing – Inactive
Flower Street	Bellflower	Existing – Inactive
Woodruff Avenue	Bellflower	Existing – Inactive

Grade Crossing	Jurisdiction	Existing Active/Inactive
Private (Extra Space Storage)	Cerritos	Existing – Inactive
Artesia Boulevard	Cerritos	Existing – Inactive
Studebaker Road	Cerritos	Existing – Inactive
183rd Street/Gridley Avenue	Artesia/Cerritos	Existing – Inactive
186th Street	Artesia	Existing – Inactive
187th Street	Artesia	Existing – Inactive
Pioneer Boulevard	Artesia/Cerritos	Existing – Inactive

Source: Metro 2021

#### 4.1.2 Existing Pedestrian and Bicycle Facilities

The Affected Area has a mix of pedestrian facilities, including crosswalks, paths, sidewalks, and mid-block crossings. The purpose of this section is to identify existing pedestrian generators within the Affected Area and to offer insight into existing conditions that may warrant discussion in Section 5 if affected by the LPA.

The northern terminus of the LPA at the Slauson/A Line Station will allow for a transfer to the Metro A (Blue) Line and is in an area with a high-density population. As of 2023, Metro is constructing the Rail to Rail Active Transportation Corridor from the Slauson/A Line Station to the newly opened Metro K Line Fairview Heights Station.

Salt Lake Park is a recreational destination adjacent to the LPA in Huntington Park; however, driving is the primary mode of access to the park in addition to pedestrians and bicyclists from the nearby neighborhoods. The Los Angeles River Bike Path, which runs in a general north-south direction along the Los Angeles River, is a widely used path by bicyclists and provides a multi-modal alternative to driving or single-occupancy vehicles within this segment. There is an existing Class II bike lane on Southern Avenue in South Gate that terminates at the Los Angeles River Bike Path. The LPA will traverse this bike lane at-grade. The Rio Hondo Bike Path, which runs in a general north-south direction along the Rio Hondo, is another pedestrian and bicyclist generator that influences circulation movement within this segment. The LPA will cross over the bike path and Rio Hondo on an existing bridge structure.

Paramount Park is adjacent to the LPA within the City of Paramount. This park is a significant recreational destination; however, travel to and from the park is primarily by driving, in addition to pedestrians and bicyclists from the nearby neighborhoods. Across from Paramount and also adjacent to the LPA is Paramount High School. The school generates substantial pedestrian traffic along Rosecrans Avenue and Downey Avenue, and may encourage pedestrians to cross the tracks at-grade to access west Rosecrans Avenue and south Downey Avenue. The Bellflower Bike Trail runs along the LPA for approximately 2.1 miles, from Lakewood Boulevard to Caruthers Park. The Paramount Bike Trail runs along the LPA for approximately 0.2 mile from Lakewood Boulevard to Somerset Boulevard. These two trails are also a pedestrian and bicyclist generator that influences pedestrian movement within this segment. Caruthers Park is adjacent to the LPA. The park is a significant recreational destination; however, travel to and from the park is also primarily by driving. The San Gabriel River Bike Path, which runs in a general north-south direction

along the San Gabriel River, is a pedestrian generator that influences pedestrian movement within this segment. The LPA will cross over the bike path and the Los Angeles River on an existing bridge structure. The Artesia Historic District Recreational Trails run along the LPA for approximately 0.5 mile, from 183rd Street to 187th Street. This trail is also a pedestrian and bicyclist generator that influences pedestrian movement within this segment.

### **4.1.3 Freight Railroad**

Several subdivisions and branches of railroad have active freight operations in the Affected Area. The LPA proposes to share ROW with UPRR along Wilmington Branch, La Habra Branch, San Pedro Subdivision, and PEROW. Refer to Figure 4-1 for a map of the LPA's shared ROW with freight. The Federal Railroad Administration (FRA) defines shared ROW as two or more rail services operating on separate parallel tracks having track centerline separation of less than 30 feet. Separation of 30 feet or less triggers the application of certain FRA safety regulations. Accident data at the existing freight grade crossings that are proposed to be shared with the LPA are provided in Appendix B. Descriptions of each of the proposed shared ROWs are in the following sections.

#### **4.1.3.1 Wilmington Branch**

Adjacent to the existing Metro A (Blue) Line there is a parallel UPRR-owned ROW along Long Beach Avenue called the Wilmington Branch. Use of this track for freight rail operations is infrequent (approximately once a day) as freight rail has shifted off the ROW and onto the Alameda Corridor. Refer to Figure 4-1 for a map of the Wilmington Branch.

#### **4.1.3.2 La Habra Branch**

The La Habra Branch is owned by UPRR and only used on a limited basis for railroad operations, as well as potentially for emergency/alternate access during a possible disruption in the Alameda Corridor. Refer to Figure 4-1 for the location of the La Habra Branch.

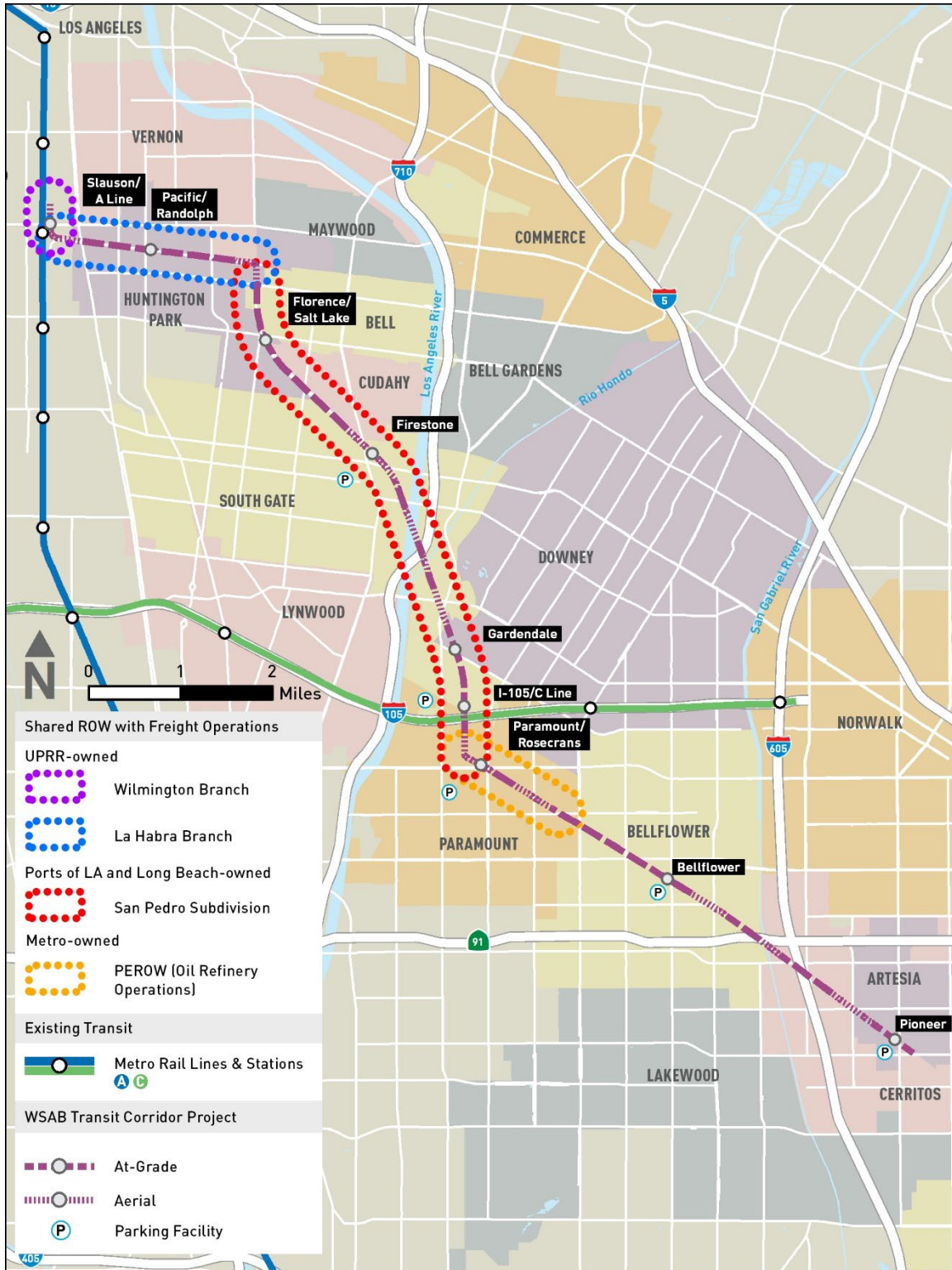
#### **4.1.3.3 San Pedro Subdivision**

The San Pedro Subdivision is owned by the Ports of Los Angeles and Long Beach and used on a limited basis by UPRR, and potentially for emergency/alternate access during a possible disruption in the Alameda Corridor. Refer to Figure 4-1 for a map of the location of the San Pedro Subdivision.

#### **4.1.3.4 Pacific Electric Right-of-Way**

The PEROW is owned by Metro and used by UPRR to access the World Energy facility. Refer to Figure 4-1 for a map of the location of the PEROW that is used by UPRR.

Figure 4-1. Map of the LPA's Shared ROW with Freight



Source: Metro 2023

## 4.2 Security

In addition to the safety programs described in Section 4.1, Metro implements internal security programs for its bus and rail system. Metro also contracts with several law enforcement agencies, described in further detail in Section 4.3.

As part of its existing operations, Metro monitors activities and implements measures to protect security at the stations and within the transit vehicles. Current Metro system passenger security features include closed-circuit television (CCTV) cameras, emergency call boxes, and standard lighting for station stops and parking areas. These features are installed in all trains and buses, as well as rail stations, and are designed to offer a secure and safe environment for passengers.

The CCTV video in trains is recorded to a digital video recorder, which is then available for upload by the contracted law enforcement agencies in the event of an incident. If no incident is reported, the video is erased after 30 days. The CCTV system that monitors rail stops is connected directly to the Metro Control Center, where it is viewed in real time by Metro personnel. If an incident is occurring, Metro transit security is notified. Emergency call boxes in trains connect passengers directly to the train operators, while those in stations connect directly to Metro Central Control.

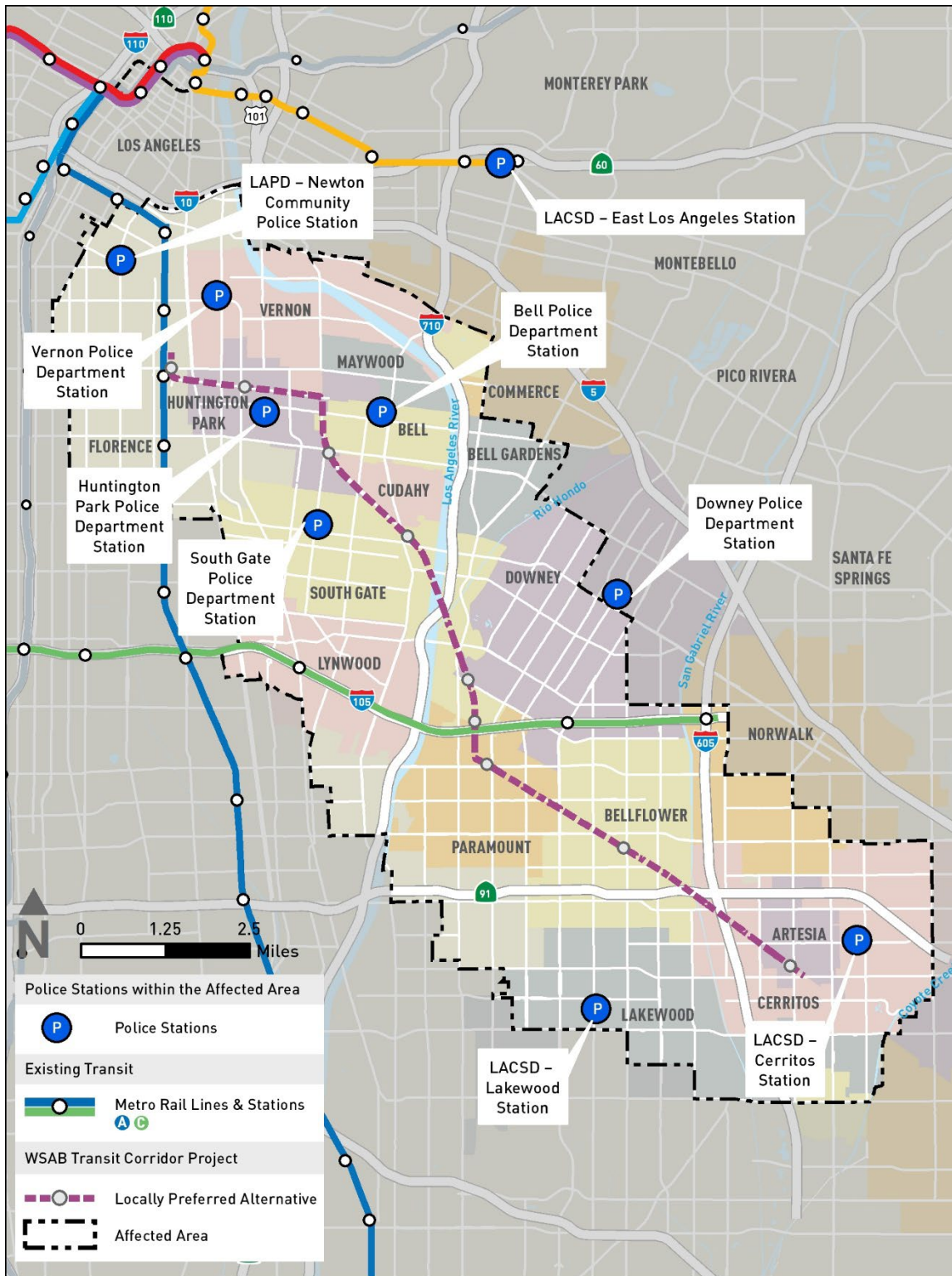
Additionally, Metro personnel receive Community Emergency Response Training in collaboration with the Los Angeles Fire Department (LAFD). This training includes earthquake awareness, disaster medical procedures, and rescue operations.

## 4.3 Police Service

The Los Angeles County Sheriff's Department (LACSD) Transit Services Bureau (TSB), the Los Angeles Police Department (LAPD), and the Long Beach Police Department (LBPD) provide contract police services to Metro. Deputies provide police services for the heavy rail, light rail, and bus transportation systems throughout Metro's 1,433-square-mile area. The TSB, LAPD, and LBPD provide security patrols throughout for the Metro LRT system. TSB officers are also deployed for fare compliance and patrolled security for fixed assets. Police departments not contracted with Metro are also available for 9-1-1 responses. The following sections summarize police services along the LPA and at the stations. For the purposes of police services, the Affected Area is defined as the area within 2 miles of the LPA. Figure 4-2 shows the police stations in the Affected Area, and addresses are listed in Table 4.3. Metro system-wide crime statistics from the latest *Transit Policing Performance Report* (Metro 2018b) are as follows:

- 150 reported crimes against persons for the month of August 2018. This is a decrease of 7 percent system-wide compared to the same period last year.
- 95 reported crimes against property for the month of August 2018. This is a decrease of 20 percent system-wide compared to the same period last year.
- 37 reported crimes against society for the month of August 2018. This is an increase of 131 percent system-wide when compared to the same period last year.
- Emergency response times averaged 4.58 minutes for the month of August.

Figure 4-2. Police Stations along the LPA and Stations



Source: Metro 2023

**Table 4.3. Summary of the Police Department Stations in the Affected Area**

Station	Address	Approximate Distance from the LPA
LAPD – Newton Community Police Station	3400 S Central Ave Los Angeles, CA 90011	Approximately 1.7 miles northwest of the LPA in Los Angeles
Vernon Police Department Station	4305 S Santa Fe Ave Vernon, CA 90058	Approximately 1 mile north of the LPA in Vernon
Huntington Park Police Department Station	6542 Miles Ave Huntington Park, CA 90255	Approximately 0.4 mile south of the LPA in Huntington Park
Bell Police Department Station	6326 Pine Ave Bell, CA 90201	Approximately 1 mile east of the LPA in Bell
LACSD – East Los Angeles Station	5019 E 3rd St East Los Angeles, CA 90022	Approximately 5.6 miles north of the LPA in Cudahy
South Gate Police Department Station	8620 California Ave South Gate, CA 90280	Approximately 1 mile west of the LPA in South Gate
Downey Police Department Station	10911 Brookshire Ave Downey, CA 90241	Approximately 2.5 miles northeast of the LPA in Downey
LACSD – Lakewood Station	5130 N Clark Ave Lakewood, CA 90712	Approximately 3.8 miles south of the LPA in Paramount Approximately 2.5 miles south of the LPA in Bellflower Approximately 2.7 miles southwest of the LPA in Artesia
LACSD – Cerritos Station	18135 Bloomfield Ave Cerritos, CA 90703	Approximately 1.3 miles northeast of the LPA in Cerritos

Source: Metro 2023

Notes: LACSD = Los Angeles County Sheriff's Department; LAPD = Los Angeles Police Department; LPA = Locally Preferred Alternative

Crimes against persons include homicide, rape, robbery, aggravated assault, battery, and sex offenses. Crimes against property include burglary, larceny, bike theft, motor vehicle theft, arson, and vandalism. Crimes against society include weapons, narcotics, and trespassing.

#### 4.3.1 Los Angeles County Sheriff's Department

The LACSD is a law enforcement agency that serves LA County. It is one of the largest sheriff's departments in the world, with approximately 18,000 employees. LACSD provides general law enforcement services to 40 contract cities; 90 unincorporated communities; 216 facilities, hospitals, and clinics located throughout the county; 9 community colleges; Metro; and 47 superior courts.

Metro contracts with the LACSD to provide law enforcement across the entire Metro system. LACSD security personnel and deputies patrol the transit system routes and stations.

In addition to providing patrol and investigative services, the LACSD offers a broad range of support services, including Neighborhood Watch coordination, community education programs, drug prevention education for school children, and homeland security. A key crime-prevention program run by the LACSD is the Community/Law Enforcement

Partnership Program. As part of this program, LACSD helps communities mobilize and organize against gangs, drugs, and violence by working through schools, community-based organizations, local businesses, churches, residents, and local governments.

### 4.3.2 Los Angeles Police Department

The LAPD serves a population of approximately 4 million people with 9,950 sworn police officers. The closest LAPD station to the LPA is the Newton Community Police Station, approximately 1.7 miles northwest of the LPA.

### 4.3.3 Vernon Police Department

The Vernon Police Department provides a full range of policing services to a community comprised primarily of businesses and industry. The Vernon Police Station currently serves the area of the LPA within the City of Vernon jurisdictional boundaries.

### 4.3.4 Huntington Park Police Department

The Huntington Park Police Department is a full-service law enforcement agency serving a population of nearly 60,000 residents. The Department is composed of 117 full-time employees, which includes 72 sworn personnel and 45 civilian employees. The Department also has 25 part-time employees. The Huntington Park Police Department is made up of various divisions and works with the community in addressing crime and quality of life issues. The Huntington Park Police Department currently serves the area where the LPA will pass through the City of Huntington Park.

### 4.3.5 Bell Police Department

The Bell Police Department consists of 47 members and is organized into two divisions: support and operations. The Bell Police Department currently serves the area where the LPA will pass through the City of Bell.

### 4.3.6 City of Cudahy

Police protection services for the City of Cudahy are provided by the LACSD (refer to Section 4.3.1 for LACSD personnel and services information). The LACSD serves the area where the LPA will pass through the City of Cudahy from the East Los Angeles Station.

### 4.3.7 South Gate Police Department

The South Gate Police Department provides service for approximately 95,000 residents over 7.4 square miles. The South Gate Police Department is divided into two divisions: patrol operations and support services. The South Gate Police Department currently serves the area where the LPA will pass through the City of South Gate.

### 4.3.8 Downey Police Department

The Downey Police Department consists of 124 sworn officers serving over 110,000 residents in a 12.6-square-mile area. For patrol purposes, the city is divided into six beats, with each beat patrolled by an assigned officer. The Downey Police Department currently serves the area where the LPA will pass through the City of Downey.

#### 4.3.9 City of Paramount

Police protection services for the City of Paramount are provided by the LACSD (refer to Section 4.3.1 for LACSD personnel and services information). The LACSD serves Paramount and the area where the LPA will be located in the City of Paramount from the LACSD – Lakewood Station located in the City of Lakewood.

#### 4.3.10 City of Bellflower

Police protection services for the City of Bellflower are provided by the LACSD (refer to Section 4.3.1 for detailed LACSD personnel and services information). The LACSD serves the City of Bellflower and the area where the LPA will be located in the City of Bellflower from the LACSD – Lakewood Station in the City of Lakewood.

#### 4.3.11 City of Artesia

Police protection services for the City of Artesia are provided by the LACSD (refer to Section 4.3.1 for LACSD personnel and services information). The LACSD serves the City of Artesia and the area where the LPA will be located in the City of Artesia from the LACSD – Lakewood Station in the City of Lakewood.

#### 4.3.12 City of Cerritos

Police protection services for the City of Cerritos are provided by the LACSD (refer to Section 4.3.1 for LACSD personnel and services information). The LACSD – Cerritos Station currently serves the City of Cerritos and the area where the LPA will be located in the City of Cerritos.

#### 4.3.13 Homeland Security

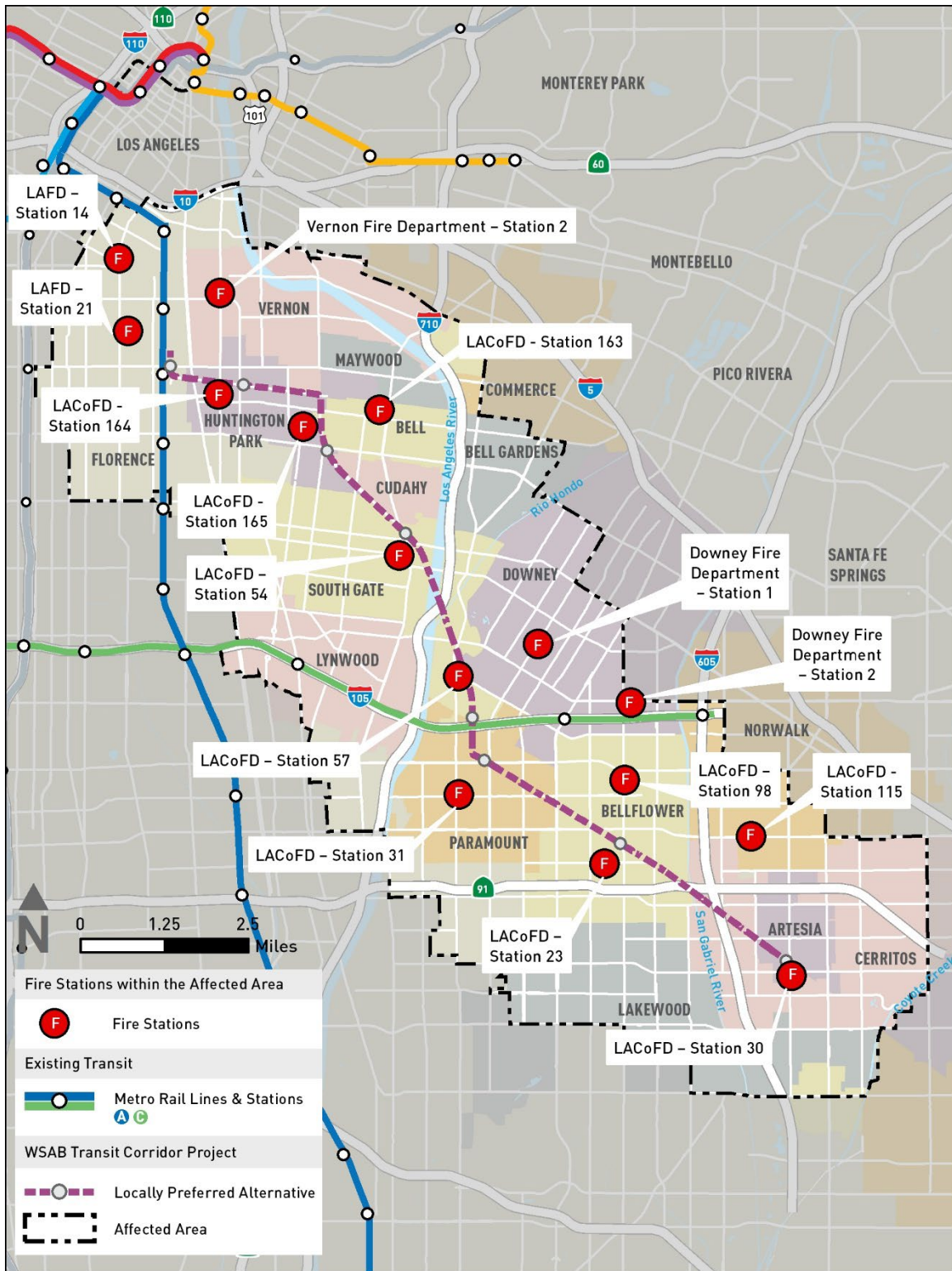
Metro and LACSD coordinate regularly, at several levels, with the Department of Homeland Security. Collectively, they are part of the Regional Transit Security Working Group, are members of the local Joint Terrorist Task Force, and coordinate on homeland security concerns with the area Federal Security Director for the Transportation Safety Administration (TSA). Metro is currently in compliance with all TSA directives as well as 49 CFR 1580, which requires designating a rail security coordinator and reporting significant security concerns to TSA.

The LACSD TSB represents Metro at FTA/TSA-sponsored Security Round Table meetings where transit security chiefs discuss best practices and lessons learned, and coordinate with TSA and FTA leaders from those agencies' headquarters. Metro also follows the FTA's *Transit Agency Security and Emergency Management Protective Measures* (Battelle Total Security 2006), which were developed in consultation with TSA.

### 4.4 Fire Services

For the purposes of fire services, the Affected Area is defined as the area within 2 miles of the LPA. Figure 4-3 shows the fire stations in the Affected Area. Cities within the Affected Area either have their own fire department or contract with LA County. The Metro Fire/Life Safety Committee focuses on ongoing emergency response services and meets regularly with Los Angeles County Fire Department (LACoFD) along with area ambulance service personnel to discuss past incidents and how to best coordinate future responses. There are also well-established communications systems between Metro operations and fire protection agencies providing response services.

Figure 4-3. Fire Stations along the LPA and Stations



Source: Metro 2023

#### 4.4.1 Los Angeles Fire Department

The LAFD provides essential emergency and nonemergency services to the City of Los Angeles with 114 fire stations throughout the city. The LAFD workforce consists of approximately 3,500 sworn and civilian members who are supported by a fleet of five fireboats, six helicopters, numerous ambulances, truck companies, engine companies, and specialized resources (LAFD 2015). LAFD is organized into four bureaus: Central, South, Valley, and West. The LPA will be located in the jurisdiction of the South Bureau. The nearest LAFD fire stations that currently serve the Affected Area are listed in Table 4.4. The closest LAFD station to the LPA is LAFD Station 21, approximately 0.8 mile northwest of the LPA.

**Table 4.4. Summary of Fire Department Stations in the Affected Area**

Station	Address	Approximate Distance from the LPA
LAFD – Station 21	1192 E 51st Street Los Angeles, CA 90011	Approximately 0.8 mile northwest of the LPA in Los Angeles
Vernon Fire Department – Station 2	4301 S Santa Fe Avenue Vernon, CA 90058	Approximately 1.3 miles north of the LPA in Vernon
LACoFD Station 164 (Battalion 13)	6301 Santa Fe Avenue Huntington Park, CA 90255	Approximately 0.2 mile south of the LPA in Huntington Park
LACoFD Station 165	3255 Saturn Avenue Huntington Park, CA 90255	Approximately 0.25 mile west of the LPA in Huntington Park
LACoFD Station 163	6320 Pine Avenue Bell, CA 90201	Approximately 1.2 miles east of the LPA in Bell
LACoFD – Station 54	4867 Southern Place South Gate, CA 90280	Approximately 0.6 mile south of the LPA in Cudahy Approximately 0.5 mile west of the LPA in South Gate
LACoFD – Station 57	5720 Gardendale Street South Gate, CA 90280	Approximately 0.4 mile south of the LPA in South Gate
Downey Fire Department – Station 1	12222 Paramount Boulevard Downey, CA 90242	Approximately 1.6 miles northeast of the LPA in Downey
Downey Fire Department – Station 2	9556 Imperial Highway Downey, CA 90242	Approximately 2.9 miles northeast of the LPA in Downey
LACoFD – Station 31	7521 Somerset Boulevard Paramount, CA 90723	Approximately 1 mile southwest of the LPA in Paramount
LACoFD – Station 23	9548 E Flower Street Bellflower, CA 90706	Approximately 0.5 mile southwest of the LPA in Bellflower
LACoFD – Station 98	9814 Maplewood Street Bellflower, CA 90706	Approximately 1 mile southwest of the LPA in Bellflower
LACoFD – Station 115	11317 Alondra Boulevard Norwalk, CA 90650	Approximately 1.6 miles northeast of the LPA in Norwalk
LACoFD – Station 30 (Battalion 9)	19030 Pioneer Boulevard Cerritos, CA 90703	Approximately 0.2 mile south of the LPA in Artesia Approximately 0.25 mile west of the LPA in Cerritos

Source: Metro 2023

Notes: LACoFD = Los Angeles County Fire Department; LAFD = Los Angeles Fire Department; LPA = Locally Preferred Alternative

#### 4.4.2 Vernon Fire Department

The Vernon Fire Department has four fire stations, strategically located throughout the City of Vernon. Each station is staffed with full-time fire personnel working three shifts rotating every 48 hours. Specialized equipment is pre-positioned in each station to meet the needs of the industrial community.

#### 4.4.3 City of Huntington Park

Fire protection services are contracted to the City of Huntington Park by the LACoFD (refer to Section 4.4.12 for LACoFD personnel and service information). The LACoFD has two fire stations in Huntington Park that currently serve the area where the LPA will be located in the City of Huntington Park.

#### 4.4.4 City of Bell

Fire protection services are contracted to the City of Bell by the LACoFD (refer to Section 4.4.12 for LACoFD personnel and service information). The LACoFD has one fire station in the City of Bell that currently serves the area where the LPA will be located in the City of Bell.

#### 4.4.5 City of Cudahy

Fire protection services are contracted to the City of Cudahy by the LACoFD (refer to Section 4.4.12 for LACoFD personnel and service information). The nearest LACoFD fire station that serves Cudahy and currently serves the area where the LPA will pass through the City of Cudahy is in the City of South Gate.

#### 4.4.6 City of South Gate

Fire protection services are contracted to the City of South Gate by the LACoFD (refer to Section 4.4.12 for LACoFD personnel and service information). The LACoFD has two fire stations in South Gate that currently serve the area where the LPA will be located in the City of South Gate.

#### 4.4.7 Downey Fire Department

The Downey Fire Department consists of approximately 100 employees providing a variety of comprehensive fire and life-safety services. The Downey Fire Department operates four fire stations. These fire stations house four engine companies, one truck company, two paramedic squads, two basic life support ambulances, one urban search and rescue unit, and one command vehicle. Two fire stations currently serve the area where the LPA will be located in the City of Downey.

#### 4.4.8 City of Paramount

Fire protection services for the City of Paramount are contracted by the LACoFD (refer to Section 4.4.12 for LACoFD personnel and service information). The LACoFD has one fire station in Paramount that currently serves the area where the LPA will be located.

#### 4.4.9 City of Bellflower

Fire protection services are contracted to the City of Bellflower by the LACoFD (refer to Section 4.4.12 for LACoFD personnel and service information). The LACoFD has two fire stations in Bellflower that currently serve the area where the LPA will be located.

#### 4.4.10 City of Artesia

Fire protection services for the City of Artesia are contracted by the LACoFD (refer to Section 4.4.12 for LACoFD personnel and service information). The nearest LACoFD fire station that serves Artesia and currently serves the area where the LPA will pass through the City of Artesia is in the City of Cerritos.

#### 4.4.11 City of Cerritos

Fire protection services are contracted to the City of Cerritos by the LACoFD (refer to Section 4.4.12 for LACoFD personnel and service information). The LACoFD has a fire station in Cerritos that currently serves the area where the LPA will be located in the City of Cerritos.

#### 4.4.12 Los Angeles County Fire Department

The LACoFD provides fire and safety services to the unincorporated areas of LA County, to contracted cities, and to cities that are under an agreement for the cooperative response and management of fires and other emergency incidents. The LACoFD currently has 4,800 personnel, ranging from firefighters and paramedics to lifeguards and pilots. The LACoFD operates 165 fire stations and several fire prevention offices. The fire prevention offices are located in the following Affected Area jurisdictions: Lynwood, Cerritos, and Commerce. These offices conduct new construction field inspections, annual business inspections, and minor plan checks for buildings, processes, and fire extinguishing systems, and contain certain specialized units such as the petroleum/chemical unit.

### 4.5 Emergency Medical Services

For the purposes of emergency medical services, the Affected Area is defined as the area within 2 miles of the LPA. A number of hospitals currently serve the Affected Area where the LPA will be located. These hospitals are available to assist in the event emergency medical response services are needed. The addresses and distances of these hospitals from the LPA are listed in Table 4.5, and the locations of the hospitals are shown on Figure 4-4.

Table 4.5. Summary of Hospitals in the Affected Area

Hospital	Address	Approximate Distance from the LPA
Los Angeles Community Hospital	4081 E Olympic Boulevard Los Angeles, CA 90023	Approximately 2.5 miles north of the LPA
Orthopedic Institute for Children	403 W Adams Boulevard Los Angeles, CA 90007	Approximately 3 miles northwest of the LPA
Keck Medical Center USC	432 W Exposition Boulevard Los Angeles, CA 90089	Approximately 3.5 miles northwest of the LPA
Community Hospital of Huntington Park	2623 E Slauson Avenue Huntington Park, CA 90255	Approximately 0.3 mile north of the LPA
St. Francis Medical Center	3630 E Imperial Highway Lynwood, CA 90262	Approximately 1.9 miles west of the LPA
PIH Health Hospital - Downey	11500 Brookshire Avenue Downey, CA 90241	Approximately 3 miles east of the LPA
Rancho Los Amigos National Rehabilitation Center	7601 Imperial Highway Downey, CA 90242	Approximately 0.9 mile east of the LPA
Kaiser Permanente Downey	9333 Imperial Highway Downey, CA 90242	Approximately 0.9 mile north of the LPA
Mercy Medical Center	16444 Paramount Boulevard Paramount, CA 90723	Approximately 1.8 miles west of the LPA
Promise Hospital	16453 Colorado Avenue Paramount, CA 90723	Approximately 1.8 miles west of the LPA
Bellflower Medical Center	9542 Artesia Boulevard Bellflower, CA 90706	Approximately 0.8 mile west of the LPA
College Hospital – Cerritos	10802 College Place Cerritos, CA 90703	Approximately 1.1 miles north of the LPA
Lakewood Regional Medical Center	3700 E South Street Lakewood, CA 90712	Approximately 3.9 miles west of the LPA
La Palma Intercommunity Hospital	7901 Walker Street La Palma, CA 90623	Approximately 3.1 miles southeast of the LPA

Source: Metro 2023

Note: LPA = Locally Preferred Alternative

Figure 4-4. Hospitals along the LPA and Stations



Source: Metro 2023



## 5 ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES

This section describes the environmental impacts/consequences of the No Build Alternative and the LPA as they relate to safety and security within the Affected Area. NEPA requires that all adverse effects of a proposed project be identified and analyzed. This section identifies potential adverse safety and/or security impacts and analyzes the consequences. The LPA would have an adverse effect under NEPA if it unduly exposed the public to increased danger from accidents or exposed the public to increased threat of crime resulting from the implementation of the LPA.

The impacts analysis includes the LPA, MSF, and design option as described in Section 2 and is based on the existing conditions described in Section 4. The following safety and security topics are used to present project features and adverse effects (if any):

- Transit system safety
- Freight safety
- Pedestrian and bicycle safety
- Motorist safety
- Emergency response services
- Seismic safety
- Security and prevention of crime and terrorism

Section 7 describes the potential construction impacts related to safety and security.

### 5.1 No Build Alternative

The No Build Alternative includes existing transportation networks and transportation improvements that have been committed to and identified in constrained plans of the Metro 2009 LRTP and the SCAG 2016 RTP/SCS. The service features include transit, freeway, and arterial operations within and around the Affected Area. As such, the No Build Alternative includes existing, under-construction, and planned rail, bus, and highway projects. Table 2.1 lists the planned projects anticipated by 2042. Planned projects will be subject to separate environmental analysis to evaluate impacts to safety and security. Implementation of these projects, including operations and maintenance, will be subject to the regulatory standards, conditions, and permitting requirements discussed in Section 2. Compliance with these standards will minimize impacts to safety and security. Impacts are expected to be minor. Under NEPA, the No Build Alternative would not result in adverse effects to safety and security and mitigation would not be required.

### 5.2 Locally Preferred Alternative

#### 5.2.1 Transit System Safety

As introduced in Section 1.5.1, transit system safety focuses on identifying, eliminating, and controlling safety hazards related to the LPA's systems and equipment, including signaling, traction power, OCS, stations, alignment, track, and communication. The potential for safety hazards such as collisions, service interruption, property damage, injuries, or fatalities may

occur as a result of the malfunction or misuse of these systems and equipment. The following describes how the LPA will address transit system safety.

MRDC or equivalent and design standards address system safety and security requirements that are applicable to the design of the facilities and equipment of the LPA, such as crossing gates and warning lights. The LPA will be designed and constructed in accordance with the referenced regulations, standards, and policies defined in Section 2. All facilities and equipment will be designed to provide for the safety and security of passengers and employees.

Transit system safety requirements will be established in accordance with FTA requirements through the development of a Safety and Security Management Plan (reference FTA Circular 5800.1). In addition, safety requirements will be established in accordance with the CPUC Rail Safety Program Standard (CPUC GO 164-D). Implementation of the FTA-required Safety and Security Certification Plan for the LPA will be initiated during preliminary engineering and will continue through each subsequent phase of the LPA, including design, construction, testing, and initiation of revenue services. This certification plan includes the identification of certifiable elements; development of safety and security design criteria, a design criteria conformance checklist, a construction specification checklist, and safety and security test requirements; and validation of operational readiness. Implementation of the plan will ensure that any identified safety issues and security concerns are addressed prior to completion of the LPA. A Preliminary Hazard Analysis (PHA) will also be conducted to identify hazardous conditions, document applicable mitigation measures, and provide a checklist for guiding the design and determining whether more detailed safety analyses and testing are necessary. The CPUC will then approve the project safety certification verification report and certify that the LPA is safe and secure before revenue operations begin.

The LPA will be operated in accordance with Metro system safety plans, policies, and procedures or equivalent, such as:

- Metro System Safety Program Plan
- Metro System Security Plan
- Metro Standard and Emergency Operating Procedures
- Metro Rail Operating Rulebook

Under NEPA, the LPA will not result in adverse effects to safety and security related to transit system safety and mitigation will not be required.

### 5.2.2 Freight Safety

Several segments of the LPA will share ROW with active light rail and freight railroad tracks but operate on separate tracks for a total of approximately 9.8 miles. The tail tracks for the northern terminus of the LPA will be on an aerial structure within the UPRR-owned Wilmington Branch along Long Beach Avenue between 57th Street and Slauson Avenue for approximately 0.3 mile. The LPA's northern terminus station will be located at the Slauson/A Line Station in an aerial configuration providing a direct connection to the Metro A (Blue) Line. The LPA will use the UPRR-owned La Habra Branch for approximately 2.3 miles, with the western limit at the intersection of Long Beach Avenue/Slauson Avenue and the eastern limit at the San Pedro Subdivision crossing. The LPA will operate along the San Pedro Subdivision, which is currently owned by the Ports of Los Angeles and Long Beach. The portion of the San Pedro Subdivision that will be used by the LPA is approximately 6.1 miles,

with the northern limit located just north of the Gage Avenue/Salt Lake Avenue intersection and the southern limit northwest of the intersection of Paramount Boulevard/Rosecrans Avenue. In addition, UPRR has an easement with both ports to operate on this same San Pedro Subdivision on a limited basis. Figure 4-1 is a map of the LPA's shared ROW corridors with freight.

The portion of the PEROW that will be used by the LPA and shares ROW with freight operations is approximately 1.2 miles, with a northern limit at the San Pedro Subdivision intersection and the southern limit at Somerset Boulevard. There is an oil refinery, owned by World Energy, located adjacent to the alignment between Downey Avenue and Somerset Boulevard.

The LPA will operate separately from the freight tracks associated with the World Energy oil refinery in the City of Paramount. At the facility, after going over Downey Avenue in an aerial configuration, the LPA will be elevated on a retained fill wall with a fence on top, which separates the LRT tracks from the freight tracks associated with the refinery. Where the LRT tracks are at grade in proximity to the facility, a fence will separate the LRT tracks from the freight tracks. Tracks will not be shared, and minimum distances will be maintained from flammable equipment and materials. The OCS poles will be located approximately 27 feet from the nearest storage track and more than 80 feet from the ROW boundary of the World Energy facility.

With shared ROW there is the potential for a derailment or a collision between the operations that could cause potential service interruptions, equipment damage, or harm to passengers and employees. This situation currently exists on the Metro A (Blue) Line along the Wilmington Branch where it shares ROW with freight operations. To date, there has not been any collisions between the Metro A (Blue) Line and freight operations. A number of design elements will be included in accordance with freight and Metro standards and criteria, or equivalent, to minimize those potential impacts, including:

- Appropriate track spacing distance between freight and the LPA
- Protective fencing and barriers installed where appropriate
- Communication protocols established between the freight railroad operators and Metro to quickly respond to derailment emergencies
- Emergency responder training and drills to respond to derailment emergencies

With the incorporation of these elements, the potential for derailments and resulting impacts to equipment, passengers, and employees will be minimized. This is supported by the fact that Metro has had only two derailments over 120 million vehicle revenue miles since 2008, according to the National Transit Database (2017). Also, according to the FRA, there were only 14 freight derailments (unrelated to train/automobile derailments) over a total of 518 million train miles in the country in 2017 (FRA Office of Safety Analysis 2017), with none occurring in the Affected Area.

As part of the project development process and pursuant to FTA Circular 5800.1 – Safety and Security Management Guidance for Major Capital Projects, Metro will conduct a PHA and TVA, and create a Fire/Life Safety committee that will review the LPA and may identify additional countermeasures to increase safety and reduce the potential of collisions during final design. In addition, Metro's ongoing coordination with freight rail operators for the acquisition of the ROW adjacent to existing freight tracks continues and may result in the

incorporation of additional safety features as determined in the future. These details will be a forthcoming component of the advancing design and the TVA itself.

While these identified safety features and processes will minimize impacts, there will still be the potential for derailment and collision. Under NEPA, the LPA will result in adverse effects related to safety and security prior to the implementation of Mitigation Measure SAF-1 (Encroachment Detection) (see Section 8.2.1), which will detect potential derailments that may occur on Metro ROW. With implementation of this mitigation measure, impacts will be minimized and there will not be an adverse effect to the safety of passengers, employees, and the public from the shared ROW with freight operation. After implementation of Mitigation Measure SAF-1 (Encroachment Detection) (see Section 8.2.1), the LPA will not result in adverse effects related to safety and security.

### 5.2.3 Pedestrian and Bicycle Safety

The Affected Area includes several high population and employment centers, along with several communities that are transit-dependent. As a result, it is anticipated that a significant number of passengers that will use the LPA will likely walk or bike to and from stations. The pedestrian and bicycle safety evaluation draws from this understanding and is based on the methodology described in Section 1.6.

#### 5.2.3.1 Pedestrian and Bicycle Safety at Stations

The main pedestrian and bicyclist safety issue at the stations is potential contact of people with the active LRT system, including the LRT vehicles and guideway. A contributing factor is the large groups of people who gather on the station platforms and pass through the stations. The large numbers of people create a potential for accidents at each of the proposed stations in all configurations (aerial and at-grade). Two transfer stations (Slauson/A Line and I-105/C Line) will provide direct and safe passage for pedestrians transferring between Metro rail lines.

To address pedestrian and bicycle safety at stations, MRDC or equivalent design standards will be applied to the LPA. The design criteria apply to walkways, pedestrian refuge areas, emergency exits, and sidewalks for pedestrian queuing to facilitate pedestrian mobility outside and within the station. The criteria will also apply to the proposed aerial stations that will be accessed via stairways, escalators, and elevators from the ground level to the LRT's mezzanine and platform levels.

Metro has an outreach and educational program that promotes safety awareness called the Metro Rail Safety Education Program. CCTV monitoring will be provided for surveillance of platforms and access areas around these platforms. Special blue light indicators will be provided at stations with emergency telephone communications to the Rail Operations Center, which will be able to cut traction power in the event of an accident.

Other design features include station platform edges equipped with warning strips between train car barriers and signage to help prevent pedestrians from falling onto the track. Public address systems at the stations will announce when trains are approaching and instruct passengers to stand back as trains arrive.

In concert with the design features, the anticipated passenger loads, and pedestrian counts will be accounted for in the LPA's design to control and channel pedestrian movements as appropriate at or near stations. These anticipated loads and counts, along with future growth in the areas surrounding the LPA's stations, will also guide station design features to address the potential for increased passenger demand and increase in use of pedestrian and bicycle facilities. The context of design, location, and scale will also be considered to provide adequate infrastructure to support bicycle activities at station locations and near or adjacent to the guideway, and at-grade crossings. This will include spaces for bikes in elevators, designated bike entries onto trains, bike storage, and bike lanes that approach the station entrance. Figure 5-1 provides an example of Metro's design techniques for access and interactions around stations for pedestrians and bicyclists. The design techniques may include active pedestrian gates, emergency exit swing gates, gating/signal system coordination, curb cuts for ADA access, railroad concrete panels, wider walkways and crossways, LED lights, and improved signage. The specific design techniques for the LPA will be determined during final design.

**Figure 5-1. Metro A (Blue) Line Safety Features for Pedestrians and Bicyclists**



Source: Metro 2016

Safety hazards at station locations will be minimized for pedestrian and bicyclists with the design features described previously along with adherence to the referenced policies and procedures. Under NEPA, the LPA will not result in adverse effects related to safety and security to pedestrians or bicyclists at stations and mitigation will not be required.

### 5.2.3.2 Pedestrian and Bicycle Safety at Parking Facilities

The discussion of pedestrian and bicycle safety within and near parking facilities are similar to those at station locations because of the potential for a large congregation of pedestrians

during the AM and PM peak travel periods. Table 5.1 provides a summary of the station parking facilities and the potential impacts.

**Table 5.1. Safety Summary of Proposed Parking Facilities**

Station Parking Facility	Proposed Parking Spaces	Parking Facility Safety Description	Potential Effects	Design Features
Firestone Station	<ul style="list-style-type: none"> <li>600 parking spaces</li> </ul>	Parking facility will have direct connection to station.	<ul style="list-style-type: none"> <li>Potential for pedestrian and freight interface accessing the station on the southwest side of the station from Atlantic Avenue.</li> </ul>	<ul style="list-style-type: none"> <li>Pedestrian access from the parking lot will not cross tracks, including freight tracks, and will be at grade to reach the elevators, escalators, and stairs beneath the station platform.</li> </ul>
I-105/C Line Station	<ul style="list-style-type: none"> <li>340 to 360 parking spaces</li> </ul>	Path of travel for passengers transferring between C (Green) Line and the LPA will require pedestrian movement and crossing Century Boulevard. Total distance of travel will be approximately 0.25 mile.	<ul style="list-style-type: none"> <li>Potential for pedestrians and automobile interface accessing the station as pedestrians cross Century Boulevard</li> </ul>	<ul style="list-style-type: none"> <li>Park-and-ride design has been revised since the Draft EIS/EIR to avoid pedestrians crossing freight tracks.</li> <li>Controlled pedestrian crossing gates with warning lights and signs, crosswalks, and signage at the Century Boulevard at-grade crossing separating the two stations for the C (Green) Line and the LPA.</li> </ul>
Paramount/Rosecrans Station	<ul style="list-style-type: none"> <li>490 parking spaces</li> </ul>	Path of travel from the parking facility to the station will require movement of pedestrians under transmission towers or via sidewalk along Paramount Boulevard. Parking facility has direct connection to station.	<ul style="list-style-type: none"> <li>Potential for pedestrian and bicyclist interface due to a future bicycle path terminating near the southeast end of the station.</li> </ul>	<ul style="list-style-type: none"> <li>Dedicated pedestrian walkway from parking facility to plaza level.</li> </ul>

Station Parking Facility	Proposed Parking Spaces	Parking Facility Safety Description	Potential Effects	Design Features
Bellflower Station	<ul style="list-style-type: none"> <li>260 parking spaces</li> </ul>	The path of travel will require crossing tracks to access the station. The parking facility will have a direct connection to the station.	<ul style="list-style-type: none"> <li>No safety issues</li> </ul>	<ul style="list-style-type: none"> <li>Pedestrian crossing with swing gates and warning signage.</li> </ul>
Pioneer Station	<ul style="list-style-type: none"> <li>1,100 parking spaces</li> </ul>	Path of travel from the parking facility will require pedestrian movement along 187th Street or Pioneer Boulevard. Total distance of travel will be less than 0.1 mile.	<ul style="list-style-type: none"> <li>No safety issues</li> </ul>	<ul style="list-style-type: none"> <li>Pedestrian walkway from parking facility to sidewalk along 187th Street and Pioneer Boulevard. Includes pedestrian crossing gates and signage.</li> </ul>

Source: Metro 2023

Notes: EIS/EIR = environmental impact statement/environmental impact report; LPA = Locally Preferred Alternative

Direct connection between the station parking facility and the station is not possible in all locations because of a lack of available public right-of-way adjacent to the stations. Safe ingress and egress for pedestrians from the parking facilities to the stations will be included in the LPA through the provision of adequate walkway widths and crosswalk locations. Traffic control improvements and wayfinding tools (e.g., signage, pavement markings) will also be implemented to provide safe passage and reduce potential conflicts between vehicles and pedestrians/bicyclists at all stations with parking facilities or interfaces with bicycle paths. In addition, Metro will continue to coordinate with the City of Paramount regarding the proposed multi-use trail near the Paramount/Rosecrans Station to promote a safe interface between pedestrians crossing the trail and users of the multi-use trail. LRT users will be prevented from accessing stations from the parking facility illegally via the track ROW by installing barriers and proper signage.

The described design measures will minimize impacts on pedestrian and bicyclist safety at or near parking facilities. Under NEPA, the LPA will not result in adverse effects related to safety and security to pedestrians and bicyclists at parking facilities, and mitigation will not be required.

### 5.2.3.3 Pedestrian and Bicycle Safety Near the Guideway

The LPA could introduce a potential safety risk to pedestrians and bicyclists. In several areas, the guideway will be adjacent to existing or new sidewalks that potentially will be modified to accommodate the guideway. The proximity concerns addressed in the prior station location discussion are also applicable in the context of the guideway. The potential impacts will be related to both accidents and unauthorized trespassing into the LRT ROW.

Existing features (including the pedestrian overcrossing at Paramount High School over the existing Metro-owned PEROW tracks, Artesia Historic District Recreational Trails, Los Angeles River Bicycle Path, Rio Hondo Bike Path, and San Gabriel River Bike Path) will be preserved, and their controlled access/passage maintained by protecting them in place. The LPA will

reconstruct the pedestrian bridge to cross over the LPA tracks and freight tracks to connect Paramount High School and the athletics fields. The pedestrian bridge will be designed in accordance with ADA standards. The LPA will provide the necessary clearances for the rebuilt pedestrian overcrossing near Paramount High School and the existing bike paths.

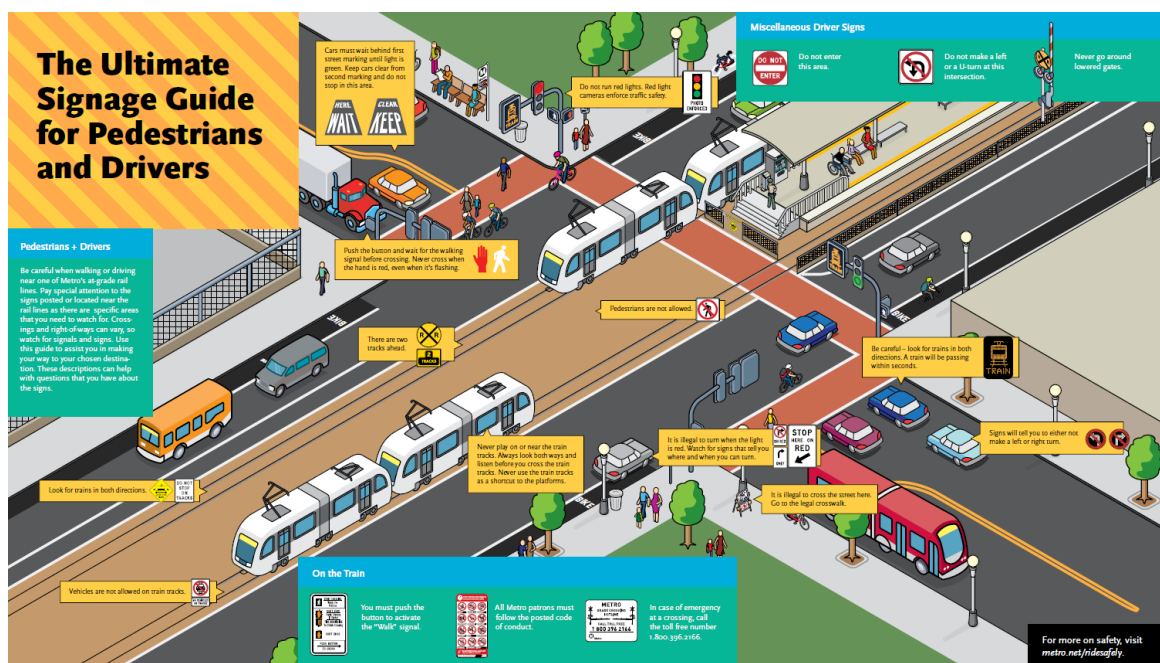
The LPA will coordinate with Metro's Rail to Rail/River Active Transportation Corridor Project to provide appropriate safety features along Randolph Street, and these features will be incorporated during advanced design stages. The LPA will also coordinate with the City of Bellflower's existing bike path and expansion project to provide appropriate horizontal clearance through the realignment of the paths.

With the exception of a permanent sidewalk closure along 188th Street between Corby Avenue and Pioneer Boulevard for a new parking structure, the LPA will not permanently remove or reduce existing sidewalk width to less than standard design geometrics. The permanent sidewalk closure of 188th Street will have no impact on safety because pathways via Corby Avenue and the Pioneer Station walkway between the station platform and parking structure will continue to be safe and accessible.

Potential interactions between pedestrians and bicyclists, and the LPA's new guideway, will introduce safety concerns due to proximity and illegal ROW entry. To reduce the risk of accidents and trespassing onto the guideway, the LPA will include access control along the ROW, including barriers and signage. These design features will be used to direct pedestrians to designated crossings and minimize inappropriate crossing behaviors. To address the potential pedestrian and bicycle hazards, the LPA will comply with all applicable regulations and MRDC or equivalent. In addition, the PHA and TVA will be prepared during preliminary engineering and final design stages of the LPA to verify the identified hazards and features for enhanced pedestrian and bicyclist safety, such as pavement markings and signs. The analysis will also verify illumination levels and sight distance improvements, as necessary. This analysis is required by FTA and Project Measure SAF PM-5. The implementation of these additional safety features will also consider pedestrian and vehicular traffic volume data to determine whether those volumes of vehicles and pedestrians traveling through an intersection warrant these design features during the preliminary engineering stage of the LPA.

In addition, Metro promotes safety and security through passenger and public awareness programs. The goals of these programs are to heighten awareness regarding safety, to reduce the potential for injuries, and to demonstrate Metro's ongoing commitment to safety. These awareness programs provide information to the public through transit user aids, bus stop information signs, fact sheets, and the Metro website. Figure 5-2 is an example of the type of safety information Metro provides through its public awareness campaign.

Figure 5-2. Example of Metro Rail Safety Education Fact Sheet



Source: Metro 2017b

Design features related to safety and access control, including fencing and signage, along with the educational program elements, will be used to direct pedestrians and bicyclists to designated crossings and minimize inappropriate crossing behaviors. Under NEPA, the LPA will not result in adverse effects related to safety and security to pedestrians and bicyclists near the guideway and mitigation will not be required.

### 5.2.3.4 Pedestrian and Bicycle Safety at Grade Crossings

Pedestrian safety at designated grade crossings is a key factor to be considered in the design of the LPA. This safety consideration is relevant only to the at-grade portions of the alignment because pedestrians are restricted from crossing aerial tracks. In most cases, there is active freight at the existing at-grade crossings, which also must be considered in the context of at-grade crossings and potential safety impacts. For the new at-grade crossings, the addition of LRVs will introduce a new operational feature and also a potential new safety hazard for pedestrians and bicyclists crossing the LRT tracks. Since the LRVs will be electrically powered, they will be quieter than diesel-powered rail engines and most automobile traffic and may not be easily heard.

The potential hazard and safety impacts will be present at intersections where pedestrians and bicyclists will need to cross over the light rail tracks (refer to Appendix A for a list of at-grade crossings proposed by the LPA) and in areas along the ROW with openings to the tracks. Unauthorized access and use of the ROW as a short-cut across the tracks may occur if the distance between designated at-grade crossings is not convenient and pedestrians and bicyclists are tempted to cross the tracks outside of designated and controlled locations. In addition, potential transit passengers who see their train approaching may attempt to cross streets and tracks illegally in order to avoid missing the train. Departing passengers may also be tempted to take shortcuts from station areas to access nearby destinations instead of crossing at designated crossings.

Those potential impacts will be addressed using Metro's latest Rail Operating Rulebook and CPUC regulations, which allow LRV operators to use audible warning devices to alert unwary pedestrians and bicyclists that an LRV is approaching. Pedestrian and bicycle traffic control and channelization techniques such as crossing gates and right-of-way barriers will be used to direct pedestrian and bicycle movements at grade crossings and encourage the use of designated crossings. Signage will be posted at these locations to provide safety information and awareness. In addition, in compliance with CPUC regulations (CPUC GO 88-B and 164-D), Metro will prepare and submit grade crossing design applications and conduct grade crossing diagnostics. Based on the CPUC review of grade crossing applications and diagnostics, additional safety and security design features will be incorporated, if necessary.

In addition, many of the at-grade locations will incorporate safety features that are identified by the Federal Highway Administration (FHWA) as Proven Safety Countermeasures, such as:

- Medians and pedestrian refuge islands (up to 56 percent reduction in pedestrian crashes) (FHWA 2008)
- Flashing lights (up to 47 percent reduction in pedestrian crashes) (National Academies of Science, Engineering, and Medicine 2017)

The standard practices and design features described previously, coupled with the CPUC grade crossing application process and Metro's operating guidelines, will minimize the potential hazards and safety impacts for pedestrians and bicyclists. Therefore, the potential for safety-related impacts will be minimized; there will be no adverse effects related to pedestrian and bicyclist safety at grade crossings; and mitigation measures will not be required. Refer to Table 4.2 for the list of grade crossings.

Several existing grade crossings south of Randolph Street do not have sidewalks or designated crossings for the existing tracks. The LPA's design will implement new sidewalks that will provide safety benefits so that pedestrians are not forced to walk within the roadway or tempted to cross the existing tracks. Figure 5-3 presents an example of the existing conditions at the intersection of Salt Lake Avenue, Santa Ana Street, and the San Pedro Subdivision railroad tracks where sidewalks and designated crossings do not exist. The LPA will instead consider incorporating safety features similar to those shown on Figure 5-1. Examples include active pedestrian gates, emergency exit swing gates, gating/signal system coordination, curb cuts for ADA, railroad concrete panels, wider walkways and crossways, LED lights, and improved signage.

The design features, including adding sidewalks where missing, coupled with the CPUC grade crossing application process and Metro's operating guidelines, will reduce the potential hazards for pedestrians and bicyclists at grade crossings. Therefore, there will be no adverse effects related to pedestrian and bicyclist safety at grade crossings, and mitigation measures will not be required. Figure 5-3 is an example of an existing grade crossing with a lack of sidewalks along the San Pedro Subdivision at Salt Lake Avenue and Santa Ana Street. The top image provides a view to the east and the bottom image provides a view to the west of Salt Lake Avenue.

Under NEPA, the LPA will not result in adverse effects related to safety and security to pedestrians and bicyclists at grade crossings and mitigation will not be required.

Figure 5-3. Grade Crossing at Salt Lake Avenue and Santa Ana Street



Source: Metro 2021

### 5.2.3.5 Summary of Pedestrian and Bicycle Safety

Table 5.2 qualitatively evaluates pedestrian and bicyclist safety and security conditions. Elements evaluated include traffic safety, access, sight visibility, lighting, and urban design; existing conditions of the Affected Area and proposed project features were considered. Each element was rated “Poor,” “Fair,” or “Good,” and an “N/A” rating was given to any element that does not apply to any specific segment evaluated. A “Poor” rating is a high-risk safety and security condition and should consider potential improvements. A “Fair” rating is an adequate safety and security condition, where potential improvements could be considered. A “Good” rating is a low-risk safety and security condition and no improvements are needed.

Table 5.2. Safety and Security Conditions Relative to Pedestrians and Bicyclists

Jurisdiction	Segment	Type	Configuration	Traffic Safety	Access/ Accessibility	Sight Visibility	Lighting	Urban Design
Unincorporated LA County	Slauson/ A Line	Station	Aerial	<b>FAIR</b> Future Rail to Rail project will enhance traffic safety	<b>FAIR</b> Future Rail to Rail project will enhance traffic safety	<b>GOOD</b> No issues	<b>FAIR</b> Area is adequately lit	<b>FAIR</b> Industrial setting; future Rail to Rail project will enhance urban design
Unincorporated LA County, Huntington Park	Slauson/ A Line to Pacific/ Randolph	Guideway	Aerial, At-Grade	<b>GOOD</b> Travel lane reduction and crosswalk improvements	N/A	<b>GOOD</b> No issues	<b>GOOD</b> Area is well-lit	<b>GOOD</b> Residential and commercial with no issues
Huntington Park	Pacific/ Randolph	Station	At-Grade	<b>GOOD</b> Travel lane reduction and crosswalk improvements	<b>GOOD</b> Sidewalk and curb ramp improvement	<b>GOOD</b> No issues	<b>GOOD</b> Area is well-lit	<b>GOOD</b> Residential and commercial with no issues
Huntington Park, Bell	Pacific/ Randolph to Florence/ Salt Lake	Guideway	At-Grade, Aerial	<b>GOOD</b> Travel lane reduction and crosswalk improvements	N/A	<b>GOOD</b> No issues	<b>GOOD</b> Area is well-lit	<b>GOOD</b> Residential and commercial with no issues
Huntington Park	Florence/ Salt Lake	Station	At-Grade	<b>GOOD</b> Signalized intersection with crosswalk improvements	<b>GOOD</b> Sidewalk and curb ramp improvement	<b>GOOD</b> No issues	<b>GOOD</b> Area is well-lit	<b>GOOD</b> Residential and commercial with no issues
Huntington Park, Cudahy, South Gate	Florence/ Salt Lake to Firestone	Guideway	At-Grade, Aerial	<b>GOOD</b> Crossing gates and existing signalized intersections with crosswalk	N/A	<b>GOOD</b> No issues	<b>GOOD</b> Area is well-lit	<b>GOOD</b> Residential and commercial with no issues

Jurisdiction	Segment	Type	Configuration	Traffic Safety	Access/ Accessibility	Sight Visibility	Lighting	Urban Design
South Gate	Firestone [P]	Station	Aerial	<b>FAIR</b> Crossing gates and existing signalized intersections with crosswalk with new driveway	<b>FAIR</b> Sidewalk and curb ramps at specific locations	<b>FAIR</b> Station is located behind several buildings, but sight visibility is adequate from aerial station	<b>FAIR</b> LPA provides lighting	<b>FAIR</b> Industrial with no issues
South Gate, Downey	Firestone to Gardendale	Guideway	Aerial, At-Grade	<b>GOOD</b> Crossing gates and existing signalized intersections with crosswalk	N/A	<b>GOOD</b> No issues	<b>GOOD</b> Area is well-lit	<b>GOOD</b> Residential and commercial with no issues
Downey	Gardendale	Station	At-Grade	<b>GOOD</b> Signalized intersection with crosswalk improvements	<b>GOOD</b> Sidewalk and curb ramp improvement	<b>GOOD</b> No issues	<b>GOOD</b> LPA provides lighting	<b>FAIR</b> Industrial with no issues
Downey, South Gate	Gardendale to I-105/ C Line	Guideway	At-Grade	<b>GOOD</b> Crossing gates and existing signalized intersections with crosswalk	N/A	<b>GOOD</b> No issues	<b>GOOD</b> Area is well-lit	<b>FAIR</b> Industrial with no issues
South Gate	I-105/C Line [P]	Station	At-Grade	<b>GOOD</b> Crossing gates and crosswalk	<b>GOOD</b> Curb ramps, pedestrian walkway from C Line station, direct access from parking facility	<b>GOOD</b> No issues	<b>GOOD</b> Area is well-lit	<b>GOOD</b> Residential and industrial with no issues

Jurisdiction	Segment	Type	Configuration	Traffic Safety	Access/ Accessibility	Sight Visibility	Lighting	Urban Design
South Gate, Paramount	I-105/ C Line to Paramount/ Rosecrans	Guideway	At-Grade, Aerial	N/A	N/A	N/A	N/A	<b>GOOD</b> Residential and industrial with no issues
Paramount	Paramount/ Rosecrans [P]	Station	Aerial	<b>GOOD</b> Existing signalized intersections with crosswalks	<b>GOOD</b> Direct access from parking facility	<b>GOOD</b> No issues	<b>GOOD</b> Area is well-lit	<b>GOOD</b> Residential and commercial with no issues
Paramount, Bellflower	Paramount/ Rosecrans to Bellflower	Guideway	Aerial, At-Grade	<b>GOOD</b> Crossing gates and existing signalized intersections with crosswalk	N/A	<b>GOOD</b> No issues	<b>GOOD</b> Area is well-lit	<b>GOOD</b> Residential and commercial with no issues
Bellflower	Bellflower [P]	Station	At-Grade	<b>GOOD</b> Crossing gates and existing signalized intersections with crosswalks	<b>GOOD</b> New curb ramps	<b>GOOD</b> No issues	<b>GOOD</b> Area is well-lit	<b>GOOD</b> Residential and commercial with no issues
Bellflower, Cerritos, Artesia	Bellflower to Pioneer	Guideway	At-Grade, Aerial	<b>GOOD</b> Crossing gates and existing signalized intersections with crosswalks	N/A	<b>GOOD</b> No issues	<b>GOOD</b> Area is well-lit	<b>GOOD</b> Residential and commercial with no issues
Artesia	Pioneer [P]	Station	At-Grade	<b>GOOD</b> Crossing gates and existing signalized intersections with crosswalks	<b>GOOD</b> Direct access from parking facility	<b>GOOD</b> No issues	<b>GOOD</b> Area is well-lit	<b>GOOD</b> Residential and commercial with no issues

Source: Metro 2023.

Note: LPA = Locally Preferred Alternative; N/A = not applicable; [P] = Stations with parking

The traffic safety element considers the quality of the pedestrian and bicyclist environment, based on both the existing and proposed infrastructure at grade crossings such as flashing light signals, gates, and traffic control signals for protection from both the LRT and vehicular traffic. Other factors considered include whether sidewalks and (signalized) crosswalks are present or proposed, and if Metro patrons will be able to safely travel to their destinations or make transfers from the station. The access/accessibility element looks at whether patrons will be able to safely and comfortably access and exit the stations and, if applicable, travel between the station and parking facility with ease. The sight visibility element examines the natural surveillance of the surrounding area and the physical environment for any objects, such as buildings and trees, that may obstruct views. The lighting element considers visibility conditions affected due to new structures introduced by the LPA and if adequate lighting will be provided in such cases, as well as visibility conditions in and around the proposed stations. The built environment element assesses level of comfort for patrons, pedestrians, bicyclists using the proposed facilities, or for those traveling through based on the existing setting and proposed project components.

The assessment identified station and guideway locations as “Good” and Fair” and will not result in adverse effects. The assessment considered analysis from the *West Santa Ana Branch Transit Corridor Project Final Transportation Impact Analysis Report* (Metro 2024) and the *West Santa Ana Branch Transit Corridor Project Urban Design Report* (Metro 2019).

Under NEPA, the LPA will not result in adverse effects related to safety and security to pedestrians and bicyclists and mitigation will not be required.

#### 5.2.4 Motorist Safety

The potential exists for conflicts between LRVs and motor vehicles at locations with at-grade crossings. A common cause for motor vehicle/light rail accidents at intersections is when motorists turn left in front of an LRV (with the LRV traveling in the median of the street and in the same direction as the motor vehicle). Other accidents between LRVs and motorists stem from motorists disobeying red light signals. As a result, the potential for automobile and LRV collision will represent a potential adverse effect.

To reduce the potential for collisions, system safety analyses will be prepared during the project development phase and as the design advances. The safety analyses will identify hazards specific to the alignment and identify mitigating measures to resolve those hazards. Specifically, the LPA will be designed to meet MRDC (or equivalent) and MUTCD standards (Parts 8 and 10). Safety features that will be considered in the system safety analyses include:

- Signs and markings
- Flashing light signals, gates, and traffic control signals
- Pathway grade crossings
- Illumination
- Safety barriers

The potential for impacts will be minimized because the LPA will follow MUTCD standards, observe all applicable traffic laws, implement and follow CPUC and local safety requirements, and incorporate the previously described design features to minimize the potential occurrences of accidents. Under NEPA, the LPA will not result in adverse effects related to safety and security to motorists and mitigation will not be required.

### 5.2.5 Emergency Response Services

Potential impacts on emergency response services will occur if the LPA were to interfere with local jurisdictions' emergency response plans or delay emergency service providers. Delays could occur due to at-grade crossing gate down-times. Other potential impacts could include modifications to emergency preparedness and planning, changes in the ability to provide fast and efficient response to emergencies or disasters, and the broader ability to minimize risk to the safety and health of passengers, employees, and emergency response personnel.

A comprehensive Emergency Preparedness Plan (EPP) that can be integrated with emergency service providers, local jurisdictional emergency response plans, and Metro's existing EPP procedures will be developed for operation of the LPA, as required by the FTA. The EPP will establish the roles and responsibilities that will be carried out not only by Metro personnel, but also by various emergency response agencies in the event of a fire, medical, or security emergency.

To address potential impacts, including demands on the resources of existing community emergency services providers, Metro's policing contract with LACSD, LAPD, and LBPD will include security coverage for the LPA. Fire safety will be addressed through design considerations and requirements. Compliance with and utilization of the Metro Fire/Life Safety Design Criteria, which outline specific requirements for fire protection at stations, along the alignment, and within LRVs, will also be required. Specific elements will include providing fire alarm control systems at each enclosed station facility and a public-address system at each station. The stations and the LRVs will also be equipped with CCTV systems monitored by Metro personnel. All Metro LRVs currently in service are equipped with fire extinguishers in case of a fire, and the vehicles are built to specifications that minimize fire hazards, such as using materials with minimum burning rates, smoke generation, and toxicity characteristics. Any new LRVs purchased for the LPA will have similar specifications and equipment.

Additionally, the MRDC, or equivalent, for sprinkler systems and standpipe connections for fire response, as well as adherence to the regulations described in Section 2, will reduce the demand for supplemental emergency services. Traffic signal improvements and adherence to MUTCD will reduce the potential for delay to emergency response services. In addition, numerous local fire stations are located within a 2-mile radius of the LPA and stations throughout the corridor. Refer to Figure 4-3 for a map of fire stations and Figure 4-4 for a map of hospitals along the LPA.

Metro, in coordination with the local jurisdictions, will develop traffic work plans to reduce delays in emergency service provider response times. Gate operations at grade crossings will be configured in accordance with CPUC standards as part of the LPA. Traffic mitigation measures, in accordance with the *West Santa Ana Branch Transit Corridor Project Final Transportation Impact Analysis Report* (Metro 2024), will include optimization of traffic signals and lane modifications near the LPA to minimize potential delays in response times. The development of the LPA will include coordination with police and fire services to develop operation plans and provide appropriate public safety and security for the Metro system. The LACSD, LAPD, and LBPD policing contract with Metro will be expanded to include the LPA. In addition to the Metro policing services, several local police stations are located within a 2-mile radius of the LPA, and stations throughout the corridor will provide continued and

ongoing safety and enforcement services. Refer to Figure 4-2 for a map of police stations along the LPA.

The previously described coordination, design features, and operational requirements will minimize the potential for overtaxing emergency service providers and delaying emergency response times. Under NEPA, the LPA will not result in adverse effects related to emergency responses services and mitigation will not be required.

### 5.2.6 Seismic Safety

Although no known active faults are capable of ground rupture within the Affected Area, the LPA's stations, alignment (particularly aerial structures), and parking facilities could be susceptible to ground shaking and seismically induced settlement. While these susceptibilities exist, all structures will be designed to meet applicable current seismic design standards, including those of Metro. These standards include provisions for a no-collapse design so that the aerial structures will not collapse during a maximum credible earthquake. A maximum credible earthquake is defined as the largest earthquake that can reasonably be expected to be generated, based on seismological and geological evidence.

Metro has established operating procedures in the case of a seismic event during operation, which includes the following steps:

- Metro Rail Operations Center immediately notifies train operators of an earthquake
- All trains are stopped at the next station (if not already at one)
- Operations staff inspect signaling and electronics to see if the system functions
- Trains are put on restricted speed to allow the train operator to inspect the track for any signs of damage

The LPA will meet the structural design standards and building codes to minimize the potential hazards of a seismic event. Under NEPA, the LPA will not result in adverse effects related to seismic safety and mitigation will not be required.

### 5.2.7 Security and Prevention of Crime and Terrorism

Security issues that could occur on or near the LPA include assault, robbery, or other crimes associated with and against patrons congregating and using the LRT system. The LPA could be vulnerable to public demonstrations, trespassing onto track ROW, and vehicle-borne or other improvised explosive devices. Public demonstrations and large-scale disturbances could introduce an adverse effect.

To help prevent crime and terrorism activity, Metro contracts law enforcement personnel from LACSD, LAPD, and LBPD on the transit system during hours of operation. The multi-agency law enforcement in the Metro system allows local jurisdictions to be positioned for active and timely response to emergency calls. It also includes delivery of dedicated service and proactive security patrols and provides flexibility to enhance security as the transit system expands to include the LPA. According to the Transit Law Enforcement Services Metro Board Report (Metro 2017c), Metro's policing contract provide consistent and reliable staffing of approximately 314 law enforcement officers per 24-hour period.

Metro's Transit Ambassador Program was launched in 2023. This program will provide a dedicated staff of diverse, specially trained individuals to offer in-person support to Metro riders. Ambassadors will have a strong visible presence on the Metro system and help

customers. The Transit Ambassador Program is an added layer to Metro's overall public safety ecosystem that includes security, law enforcement, crisis response teams, and homeless outreach that advance the goal of a safer public transit system.

In addition to these enforcement contracts and the Transit Ambassador Program, every station will have the necessary lighting system to provide visibility around the entire station both during the day and night, as specified by local city requirements and MRDC or equivalent. Lighting will illuminate the stairs, escalators, elevators, and station platforms without causing darkness or shadow areas or light trespass to adjacent properties. The stations and the LRVs will be equipped with CCTV systems to provide surveillance. Cameras will be mounted where a constant and uninterrupted view is provided to allow monitoring by Metro personnel. Additionally, emergency call boxes will be available in all stations for public use in case of emergency, and each LRV will have an operator that can be contacted by passengers via an intercom system. To reduce the risk of trespassing, the LPA will also have access controls along the ROW, including barriers and signage.

The stations will be designed to provide the natural surveillance, natural access control, and territoriality principles associated with CPTED. An example of natural surveillance is decreasing target opportunities in a space by placing physical features, activities, and people to maximize visibility. Natural access control deters entry along the boundary with the exception of designated entries through the judicious placement of entrances, exits, barriers, landscaping, and lighting. This concept denies access to crime targets and creates a perception of risk for adversaries. The territoriality principle notifies users and nonusers of the boundaries of a space/area or facility by creating a sense that users of the space are being watched and that the community is the space for purposeful activities.

The LPA will include parking facilities at the following stations: Firestone, I-105/C Line, Paramount/Rosecrans, Bellflower, and Pioneer. The parking facilities will be designed to address the potential for criminal activities such as motor vehicle theft and property theft. Current Metro system security features include CCTV, emergency call boxes, and lighted parking facilities.

In addition, the Metro Customer Code of Conduct will apply to the LPA, which states dumping is prohibited in, on, or in close proximity to Metro facilities and vehicles. Littering or dumping is a Metro violation and can result in a monetary fine, ejection from Metro property, and exclusion for 90 days from Metro property. Metro also has a graffiti program that requires removal of graffiti within 24 hours of when it is reported. Furthermore, the MRDC require a graffiti-resistant coating be applied to furnishings and surfaces to prevent graffiti. Metro also procures regular maintenance and clean-up services, such as clearing trash and illegal dumping from Metro ROW, facilities, parking lots, and parcel properties, which will include the LPA. Metro Rail Custodial Services provides each station with cleaning services twice per day. These services include trash removal, sweeping, mopping elevators, odor mitigation, and disinfecting escalator/staircase handrails, ticket machines, seating areas, and elevator buttons. Emergency cleaning response services are provided for materials and substances that can pose health and safety concern for patrons. Supervisors are assigned to each line for dedicated coverage, including station inspections.

In concert with the measures described previously and prior to the start of operations, Metro will establish a Fire/Life Safety Committee during the preliminary engineering phase. The committee will be responsible for assessing the LPA and recommending any design changes

to the LPA and recommended implementation measures, if necessary, to improve crime prevention for the LPA. Finally, a complete TVA in compliance with FTA regulations will be conducted for the LPA and include a response and evacuation plan. Key provisions of the TVA that the assessment will verify include the following:

- Various threat scenarios that may be applicable to the LPA's assets
- Consequences and possible effects resulting from credible criminal and terrorist threats
- Prioritized risk assessment based on potential consequences and probability

Compliance with FTA regulations, the CPTED, and security patrols will minimize potential security concerns associated with the previously described threats. The LPA will be designed to address these threats. Under NEPA, the LPA will not result in adverse effects related to security and prevention of crime and terrorism and mitigation will not be required.

### 5.3 Design Option: Close 186th Street

#### 5.3.1 Transit System Safety

The LPA with the design option is substantially similar to the LPA without the design option in regard to transit system safety conditions, potential impacts, and effect determinations because the LPA with the design option would maintain the same number of at-grade crossings as the LPA without the design option. The conclusions and effect determinations provided for the LPA without the design option would also be applicable to the LPA with the design option. Under NEPA, the design option would not result in adverse effects to safety and security related to transit system safety and mitigation would not be required.

#### 5.3.2 Freight Safety

Rail freight safety is not applicable to the location of the design option because rail freight does not operate through 186th or 187th Streets.

#### 5.3.3 Pedestrian and Bicyclist Safety

The LPA with the design option would permanently close the sidewalk along 186th Street across from the PEROW. However, the LPA with the design option is substantially similar to the LPA without the design option in regard to pedestrian and bicycle safety conditions, potential impacts, and effect determinations. The conclusions and effect determinations provided for the LPA without the design option would also be applicable to the LPA with the design option. Under NEPA, the design option would not result in adverse effects to safety and security related to pedestrians and bicyclists, and mitigation would not be required.

#### 5.3.4 Motorist Safety

The LPA with the design option is substantially similar to the LPA without the design option in regard to motorist safety conditions, potential impacts, and effect determinations. The conclusions and effect determinations provided for the LPA without the design option would also be applicable to the LPA with the design option. Under NEPA, the design option would not result in adverse effects to safety and security related to motorists and mitigation would not be required.

### 5.3.5 Emergency Response Services

The LPA with the design option is substantially similar to the LPA without the design option in regard to emergency response service conditions, potential impacts, and effect determinations. The conclusions and effect determinations provided for the LPA without the design option would also be applicable to the LPA with the design option. Under NEPA, the design option would not result in adverse effects to safety and security related to emergency response services and mitigation would not be required.

### 5.3.6 Seismic Safety

The LPA with the design option is substantially similar to the LPA without the design option in regard to seismic safety, potential impacts, and effect determinations. The conclusions and effect determinations provided for the LPA without the design option would also be applicable to the LPA with the design option. Under NEPA, the design option would not result in adverse effects to seismic safety and mitigation would not be required.

### 5.3.7 Security and Prevention of Crime and Terrorism

The LPA with the design option is substantially similar to the LPA without the design option in regard to security and crime conditions, potential impacts, and effect determinations. The conclusions and effect determinations provided for the LPA without the design option would also be applicable to the LPA with the design option. Under NEPA, the design option would not result in adverse effects to safety and security related to security and prevention of crime and terrorism, and mitigation would not be required.

## 5.4 Maintenance and Storage Facility

### 5.4.1 Transit System Safety

The MSF site will be closed to the public, and only employee-related work will occur at the site. The employee-related work at the MSF will be completed consistent with Occupational Safety and Health Administration (OSHA) requirements, and employees will follow the procedures in Metro's latest Rail Operating Rulebook for transit system safety. Under NEPA, the MSF will not result in adverse effects to safety and security related to transit system safety and mitigation will not be required.

### 5.4.2 Freight Safety

No freight operations will occur within the MSF site. Under NEPA, the MSF will not result in adverse effects to safety and security related to freight and mitigation will not be required.

### 5.4.3 Pedestrian and Bicyclist Safety

The MSF site will be closed to the public and only employee-related work will occur at the site. Access to the MSF site will be strictly controlled by an onsite guard and security team, as well as barriers around the perimeter of the maintenance yard to prohibit unauthorized access into the yard. A new signalized intersection will be added for the MSF entrance at Somerset Boulevard and Bayou Avenue, which will provide increased safety for pedestrians and bicyclists. Under NEPA, the MSF will not result in adverse effects to safety and security related to pedestrians and bicyclists, and mitigation will not be required.

#### 5.4.4 Motorist Safety

The MSF site will be closed to the public and only employee-related work will occur at the site. Access to the MSF site will be strictly controlled by an onsite guard and security team, as well as barriers around the perimeter of the maintenance yard to prohibit unauthorized access into the yard. A new signalized intersection will be added for the MSF entrance at Somerset Boulevard and Bayou Avenue, which will provide increased safety for motorists. Under NEPA, the MSF will not result in adverse effects to safety and security related to motorists and mitigation will not be required.

#### 5.4.5 Emergency Response Services

The MSF site will not interfere with emergency response services because there are no at-grade crossings. Under NEPA, the MSF will not result in adverse effects to safety and security related to emergency response services and mitigation will not be required.

#### 5.4.6 Seismic Safety

The MSF is substantially similar to the LPA, as described in Section 5.2.6, in regard to seismic safety. The conclusions and effect determinations provided for the LPA will also be applicable to the MSF. Under NEPA, the MSF will not result in adverse effects to safety and security for seismic safety and mitigation will not be required.

#### 5.4.7 Security and Prevention of Crime and Terrorism

The MSF site will be designed in accordance with the MRDC or equivalent. As part of the MRDC or equivalent to deter crime and terrorism, the MSF will include CCTV, emergency call boxes, and the necessary lighting to provide visibility around the entire facility day and night. Access to the MSF site will be strictly controlled by an onsite guard and security team, as well as barriers around the perimeter of the maintenance yard to prohibit unauthorized access into the yard.

In addition, the Metro Customer Code of Conduct will apply to the MSF site, which states dumping is prohibited in, on, or in close proximity to Metro facilities and vehicles. Littering or dumping is a Metro violation and can result in a monetary fine, ejection from Metro property, and exclusion for 90 days from Metro property. Metro also has a graffiti program that requires removal of graffiti within 24 hours of when it is reported. Furthermore, the MRDC require a graffiti-resistant coating be applied to furnishings and surfaces to prevent graffiti. Metro also procures regular maintenance and clean-up services, such as clearing trash and illegal dumping from Metro ROW, facilities, parking lots, and parcel properties, which will include the MSF.

Under NEPA, the MSF will not result in adverse effects to safety and security related to security and prevention of crime and terrorism and mitigation will not be required.

### 5.5 U.S. Army Corps of Engineers Facilities

The LPA alignment will cross three United States Army Corp of Engineers (USACE) facilities: the concrete-lined Los Angeles River and Rio Hondo Channels just west and east, respectively, of I-710, and the concrete-lined San Gabriel River Channel just west of I-605.

### 5.5.1 Transit System Safety

Operation of the LPA over the USACE facilities is substantially similar to the overall alignment in regard to transit system safety conditions, potential impacts, and effect determinations. The conclusions and effect determinations provided for the overall alignment, as described in Section 5.2.1, will also be applicable to the USACE river crossings. Under NEPA, the LPA will not result in adverse effects to safety and security related to transit system safety and mitigation will not be required.

### 5.5.2 Freight Safety

Along the San Pedro Subdivision, the LPA will cross over the Los Angeles River and Rio Hondo Channels in an aerial configuration via proposed LRT bridges that will be constructed next to the existing freight bridge and share ROW with freight operations. The same freight operating conditions, potential impacts, and effect determinations for the overall alignment, as described in Section 5.2.2, will also exist within USACE facilities. Under NEPA, the LPA will result in adverse effects related to safety and security prior to the implementation of Mitigation Measure SAF-1 (Encroachment Detection) (see Section 8.2.1), which will detect potential derailments that may occur on Metro ROW. After implementation of Mitigation Measure SAF-1 (Encroachment Detection), the LPA will not result in adverse effects to safety and security related to freight within USACE facilities.

### 5.5.3 Pedestrian and Bicyclist Safety

The LPA will traverse over the Los Angeles River, the Rio Hondo Channel, and the San Gabriel River in an aerial configuration via proposed LRT bridges. To reduce the risk of accidents and trespassing onto the guideway, the LPA will include high-quality access control at the USACE river crossings, including barriers, fencing, and signage. These design features will minimize illegal ROW entry. The conclusions and effect determinations provided for the overall alignment, as described in Section 5.2.3, will also be applicable to the USACE river crossings. Under NEPA, the LPA will not result in adverse effects to pedestrian and bicyclist safety within USACE facilities and mitigation will not be required.

### 5.5.4 Motorist Safety

Operation of the LPA over USACE facilities will not affect motorist safety because there are no at-grade crossings. Under NEPA, the LPA will not result in adverse effects to safety and security related to motorists within USACE facilities and mitigation will not be required.

### 5.5.5 Emergency Response Services

Operation of the LPA over USACE facilities will not interfere with emergency response services because there are no at-grade crossings. Under NEPA, the LPA will not result in adverse effects to safety and security related to emergency response services within USACE facilities and mitigation will not be required.

### 5.5.6 Seismic Safety

Operation of the LPA over USACE facilities is substantially similar to the overall alignment in regard to seismic safety. The conclusions and effect determinations provided for the overall alignment, as described in Section 5.2.6, will also be applicable to the USACE river crossings. Under NEPA, the LPA will not result in adverse effects to safety and security related to seismic safety and mitigation will not be required.

### 5.5.7 Security and Prevention of Crime and Terrorism

The LPA will traverse over the Los Angeles River, the Rio Hondo Channel, and the San Gabriel River in an aerial configuration via proposed LRT bridges. The bridges and abutments will be designed to incorporate CPTED principles, and the design will restrict public access, preventing individuals from occupying Metro's ROW over the USACE facilities. The conclusions and effect determinations provided for the overall alignment, as described in Section 5.2.7, will also be applicable to the USACE river crossings. Under NEPA, the LPA will not result in adverse effects to security and prevention of crime and terrorism within USACE facilities and mitigation will not be required.

## 5.6 California Department of Transportation Facilities

### 5.6.1 Transit System Safety

Operation of the LPA within Caltrans ROW is substantially similar to the overall alignment in regard to transit system safety conditions, potential impacts, and effect determinations. The conclusions and effect determinations provided for the overall alignment, as described in Section 5.2.1, will also be applicable to the Caltrans facilities. Under NEPA, the LPA will not result in adverse effects to safety and security related to transit system safety and mitigation will not be required.

### 5.6.2 Freight Safety

Along the San Pedro Subdivision, the LPA will traverse beneath the I-710 freeway via a new box tunnel structure and in an aerial configuration over the I-105 freeway within the existing San Pedro Subdivision bridge footprint ROW. The same freight operating conditions, potential impacts, and effect determinations for the overall alignment, as described in Section 5.2.2, will also exist within Caltrans ROW. Under NEPA, the LPA will result in adverse effects related to safety and security prior to implementation of Mitigation Measure SAF-1 (Encroachment Detection) (see Section 8.2.1), which will detect potential derailments that may occur on Metro ROW. After implementation of Mitigation Measure SAF-1 (Encroachment Detection), the LPA will not result in adverse effects to safety and security related to freight within Caltrans ROW.

### 5.6.3 Pedestrian and Bicyclist Safety

Potential interactions between pedestrians, bicyclists, and the LPA's guideway will introduce safety concerns due to proximity and illegal ROW entry. To reduce the risk of accidents and trespassing onto the guideway, the LPA will include high-quality access control along the ROW, including barriers, fencing, and signage. These design features will be used to direct pedestrians to designated pedestrian crossings and minimize inappropriate crossing behaviors and potential for entry onto Caltrans ROW. The conclusions and effect determinations provided for the overall alignment, as described in Section 5.2.3, will also be applicable to the Caltrans facilities. Under NEPA, the LPA will not result in adverse effects to pedestrian and bicyclist safety within Caltrans ROW and mitigation will not be required.

### 5.6.4 Motorist Safety

Operation of the LPA within Caltrans ROW will not affect motorist safety because there are no at-grade crossings. Under NEPA, the LPA will not result in adverse effects to safety and security related to motorists within Caltrans ROW and mitigation will not be required.

### 5.6.5 Emergency Response Services

Operation of the LPA within Caltrans ROW will not interfere with emergency response services because there are no at-grade crossings. Under NEPA, the LPA will not result in adverse effects to safety and security related to emergency response services within Caltrans ROW and mitigation will not be required.

### 5.6.6 Seismic Safety

Operation of the LPA within Caltrans ROW is substantially similar to the overall alignment in regard to seismic safety. The conclusions and effect determinations provided for the overall alignment, as described in Section 5.2.6, will also be applicable to the Caltrans facilities. Under NEPA, the LPA will not result in adverse effects to safety and security related to seismic safety and mitigation will not be required.

### 5.6.7 Security and Prevention of Crime and Terrorism

Operation of the LPA within Caltrans ROW will include interface at the new box tunnel structure under the I-710 freeway, at the proposed LRT bridge within the existing San Pedro Subdivision ROW bridge footprint over the I-105 freeway, at the existing underpass under the SR-91 freeway, and at the existing underpass beneath the I-605 freeway. Segments of the LPA where the alignment interfaces with Caltrans facilities could be vulnerable to trespassing onto track ROW. The potential exists for trespassers to vandalize the tunnel with spray paint or for persons experiencing homelessness to seek shelter. To reduce the risk of trespassing, the LPA will have access controls along the ROW, including barriers, fencing, and signage. The LRT guideway structures will be designed to incorporate CPTED principles. The design will restrict public access, preventing individuals from occupying Metro's facilities within Caltrans ROW. The conclusions and effect determinations provided for the overall alignment, as described in Section 5.2.7, will also be applicable to the LPA within Caltrans ROW. Under NEPA, the LPA will not result in adverse effects to security and prevention of crime and terrorism within Caltrans ROW and mitigation will not be required.

## 6 CEQA DETERMINATION

Appendix G of the CEQA Guidelines does not have specific thresholds for safety and security impacts; however, impacts regarding safety and security is addressed through the following CEQA thresholds.

### 6.1 Threshold SAF-1: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

#### 6.1.1 No Project Alternative

Under the No Project Alternative, no design features of the LPA would be introduced that would change the existing conditions within the Affected Area and emergency plans would remain unchanged. No impacts to emergency response services would occur.

##### 6.1.1.1 Mitigation Measures

No mitigation measures are required.

##### 6.1.1.2 Impacts Remaining After Mitigation

Less than significant.

#### 6.1.2 Locally Preferred Alternative

As described in Section 5.2, there will be changes in the Affected Area because the LPA will introduce operation of a new LRT route; however, the LPA will not impair or interfere with adopted emergency response plans or evacuation plans because evacuation plans will typically avoid crossing active rail corridors (U.S. Department of Health and Human Services 2003), and the at-grade portions of the LPA are located within active rail corridors. The aerial segments of the LPA will not impair or interfere with adopted emergency response plans or emergency evacuation plans.

The LPA will include development of a comprehensive EPP, in accordance with CPUC GO 164-E, that will be integrated with local jurisdictional emergency response plans. The EPP will establish and coordinate the roles and responsibilities that will be carried out by Metro personnel and by various emergency response agencies in the event of a fire, medical, or security emergency. In addition to the EPP, a Fire/Life Safety Report will be developed to explain the safety features in the proposed stations, the design specifics related to emergency access and egress, and the security and fire suppression systems.

In accordance with FTA's System Safety Program Plans (49 CFR 659) and CPUC GO 164-E requirements, Metro will be responsible for implementing or conducting the TVA, Safety and Security Certification Plan, System Safety Management Plan provisions, and hazard analyses. Metro's Fire/Life Safety Committee will be responsible for overseeing project compliance with NFPA 130 and Metro's Fire/Life Safety Design Criteria, as well as coordination with fire jurisdictions for design reviews, training, and familiarization. Operation of the LPA will not impair or interfere with emergency response and evacuation plans. Therefore, impacts for the LPA will be less than significant.

### 6.1.2.1 Mitigation Measures

No mitigation measures are required.

### 6.1.2.2 Impacts Remaining After Mitigation

Less than significant.

### 6.1.3 Design Option: Close 186th Street

As described in Section 5.3, the LPA with the design option would not interfere with emergency response or evacuation plans. Therefore, no impact would occur.

#### 6.1.3.1 Mitigation Measures

No mitigation measures are required.

#### 6.1.3.2 Impacts Remaining After Mitigation

No impact.

### 6.1.4 Maintenance and Storage Facility

As described in Section 5.4, the MSF will not interfere with emergency response plans or emergency evacuation plans as there are no at-grade crossings. Therefore, no impact will occur.

#### 6.1.4.1 Mitigation Measures

No mitigation measures are required.

#### 6.1.4.2 Impacts Remaining After Mitigation

No impact.

## 6.2 Threshold SAF-2: Result in substantial adverse physical impacts associated with the provisions of new or physically altered government facilities, need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain response times or other performance objectives for fire and police protection services?

### 6.2.1 No Project Alternative

Under the No Project Alternative, no design features of the LPA would be introduced that would change the existing conditions within the Affected Area and emergency plans would remain unchanged. No impacts to emergency response services would result.

## 6.2.2 Locally Preferred Alternative

As described in Section 5.2, the LPA will not result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities or the need for new or physically altered government facilities to maintain response times or other performance objectives for fire and police protection services. Operation of the LPA will not introduce the need for new or expanded facilities relative to emergency service providers, and there will not be any new buildings required for such services as a result of the LPA. Therefore, no impacts will occur under the LPA, and no mitigation measures will be required.

### 6.2.2.1 Mitigation Measures

No mitigation measures are required.

### 6.2.2.2 Impacts Remaining After Mitigation

No impacts.

## 6.2.3 Design Option: 186th Street

As described in Section 5.3, the LPA with the design option would not result in new or physically altered government facilities to maintain response times or other performance objectives for fire and police protection services. Therefore, no impact would occur.

### 6.2.3.1 Mitigation Measures

No mitigation measures are required.

### 6.2.3.2 Impacts Remaining After Mitigation

No impact.

## 6.2.4 Maintenance and Storage Facility

As described in Section 5.4, the MSF will not result in new or physically altered government facilities to maintain response times or other performance objectives for fire and police protection services. Therefore, no impact will occur.

### 6.2.4.1 Mitigation Measures

No mitigation measures are required.

### 6.2.4.2 Impacts Remaining After Mitigation

No impact.

## 6.3 Threshold SAF-3: Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

### 6.3.1 No Project Alternative

Under the No Project Alternative, no design features of the LPA would be incorporated and there would be no increase of hazards due to geometric design features or incompatible uses. However, one benefit related to pedestrian safety from the construction and operation of the LPA would not be realized. As described and shown in photos in Section 5.2.3.4, several at-

grade crossings along the San Pedro Subdivision do not have existing sidewalks or pedestrian infrastructure, which the LPA would provide to improve pedestrian safety conditions. Even without the benefits being realized, no impact would occur under the No Project Alternative.

### 6.3.1.1 Mitigation Measures

No mitigation measures are required.

### 6.3.1.2 Impacts Remaining After Mitigation

No impact.

### 6.3.2 Locally Preferred Alternative

As discussed in Section 5.2, for locations where the LPA will cross streets at-grade, the addition of LRVs and an increase in the frequency of trains will be the primary new safety hazard for pedestrians, bicyclists, and vehicular traffic in the Affected Area. This impact will be addressed through design features of the LRV, such as audible warning devices to alert pedestrians, bicyclists, and vehicular traffic that an LRV is approaching. In accordance with the MRDC or equivalent, pedestrian and bicycle traffic control and channelization techniques will also be used to control pedestrian and bicycle movements at intersections and encourage the use of designated crossings through pedestrian gates and crosswalks. In addition, Metro will prepare grade crossing applications for approval by the CPUC and in coordination with local public agencies, such as city and county fire departments. Following review of grade crossing applications, additional safety and security design features may be incorporated if necessary. Impacts will be further reduced through the incorporation and application of the MRDC or equivalent, CPUC rail crossing rules and regulations, and MUTCD requirements.

FTA-required hazard analyses will be prepared during preliminary engineering and final design stages of the LPA to identify specific hazards and may include features described in Section 5.2.3 for enhanced pedestrian and bicyclist safety. Therefore, impacts related to motorist, pedestrian, and bicycle safety will be less than significant for the LPA, and no mitigations measures will be required.

The LRT operations and stations of the LPA will also share ROW with freight operations, which could result in impacts. Safety requirements will be established in accordance with FTA and FRA regulations (49 CFR 659), CPUC GO 164-E and GO 143-B requirements, the MRDC or equivalent, and with additional input from the freight operators for safety elements. The LPA will also operate in accordance with Metro system safety plans, policies, and procedures, including the following: Metro System Safety Program Plan, Metro System Security Plan, Metro Standard Emergency Operating Procedures, and the Metro Rail Operating Rulebook or equivalent.

Specifically, these safety plans, policies, and procedures may include the following direction to implement appropriate and required safety features for LRT operations and freight operations within shared ROW:

- Appropriate track spacing distance between freight and the LPA
- Protective fencing and barriers installed where appropriate
- An intrusion detection system to detect an unauthorized entry into the ROW

- Communication protocols established between the freight railroad and Metro to quickly respond to derailment emergencies
- Emergency responder training and drills to respond to derailment emergencies

The safety characteristics described previously will reduce the potential for conflicts between freight and LRT service; however, impacts will not be completely avoidable and would be considered significant. Therefore, Mitigation Measure SAF-1 (Encroachment Detection) has been identified to ensure additional safety measures are incorporated to lower impacts from LRT operations and freight operations within shared ROW to less than significant levels.

The LPA will provide security features to support the prevention of crime and terrorism, as described in Section 5.2.7. The LPA will comply with Metro's MRDC or equivalent and security plans, incorporate CPTED features, and include security patrols to minimize potential security concerns associated with criminal and terrorist activities. Design features, as well as operational security features and requirements, will help prevent crime and terrorism; therefore, impacts will less than significant for the LPA.

#### **6.3.2.1 Mitigation Measures**

No mitigation measures related to motorist, pedestrian, and bicycle safety are required.

Mitigation Measure SAF-1 (Encroachment Detection), as described in Section 8.2.1, will be implemented to reduce safety and security impacts associated with operation of freight and LRT in shared ROW and reported incidents of criminal activity to reduce operation-related impacts to less than significant for the LPA.

No mitigations measures related to security and prevention of crime and terrorism are required.

#### **6.3.2.2 Impacts Remaining After Mitigation.**

Less than significant.

#### **6.3.3 Design Option: Close 186th Street**

As described in Section 5.3, the LPA with the design option would be designed in accordance with the MRDC or equivalent and would not introduce or increase hazards due to geometric design features or incompatible uses. Therefore, no impact would occur, and no mitigation measures are required.

##### **6.3.3.1 Mitigation Measures**

No mitigation measures are required.

##### **6.3.3.2 Impacts Remaining After Mitigation**

No impact.

#### **6.3.4 Maintenance and Storage Facility**

As described in Section 5.4, the MSF will be designed in accordance with the MRDC or equivalent and will not introduce or increase hazards due to geometric design features or incompatible uses. Therefore, no impact will occur, and no mitigation measures are required.

**6.3.4.1 Mitigation Measures**

No mitigation measures are required.

**6.3.4.2 Impacts Remaining After Mitigation**

No impact.

## 7 CONSTRUCTION IMPACTS

This section describes the construction activities, methodology, and impacts, and describes whether construction of the LPA could adversely affect safety and security.

### 7.1 Construction Activities

Construction activities will likely begin simultaneously at several locations along the LPA to accommodate areas of work requiring lengthy construction times and to bring the different segments of the LPA to completion on schedule. Many contractors specializing in various methods of construction will be working on the LPA during the construction period. Construction of the LPA will follow all applicable local, state, and federal laws for building and safety. Working hours will vary to meet special circumstances and restrictions, and efforts will be made to ensure working hours are appropriate for the community. Efforts will be made to keep residents and businesses informed. Standard construction methods will be used for traffic, noise, vibration, and dust control, consistent with all applicable laws and as described in the following sections.

The LPA will require extensive infrastructure improvements to construct structures for the aerial portions of the alignments and stations. Other infrastructure improvements will include OCS, TPSSs, and the MSF, all of which will require utility relocations, road and street work, and power and communications upgrades.

### 7.2 Methodology

To satisfy NEPA requirements, the analysis of construction effects considered the anticipated construction activities and phasing and identified where construction staging could occur. This assessment assumes all federal, state, regional, and local regulations and guidelines pertinent to the construction of the LPA will be followed, compares safety and security conditions between the No Build Alternative and the LPA, and discusses potential impacts.

Appendix G of the CEQA Guidelines does not have specific thresholds for safety and security impacts; however, impacts regarding safety and security are addressed through the following CEQA thresholds:

- Would the Project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?
- Would the Project result in substantial adverse physical impacts associated with the provisions of new or physically altered government facilities, need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain response times or other performance objectives for fire and police protection services?
- Would the Project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

## 7.3 Construction Impacts

This section describes the temporary construction safety and security impacts related to pedestrian, bicycle, and motorist safety, as well as security and prevention of crime and terrorism. Construction of the LPA will require the activities as summarized in Section 7.1. Safety and security impacts will be minimized through compliance with OSHA, California OSHA, MUTCD, and Metro safety and security programs, which are designed to reduce potential impacts during construction.

### 7.3.1 No Build Alternative

The No Build Alternative includes capital transportation improvements and transit and highway operational enhancements in the Affected Area that are reasonably foreseeable. These include Metro service features that currently exist or projects that have been explicitly committed for buildout by the year 2042. Construction of the projects included in the No Build Alternative would be subject to a separate environmental clearance. Under NEPA, the No Build Alternative would not result in adverse effects to safety and security and mitigation would not be required.

### 7.3.2 Locally Preferred Alternative

This section describes the potential adverse effects related to construction of the LPA to pedestrian and bicycle safety, emergency response services, security, and prevention of crime and terrorism. Construction of the LPA will include transit stations, station parking facilities, pedestrian walkways, TPSSs, a MSF, guideway, and pre-revenue operations testing.

The LPA's construction activities could temporarily affect the pedestrian and bicycle environment, motorist safety, emergency response services, and crime and terrorism activities. Existing conditions identified in Section 4 have been reviewed within the context of constructing the LPA.

The potential for adverse safety and security impacts will be minimized through compliance with OSHA, California OSHA, MUTCD, and Metro safety and security programs, which are designed to reduce potential impacts during construction. Key potential indirect impacts related to construction on pedestrian, bicycle and motorist safety, emergency response, and crime prevention are discussed further in the following subsections.

#### 7.3.2.1 Pedestrian, Bicyclist, and Motorist Safety

Temporary construction-related activities/conditions that may impact pedestrian, bicyclist, and motorist safety include the following:

- Construction activities along the LPA related to excavation and construction of aerial structures, columns, stations, track, street improvements, and TPSS facilities
- Shallow excavation and construction activity along the centerline of streets along the LPA's alignments to install columns, utility relocations, and track and power facilities
- Activities at the locations of staging and storage areas for construction equipment and materials
- Movement of construction equipment and materials between staging and storage areas and the areas of construction

- Transport of excavation debris along haul routes within communities
- Construction sites and staging areas where bystanders could suffer falls or other accidents

The construction effects of the LPA will also include lane closures; traffic detours; designated truck ingress, egress, and haul routes; and potential sidewalk and bike lane closures, which could affect pedestrian, bicyclist, and motorist safety, as well as Safe Routes to School.<sup>7</sup>

However, the LRT corridor will be constructed primarily along an existing rail ROW; therefore, impacts to pedestrian and bicyclist safety are expected to be minimal. Other impacts to pedestrian and bicyclist safety during construction of the LPA could occur along the Los Angeles River Bike Path, the Rio Hondo Bike Path, the San Gabriel River Bike Path, the Artesia Historic District Recreational Trails, or the Bellflower-Paramount Bike Trail.

The existing pedestrian overcrossing at Paramount High School over the PEROW will be temporarily removed during construction of the LPA, and a new, replacement pedestrian bridge will be constructed as part of the LPA to maintain safe pedestrian connectivity at this location. A temporary detour route will be designated to provide safe access between the Paramount High School campuses during construction of the LPA.

The LPA will have temporary effects on pedestrians and bicyclists when construction requires the temporary closure of sidewalks and bicycle facilities. There will also be temporary detours and temporary reductions in sidewalk width/length during construction. Alternate and safe detour routes will be provided during construction, will be coordinated with the local jurisdiction, and will meet ADA requirements. Advance notices, signage, barriers, and fencing will be used to direct pedestrian, bicyclist, and motorist travel, thereby reducing the potential for temporary safety impacts.

Per Metro standard construction specifications, Metro and the construction contractor will develop a Construction Management Plan during final design and will implement the program during construction. The Construction Management Plan will guide Metro and its contractor in communicating to the community. This will include communicating traffic control measures, schedules of activities, and durations of operations, and will further minimize potential safety impacts.

Pedestrian, bicyclist, and motorist safety is substantially similar for aerial and at-grade construction. Lane closures and detour routes will be provided for the public to safely navigate around construction activities, including access points and entrances to construction activity areas. Fencing and barriers will also be provided for all construction areas, including construction entrances, to prevent entry into an active construction site (e.g., staging, storage, mobilization, and active areas).

Implementation of the aforementioned safety measures during construction of the LPA will minimize the potential hazards to pedestrian, bicycle, and motorist safety. However, these same construction activities and the corresponding detour routes may interfere with or potentially block Safe Routes to Schools. Under NEPA, the LPA will result in adverse effects related to safety and security prior to the implementation of Mitigation Measures SAF-2

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<sup>7</sup> Safe Routes to School (<https://www.metro.net/projects/srts/>) is a program aimed at increasing the number of students who choose active (walking, bicycling, scooter, skateboarding) or shared (public transit, carpooling) modes of transportation to school by making it safer and more accessible to walk, bicycle, and/or take transit.

(School District Coordination) and SAF-3 (Construction Site Measures) (see Section 8.2.2). After implementation of Mitigation Measures SAF-2 (School District Coordination) and SAF-3 (Construction Site Measures), the LPA will not result in adverse effects related to safety and security.

### 7.3.2.2 Emergency Response Services

The potential impacts from temporary construction activities on the ability of emergency response services (medical, police, and fire) to provide timely responses will be influenced by the following:

- Street or lane closures
- Roadway detours
- Increased traffic near emergency facilities or along emergency response routes
- Construction staging plans

In response to these potential conditions, fire and emergency medical services personnel have the ability to use onboard live mapping software that alerts drivers of construction activities that may impede travel times to and from the scene of an emergency. Emergency responders are also able to see which roadways are experiencing delays due to construction, accidents, or other events, and will be able to take alternate routes accordingly. Metro and the construction contractor will coordinate with police, medical, and fire services to develop construction staging plans and detours to provide appropriate public safety and security for the Metro system, employees, and surrounding communities. Emergency response service is substantially similar for aerial and at-grade construction. Lane closures and detour routes will be identified for emergency responders to safely navigate around at-grade construction (including columns for aerial construction). Under NEPA, the LPA will not result in adverse effects to safety and security related to construction, and mitigation will not be required.

### 7.3.2.3 Security and Prevention of Crime and Terrorism

The potential for crime and terrorism during construction is related primarily to construction equipment and staging areas being targeted by potential theft if not adequately secured. To reduce potential impacts, construction sites will include security features such as CCTV, onsite guards, and security teams, as well as perimeter fencing to prohibit unauthorized individuals from accessing the construction area. However, crime from intentional acts against people and facilities cannot be completely eliminated. Under NEPA, the LPA will result in adverse effects related to safety and security prior to implementation of Mitigation Measure SAF-3 (Construction Site Measures) (refer to Section 8.2.2). After implementation of Mitigation Measure SAF-3 (Construction Site Measures) (refer to Section 8.2.2), the LPA will not result in adverse effects related to safety and security.

## 7.3.3 Design Option: Close 186th Street

### 7.3.3.1 Pedestrian, Bicyclist, and Motorist Safety

The LPA with the design option is substantially similar to the LPA without the design option, as described in Section 7.3.2.1, in regard to pedestrian, bicycle, and motorist safety, potential construction-related impacts, and effect determinations because the LPA with the design option would maintain the same number of at-grade crossings as the LPA without the design option. The conclusions and effect determinations provided for the LPA without the design option would also be applicable to the LPA with the design option. Under NEPA, the LPA

with the design option would result in adverse effects related to safety and security prior to the implementation of Mitigation Measures SAF-2 (School District Coordination) and SAF-3 (Construction Site Measures) (see Section 8.2.2). After implementation of Mitigation Measure SAF-2 (School District Coordination) and SAF-3 (Construction Site Measures), the design option would not result in adverse effects related to safety and security.

### **7.3.3.2 Emergency Response Services**

The LPA with the design option is substantially similar to the LPA without the design option, as described in Section 7.3.2.2, in regard to emergency response services, potential impacts, and effect determinations. The conclusions and effect determinations provided for the LPA without the design option would also be applicable to the LPA with the design option. Under NEPA, the design option would not result in adverse effects to safety and security related to construction, and mitigation would not be required.

### **7.3.3.3 Security and Prevention of Crime and Terrorism**

The LPA with the design option is substantially similar to the LPA without the design option, as described in Section 7.3.2.3, in regard to security and prevention of crime and terrorism, potential impacts, and effect determinations. The conclusions and effect determinations provided for the LPA without the design option would also be applicable to the LPA with the design option. Under NEPA, the design option would result in adverse effects related to safety and security prior to implementation of Mitigation Measure SAF-3 (Construction Site Measures) (refer to Section 8.2.2). After implementation of Mitigation Measure SAF-3 (Construction Site Measures), the design option would not result in adverse effects related to safety and security.

## **7.3.4 Maintenance and Storage Facility**

### **7.3.4.1 Pedestrian, Bicyclist, and Motorist Safety**

The MSF site will be closed to the public and only construction-related work will occur at the site. Access to the MSF will be strictly controlled by an onsite guard and security team, as well as barriers around the perimeter of the maintenance yard to prohibit unauthorized access into the yard. Under NEPA, the MSF will not result in adverse effects to safety and security related to construction, and mitigation will not be required.

### **7.3.4.2 Emergency Response Services**

The MSF will not interfere with emergency response services because construction activities will not interfere or block public right-of-way for emergency response vehicles. Under NEPA, the MSF will not result in adverse effects to safety and security related to construction, and mitigation will not be required.

### **7.3.4.3 Security and Prevention of Crime and Terrorism**

The MSF site will be closed to the public and only construction-related work will occur at the site. Access to the MSF site will be strictly controlled by an onsite guard and security team, as well as barriers around the perimeter of the maintenance yard to prohibit unauthorized access into the yard. Under NEPA, the MSF will not result in adverse effects to safety and security related to construction, and mitigation will not be required.

### **7.3.5 U.S. Army Corps of Engineers Facilities**

#### **7.3.5.1 Pedestrian, Bicyclist, and Motorist Safety**

Construction of the LPA at USACE facilities is substantially similar to the overall alignment, as described in Section 7.3.2.1, in regard to pedestrian, bicycle, and motorist safety, potential construction-related impacts, and effect determinations. The conclusions and effect determinations provided for the overall alignment will also be applicable to construction activities within USACE facilities. Under NEPA, the LPA will result in adverse effects related to safety and security prior to the implementation of Mitigation Measures SAF-2 (School District Coordination) and SAF-3 (Construction Site Measures) (see Section 8.2.2). After implementation of Mitigation Measure SAF-2 (School District Coordination) and SAF-3 (Construction Site Measures), construction of the LPA within USACE facilities will not result in adverse effects related to safety and security.

#### **7.3.5.2 Emergency Response Services**

Construction of the LPA at USACE facilities will not interfere with emergency response services because construction activities will not interfere or block public ROW for emergency response vehicles. Under NEPA, the LPA will not result in adverse effects to safety and security related to construction, and mitigation will not be required.

#### **7.3.5.3 Security and Prevention of Crime and Terrorism**

Construction of the LPA at USACE facilities is substantially similar to the LPA, as described in Section 7.3.2.3, in regard to security and prevention of crime and terrorism, potential impacts, and effect determinations. The LPA will implement new structures over the Los Angeles River, the Rio Hondo Channel, and the San Gabriel River in an aerial configuration via new LRT bridges. The bridges will be designed to incorporate CPTED principles. The design will restrict public access, preventing individuals from occupying Metro's facilities within USACE facilities. Under NEPA, the LPA will not result in adverse effects to security and prevention of crime and terrorism within USACE facilities and mitigation will not be required.

The conclusions and effect determinations provided for the overall alignment will also be applicable to construction activities at the USACE facilities. Under NEPA, the LPA will result in adverse effects related to safety and security prior to the implementation of Mitigation Measure SAF-3 (Construction Site Measures) (refer to Section 8.2.2). After implementation of Mitigation Measure SAF-3 (Construction Site Measures), the construction of the LPA within USACE facilities will not result in adverse effects related to safety and security.

### **7.3.6 California Department of Transportation Facilities**

#### **7.3.6.1 Pedestrian, Bicyclist, and Motorist Safety**

Construction of the LPA within Caltrans ROW is substantially similar to the overall alignment, as described in Section 7.3.2.1, in regard to pedestrian, bicycle, and motorist safety, potential construction-related impacts, and effect determinations. The conclusions and effect determinations provided for the overall alignment will also be applicable to construction activities within Caltrans ROW. Under NEPA, the LPA will result in adverse effects related to safety and security prior to implementation of Mitigation Measures SAF-2 (School District Coordination) and SAF-3 (Construction Site Measures) (see Section 8.2.2). After implementation of Mitigation Measure SAF-2 (School District Coordination) and SAF-3

(Construction Site Measures), the construction of the LPA within Caltrans ROW will not result in adverse effects related to safety and security.

#### **7.3.6.2 Emergency Response Services**

Construction of the LPA within Caltrans ROW is substantially similar to the overall alignment, as described in Section 7.3.2.2, in regard to emergency response services, potential impacts, and effect determinations. The conclusions and effect determinations provided for the overall alignment will also be applicable to construction of the LPA within Caltrans ROW. Under NEPA, the LPA will not result in adverse effects to safety and security related to construction, and mitigation will not be required.

#### **7.3.6.3 Security and Prevention of Crime and Terrorism**

Construction of the LPA within Caltrans ROW is substantially similar to the LPA, as described in Section 7.3.2.3, in regard to security and prevention of crime and terrorism, potential impacts, and effect determinations. The conclusions and effect determinations provided for the overall alignment will also be applicable to construction activities within Caltrans ROW. Under NEPA, the LPA will result in adverse effects related to safety and security prior to implementation of Mitigation Measure SAF-3 (Construction Site Measures) (refer to Section 8.2.2). After implementation of Mitigation Measure SAF-3 (Construction Site Measures), construction of the LPA within Caltrans ROW will not result in adverse effects related to safety and security.

### **7.4 California Environmental Quality Act Determination**

Appendix G of the CEQA Guidelines does not have specific thresholds for safety and security impacts; however, impacts regarding safety and security are addressed through the following CEQA thresholds:

#### **7.4.1 Threshold SAF-CON-1: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?**

##### **7.4.1.1 No Project Alternative**

Project-related construction activities would not occur under the No Project Alternative. Therefore, no construction-related impacts for the No Project Alternative would occur, and no mitigation measures would be required.

#### **Mitigation Measures**

No mitigation measures are required.

#### **Impacts Remaining After Mitigation**

No impacts.

##### **7.4.1.2 Locally Preferred Alternative**

Construction-related impacts of the LPA on emergency response plans or emergency evacuation plans could be caused by temporary construction activities, such as:

- Street or lane closures
- Roadway detours

- Increased traffic near emergency facilities or along emergency response routes
- Construction staging plans

In response to these potential conditions, fire and emergency medical services personnel have the ability to use onboard live mapping software that alerts drivers of construction activities that may impede travel times to and from the scene of an emergency. Emergency responders are also able to see which roadways are experiencing delays due to construction, accidents, or other events, and will be able to take alternate routes accordingly. Metro and the contractor will coordinate with involved police, medical, and fire service providers during construction. Therefore, construction-related impacts will be less than significant, and no mitigation measures will be required.

### **Mitigation Measures**

No mitigation measures are required.

### **Impacts Remaining After Mitigation**

Less than significant.

#### **7.4.1.3 Design Option: Close 186th Street**

The construction activities for the design option would not interfere with emergency response plans or emergency evacuation plans. Therefore, no construction-related impacts for the design option would occur.

### **Mitigation Measures**

No mitigation measures are required.

### **Impacts Remaining After Mitigation**

No impact.

#### **7.4.1.4 Maintenance and Storage Facility**

The construction activities for the MSF will occur outside of public ROW, with the exception of the new signalization at Somerset Boulevard and Bayou Avenue. The MSF and signalized intersection at Somerset Boulevard and Bayou Avenue will not interfere with emergency response plans or emergency evacuation plans. Therefore, no construction-related impacts for the MSF will occur.

### **Mitigation Measures**

No mitigation measures are required.

### **Impacts Remaining After Mitigation**

No impact from the MSF. Less than significant for the LPA overall, including the MSF.

**7.4.2 Threshold SAF-CON-2: Result in substantial adverse physical impacts associated with the provisions of new or physically altered government facilities, need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain response times or other performance objectives for fire and police protection services?**

**7.4.2.1 No Project Alternative**

Project-related construction activities would not occur under the No Project Alternative. Therefore, no construction-related impacts for the No Project Alternative would occur, and no mitigation measures would be required.

**Mitigation Measures**

No mitigation measures are required.

**Impacts Remaining After Mitigation**

No impacts.

**7.4.2.2 Locally Preferred Alternative**

Under the LPA, there will be no construction-related activities associated with new or physically altered government facilities to maintain response times or other performance objectives for fire and police protection services. Therefore, no construction-related impacts for the LPA will occur, and no mitigation measures will be required.

**Mitigation Measures**

No mitigation measures are required.

**Impacts Remaining After Mitigation**

No impacts.

**7.4.2.3 Design Option: Close 186th Street**

The construction activities for the design option would not result in new or physically altered government facilities to maintain response times or other performance objectives for fire and police protection services. Therefore, no construction-related impacts for the design option would occur.

**Mitigation Measures**

No mitigation measures are required.

**Impacts Remaining After Mitigation**

No impacts.

**7.4.2.4 Maintenance and Storage Facility**

The construction activities for the MSF will occur at the site, and the signalized intersection improvements for the MSF entrance at Somerset Boulevard and Bayou Avenue will be minor. The construction activities and improvements will not result in new or physically altered government facilities to maintain response times or other performance objectives for

fire and police protection services. Therefore, no construction-related impacts for the MSF will occur.

#### **Mitigation Measures**

No mitigation measures are required.

#### **Impacts Remaining After Mitigation**

No impacts.

### **7.4.3 Threshold SAF-CON-3: Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?**

#### **7.4.3.1 No Project Alternative**

Project-related construction activities would not occur under the No Project Alternative. Therefore, no construction-related impacts for the No Project Alternative would occur, and no mitigation measures would be required.

#### **Mitigation Measures**

No mitigation measures are required.

#### **Impacts Remaining After Mitigation**

No impacts.

#### **7.4.3.2 Locally Preferred Alternative**

Temporary construction-related activities and conditions that could impact pedestrian, bicyclist, and motorist safety include the following:

- Construction activities along the LPA related to excavation and construction of aerial structures, columns, stations, track, street improvements, and TPSS facilities
- Shallow excavation and construction activity along the centerline of streets along the LPA alignment to install columns, utility relocations, and track and power facilities
- Activities at the locations of staging and storage areas for construction equipment and materials
- Movement of construction equipment and materials between staging and storage areas and the areas of construction
- Transport of excavation debris along haul routes within communities
- Construction sites and staging areas where bystanders could suffer falls or other accidents

The construction effects of the LPA will also include lane closures; traffic detours; designated truck ingress, egress, and haul routes; and potential sidewalk and bike lane closures, which could affect pedestrian, bicycle, and motorist safety, as well as Safe Routes to School. However, the LRT corridor will be constructed primarily along an existing rail ROW and, therefore, impacts to pedestrian and bicyclist safety are expected to be minimal.

Lane closures and detour routes will be provided for the public to safely navigate around at-grade construction (including column construction for aerial construction). Fencing and barriers will be provided for all at-grade construction to prevent entry into active construction

sites for the safety of pedestrians, bicyclists, and motorists. A detailed discussion on construction, including methodologies, staging areas, and traffic detours, is provided in Section 7.

Other impacts to pedestrian and bicyclist safety during construction of the LPA may potentially occur along the Los Angeles River Bike Path, the Rio Hondo Bike Path, the San Gabriel River Bike Path, the Artesia Historic District Recreational Trails, or the Bellflower-Paramount Bike Trail. The existing pedestrian overcrossing at Paramount High School over the PEROW will be temporarily removed during construction of the LPA, and a new, replacement pedestrian bridge will be constructed as part of the LPA to maintain safe pedestrian connectivity at this location. A temporary detour route will be designated to provide safe access between the Paramount High School campuses during construction of the LPA.

The implementation of the aforementioned safety measures during construction of the LPA will minimize the potential hazards to pedestrians, bicyclists, and motorists. However, these same construction activities and the corresponding detour routes may interfere with or potentially block Safe Routes to School. Therefore, the construction-related impacts to pedestrian and bicyclist safety along Safe Routes to School will be potentially significant during construction. However, with implementation of Mitigation Measure SAF-2 (School District Coordination) (see Section 8.2.2), as well as COM-1 (Construction Outreach Plan), construction-related impacts will be reduced to a less than significant level.

The potential for crime and protection of the public during construction is primarily related to construction equipment and staging areas that are not adequately secured. To reduce potential impacts, construction sites will include security features such as CCTV, onsite guards and security teams, and perimeter fencing to prohibit unauthorized individuals from accessing the area. However, crime from intentional acts against people and facilities cannot be completely eliminated. Therefore, Mitigation Measure SAF-3 (Construction Site Measures) (see Section 8.2.2) will be implemented to reduce construction-related impacts to less than significant levels.

### **Mitigation Measures**

Mitigation Measures SAF-2 (School District Coordination) and SAF-3 (Construction Site Measures), as described in Section 8.2.2, will be implemented for safe routing and detours during construction, and onsite safety and security within and around construction areas to reduce construction-related impacts to less than significant for the LPA.

### **Impacts Remaining After Mitigation**

Less than significant.

#### **7.4.3.3 Design Option: Close 186th Street**

The construction activities for the LPA with the design option would be substantially similar to the LPA without the design option. Therefore, impacts and mitigation would be the same as those described in Section 7.4.3.2.

### **Mitigation Measures**

Mitigation requirements would be the same as for the LPA.

***Impacts Remaining After Mitigation***

Less than significant.

**7.4.3.4 Maintenance and Storage Facility**

The MSF will be specific to the site, and the construction activities will be minimal in regard to construction-related impacts associated with hazards due to geometric design or incompatible uses. The MSF will be closed to the public and only construction-related work will occur at the site. Access to the MSF site will be strictly controlled by an onsite guard and security team, as well as barriers around the perimeter of the maintenance yard to prohibit unauthorized access into the yard. The signalized intersection improvements for the MSF entrance at Somerset Boulevard and Bayou Avenue will be minor and will not increase hazards due to geometric design or incompatible uses. Therefore, no additional impact will occur, and no additional mitigation measures are required.

***Mitigation Measures***

Mitigation requirements will be the same as for the LPA.

***Impacts Remaining After Mitigation***

Less than significant.

## 8 PROJECT MEASURES AND MITIGATION MEASURES

### 8.1 Project Measures

#### 8.1.1 Operation

The following project measures will be required during project operation and therefore are included as part of the LPA to avoid, minimize, or reduce the potential for impacts to safety and security:

- SAF PM-1** Emergency Access. Metro will coordinate access for emergency responders, locations of fire hydrants, and security features with the applicable fire and police departments in addressing fire, life, safety, and security for the LPA, parking facilities, and station areas within their respective jurisdictions.
- SAF PM-2** Security Assessments. Metro will employ an ongoing assessment of security at all WSAB station areas for possible re-deployment of law enforcement and security services.
- SAF PM-3** Freight Track Clearance. There will be a minimum 20-foot horizontal clearance between the LPA and freight track(s) where the LPA is located at-grade in shared ROW. This occurs primarily from Randolph Street to World Energy.
- SAF PM-4** Pedestrian Bridge. The pedestrian bridge at Paramount High School connecting athletic fields to the school will be reconstructed to avoid potential interactions between pedestrians and vehicular traffic.
- SAF PM-5** Certification and Approval. The LPA will comply with all FTA and FRA safety and security certification processes and approval prior to the start of revenue operating services. This includes conducting a PHA and a TVA. The PHA will assess the potential hazards introduced by or associated with a design. The TVA will verify critical assets and vulnerability to specific threats based on the likelihood of occurrence and the severity of occurrence and develop countermeasures for addressing prioritized vulnerabilities.
- SAF PM-6** Metro Compliance. The LPA will be operated in compliance with Metro's policies, standard operating procedures, and rulebook or equivalent, as approved by Metro.
- SAF PM-7** Station Access. The LPA will include modifications to provide safe and ADA accessible access for pedestrians and bicyclists at stations.
- SAF PM-8** Fire/Life Safety Committee. A Fire/Life Safety Committee for the LPA will be established per the MRDC or equivalent and FTA requirements. The committee will be tasked with addressing fire protection requirements for the operation of the LPA, along with establishing minimum requirements that will provide for the protection of life and property from the effects of a potential fire. Additional safety and security design recommendations may be identified by the Fire/Life Safety Committee as the LPA's design progresses further during preliminary engineering and final design.

### 8.1.2 Construction

The following project measures will be required during project construction and therefore are included as part of the LPA to avoid, minimize, or reduce the potential for impacts to safety and security:

- SAF PM-9** Service Providers. Metro will coordinate with police and fire service providers prior to and during construction.
- SAF PM-10** MRDC Compliance. The LPA will be designed and constructed in compliance with the MRDC or equivalent related to safety and security.
- SAF PM-11** Fire/Life Safety Committee (Construction). A Fire/Life Safety Committee for the LPA will be established per the MRDC or equivalent and FTA requirements. The committee will be tasked with addressing fire protection requirements for the construction of the LPA.

## 8.2 Mitigation Measures

### 8.2.1 Operation

The following mitigation measure will be implemented during project operation to avoid, minimize, or reduce the potential for impacts to safety and security.

- SAF-1** (Encroachment Detection) Subject to coordination with the applicable stakeholders, the Locally Preferred Alternative will incorporate a means of encroachment detection along the portion of the corridor that shares right-of-way with freight operations. The encroachment detection system will detect unauthorized entry into Metro right-of-way, such as a freight train derailment. Prior to the start of service, Metro will develop a plan that outlines procedures should the encroachment detection system be triggered. In the event the intrusion detection system detects a possible derailment, all parties operating in the shared right-of-way corridor will be notified and train traffic (freight and light rail transit) will not be permitted to enter the area until the detection is investigated and the intrusion, if any, addressed to avoid possible derailments.

### 8.2.2 Construction

The following mitigation measures will be implemented during project construction to avoid, minimize, or reduce the potential for impacts to safety and security.

- SAF-2** (School District Coordination) Metro will coordinate with and notify the school districts and individual school administrators to maintain or modify safe and convenient pedestrian, bicycle, and bus routes to schools as necessary during and after construction. This also includes the publication and distribution of alternative pedestrian and bicycle route maps.
- SAF-3** (Construction Site Measures) Metro's contractor will provide safety and security measures at the construction sites and staging areas. Security measures will include barriers for excavations, installation of temporary barriers around perimeters, security patrols, and appropriate signage and lighting. The contractor will provide a safety and security plan to Metro for review prior to the start of construction.

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## APPENDIX A – EXISTING SAFETY FEATURES AT STREET INTERSECTIONS





Table A.1. List of Potential Grade Crossings with Existing Physical Features

Street/Pedestrian Crossings	Jurisdiction	Existing Crossing Type	Traffic Safety	Pedestrian Facility
Slauson Avenue	Los Angeles	Grade Separated	Railroad gate and warning light	N/A
Randolph Street/ Holmes Avenue	Florence-Graham	Existing at-grade	Signalized intersection railroad gate and warning light	Sidewalk
Randolph Street/ Wilmington Avenue	Florence-Graham	Existing at-grade	Four-way stop railroad gate and warning light	Sidewalk
Randolph Street/ Alameda Street	Huntington Park	Existing at-grade	Signalized intersection railroad gate and warning light	Crosswalk
Randolph Street/ Regent Street	Huntington Park	Existing at-grade	N/A	N/A
Randolph Street/ Albany Street	Huntington Park	Existing at-grade	Railroad gate and warning light	Sidewalk
Randolph Street/ Santa Fe Avenue	Huntington Park	Existing at-grade	Signalized intersection railroad gate and warning light	Crosswalk
Randolph Street/ Malabar Street	Huntington Park	Existing at-grade	Signalized intersection railroad gate and warning light	Crosswalk
Randolph Street/ Rugby Avenue	Huntington Park	Existing at-grade	Railroad gate and warning light	N/A
Randolph Street/ Pacific Boulevard	Huntington Park	Existing at-grade	Signalized intersection and railroad warning light	Crosswalk
Randolph Street/ Rita Avenue	Huntington Park	Existing at-grade	Railroad gate and warning light	N/A
Randolph Street/ Seville Avenue	Huntington Park	Existing at-grade	Signalized intersection railroad gate and warning light	Crosswalk
Randolph Street/ Miles Avenue	Huntington Park	Existing at-grade	Signalized intersection railroad gate and warning light	Crosswalk
Randolph Street/ Arbutus Avenue	Huntington Park	Existing at-grade	Railroad warning light	N/A
North Randolph Street	Huntington Park	Existing at-grade	Railroad gate and warning light	N/A
Randolph Street/ State Street	Huntington Park	Existing at-grade	Railroad gate and warning light	Sidewalk
Randolph Street	Huntington Park	Existing at-grade	Railroad gate and warning light	Sidewalk
Gage Avenue	Bell	Existing at-grade	Railroad gate and warning light	Sidewalk

Appendix A: Existing Safety Features at Street Intersections

Street/Pedestrian Crossings	Jurisdiction	Existing Crossing Type	Traffic Safety	Pedestrian Facility
Bell Avenue	Bell	Existing at-grade	Railroad gate and warning light	Sidewalk
Florence Avenue	Bell	Existing at-grade	Railroad gate and warning light	Sidewalk
Otis Avenue	Cudahy	Existing at-grade	Railroad gate and warning light	Sidewalk
Santa Ana Street	Cudahy	Existing at-grade	Railroad gate and warning light	N/A
Ardine Street	Cudahy	Existing at-grade	Railroad warning light	N/A
Atlantic Avenue	South Gate	Existing at-grade	Railroad gate and warning light	Sidewalk
Firestone Boulevard	South Gate	Existing at-grade	Signalized crossing railroad gate and warning light	Sidewalk
Rayo Avenue	South Gate	Existing at-grade	Railroad gate and warning light	Sidewalk
Southern Avenue	South Gate	Existing at-grade	Railroad gate and warning light	Bike lane
LA River Bike Path	South Gate	Grade separated	N/A	Bike path
I-710	South Gate	Grade separated	N/A	N/A
Rio Hondo Bike Path	South Gate	Grade separated	N/A	Bike path
Imperial Highway	South Gate	Existing at-grade	Railroad gate and warning light	Sidewalk
Garfield Avenue	South Gate	Existing at-grade	Railroad gate and warning light	Sidewalk
Gardendale Street	Downey	Existing at-grade	Railroad gate and warning light	N/A
Main Street	South Gate	Existing at-grade	Railroad gate and warning light	Sidewalk
Century Boulevard	South Gate	Existing at-grade	Railroad gate and warning light	Sidewalk
I-105	Paramount	Grade separated	N/A	N/A

Street/Pedestrian Crossings	Jurisdiction	Existing Crossing Type	Traffic Safety	Pedestrian Facility
Paramount Boulevard/ Rosecrans Avenue	Paramount	Existing at-grade	Signalized intersection	Crosswalk/ sidewalk
Paramount Park/ High School	Paramount	Grade separated	N/A	Pedestrian bridge
Downey Avenue	Paramount	Existing at-grade	Railroad gate and warning light	Sidewalk
Somerset Boulevard	Paramount	No existing crossing	N/A	Sidewalk
Lakewood Boulevard	Paramount	No existing crossing	N/A	Sidewalk
Clark Avenue	Bellflower	No existing crossing	N/A	Sidewalk
Alondra Boulevard	Bellflower	No existing crossing	N/A	Sidewalk
Bellflower Boulevard	Bellflower	No existing crossing	N/A	Sidewalk
Bellflower Bike Trail (1/2)	Bellflower	No existing crossing	N/A	Bike Path
Bellflower Bike Trail (2/2)	Bellflower	No existing crossing	N/A	Bike Path
Flower Street	Bellflower	No existing crossing	N/A	Sidewalk
Woodruff Avenue	Bellflower	No existing crossing	N/A	Sidewalk
SR-91	Bellflower	Grade separated	N/A	N/A
San Gabriel River Bike Path	Cerritos	Grade separated	N/A	Bike path
Driveway off of Artesia Boulevard	Cerritos	At-grade	Private crossing	Private crossing
Artesia Boulevard	Cerritos	No existing crossing	N/A	Sidewalk
I-605	Cerritos	Grade separated	N/A	Freeway
Studebaker Road	Cerritos	No existing crossing	N/A	Sidewalk
183rd Street/ Gridley Road	Artesia	No existing crossing	N/A	Crosswalk/ sidewalk

Appendix A: Existing Safety Features at Street Intersections

Street/Pedestrian Crossings	Jurisdiction	Existing Crossing Type	Traffic Safety	Pedestrian Facility
186th Street	Artesia	No existing crossing	N/A	Sidewalk
187th Street	Artesia	No existing crossing	N/A	Sidewalk
Pioneer Boulevard	Artesia	No existing crossing	N/A	Sidewalk

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## **APPENDIX B – ACCIDENT DATA FOR EXISTING GRADE CROSSINGS**



Grade Crossing	Jurisdiction	Crossing ID	Accidents Since 1975
Randolph Street/Alameda Street	Huntington Park	761584V	2
Randolph Street/Santa Fe Avenue	Huntington Park	761587R	4
Randolph Street/Malabar Street	Huntington Park	761588X	0
Randolph Street/Seville Avenue	Huntington Park	761592M	1
Randolph Street/Miles Avenue	Huntington Park	761593U	0
Randolph Street/Arbutus Avenue	Huntington Park	761594B	0
Randolph Street/Wilmington Avenue	Huntington Park	N/A	N/A
Randolph Street/Regent Street	Huntington Park	761585C	0
Randolph Street/Albany Street	Huntington Park	761586J	0
Randolph Street/Rugby Avenue	Huntington Park	761589E	2
Randolph Street/Rita Avenue	Huntington Park	761591F	5
Pacific Boulevard/Randolph Street	Huntington Park	761590Y	2
Randolph Street/State Street	Huntington Park	N/A	N/A
Salt Lake Avenue/Bell Avenue	Bell	810950F	1
Salt Lake Avenue/Gage Avenue	Huntington Park	810949L	3
Salt Lake Avenue/Otis Avenue	Huntington Park	810952U	17
Salt Lake Avenue/Florence Avenue	Huntington Park	028134F/810951M	6
Salt Lake Avenue/Ardine Street	Cudahy	810955P	3
Salt Lake Avenue/Santa Ana Street	Cudahy	810953B/973818H	3
Salt Lake Avenue/Southern Avenue	South Gate	810961T	0
Firestone Boulevard/Firestone Place	South Gate	810958K	3
Atlantic Avenue/Patata Street	South Gate	810956W	3
Rayo Avenue	South Gate	810961T	0
Garfield Avenue	South Gate	811091X	3
Garfield Place/Imperial Highway	South Gate	811090R	17
Dakota Avenue/Main Street	South Gate	811089W	4
Dakota Avenue/Gardendale Street	South Gate	811092E	3
Paramount Boulevard/Rosecrans Avenue	South Gate	747939K	1
Century Boulevard/Industrial Avenue	Paramount	811087H	2

Source: Federal Railroad Administration. 2017. Office of Safety Analysis Crossing Inventory and Accident Reports, July 2017. <http://safetydata.fra.dot.gov/OfficeofSafety/PublicSite/Crossing/Crossing.aspx>. Accessed October 2017.