

Appendix Q Cumulative Impacts Report

GOLD LINE EASTSIDE TRANSIT CORRIDOR PHASE 2



Prepared for
Los Angeles Metropolitan
Transportation Authority
One Gateway Plaza
Los Angeles, CA 90012

June 2022

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Acronyms

2020 RTP/SCS	2020-2045 Regional Transportation Plan / Sustainable Communities Strategy
AQMP	Air Quality Management Plan
BMP	Best Management Practices
BNSF	Burlington Northern Santa Fe
BRT	Bus Rapid Transit
Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
CO	carbon monoxide
DSA	detailed study area
EIR	Environmental Impact Report
FLM	first/last mile
GHG	greenhouse gas
GSA	general study area
IOS	Initial Operating Segment
ITS	Intelligent Transportation System
LAX	Los Angeles International Airport
LRT	light rail transit
LRTP	Long Range Transportation Plan
LRV	light rail vehicles
Metro	Los Angeles County Metropolitan Transportation Authority
MM	mitigation measure
MOD	Mobility on Demand
MSF	maintenance and storage facility
MTP	MicroTransit Pilot

MUTCD	Manual of Uniform Traffic Control Devices
NO _x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
OCS	overhead catenary system
PM ₁₀	inhalable particulate matter or particulate matter with an aerodynamic diameter less than or equal to 10 micrometers
PM _{2.5}	fine particulate matter or particulate matter with an aerodynamic diameter less than or equal to 2.5 micrometers
Project	Eastside Transit Corridor Phase 2 Project
ROW	right-of-way
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCS	Sustainable Community Strategy
SO ₂	sulfur dioxide
SPaT	signal phase and timing
TAC	toxic air contaminants
TBM	tunnel boring machine
TIP	Transportation Improvement Program
TOC	Transit Oriented Communities
TPSS	traction power substation
VMT	vehicle miles traveled
VOC	volatile organic compounds

1.0 INTRODUCTION

This impacts report discusses the Eastside Transit Corridor Phase 2 Project (Project) setting in relation to the cumulative environmental effects of the Project. It describes existing conditions, current applicable regulatory setting, and potential cumulative impacts from operation and construction of the Build Alternatives and the No Project Alternative when combined with the cumulative effects of other reasonably foreseeable projects. This study was conducted in compliance with the California Environmental Quality Act (CEQA) and the State CEQA Guidelines, California Code of Regulations Section 15000 et seq.

The Project would extend the Los Angeles County Metropolitan Transportation Authority (Metro) L (Gold) Line, a light rail transit (LRT) line, from its current terminus at the Atlantic Station in the unincorporated community of East Los Angeles to the city of Whittier. It would extend the existing Metro L Line approximately 3.4 to 9.5 miles, depending on the Build Alternative.

The Project area of analysis includes a general study area (GSA) that is regional in scope and scale and a detailed study area (DSA) that encompasses an approximately two-mile area from the project alignment in eastern Los Angeles County. Additionally, specialized study areas were developed for certain environmental impact categories where the potential impacts would occur within an area that varies from the GSA or DSA. All specialized study areas are contained within the GSA. The cumulative impacts study area (i.e., GSA, DSA or specialized study area) varies by environmental topic, depending upon the geographic area where the impacts of those projects could combine with those of the Project. Some cumulative impacts study areas for environmental topics are larger or smaller than others (e.g., the cumulative impacts study area for aesthetics and visual resources includes those areas in proximity to the Project, whereas the cumulative impacts study area for air quality is the larger regional air basin).

A diverse mix of land uses are located within the GSA and DSA, including single- and multi-family residences, commercial and retail uses, industrial development, parks and recreational, health and medical uses, educational institutions, and vacant land. The Project would traverse densely populated, low-income, and heavily transit-dependent communities with major activity centers within the Gateway Cities subregion of Los Angeles County.

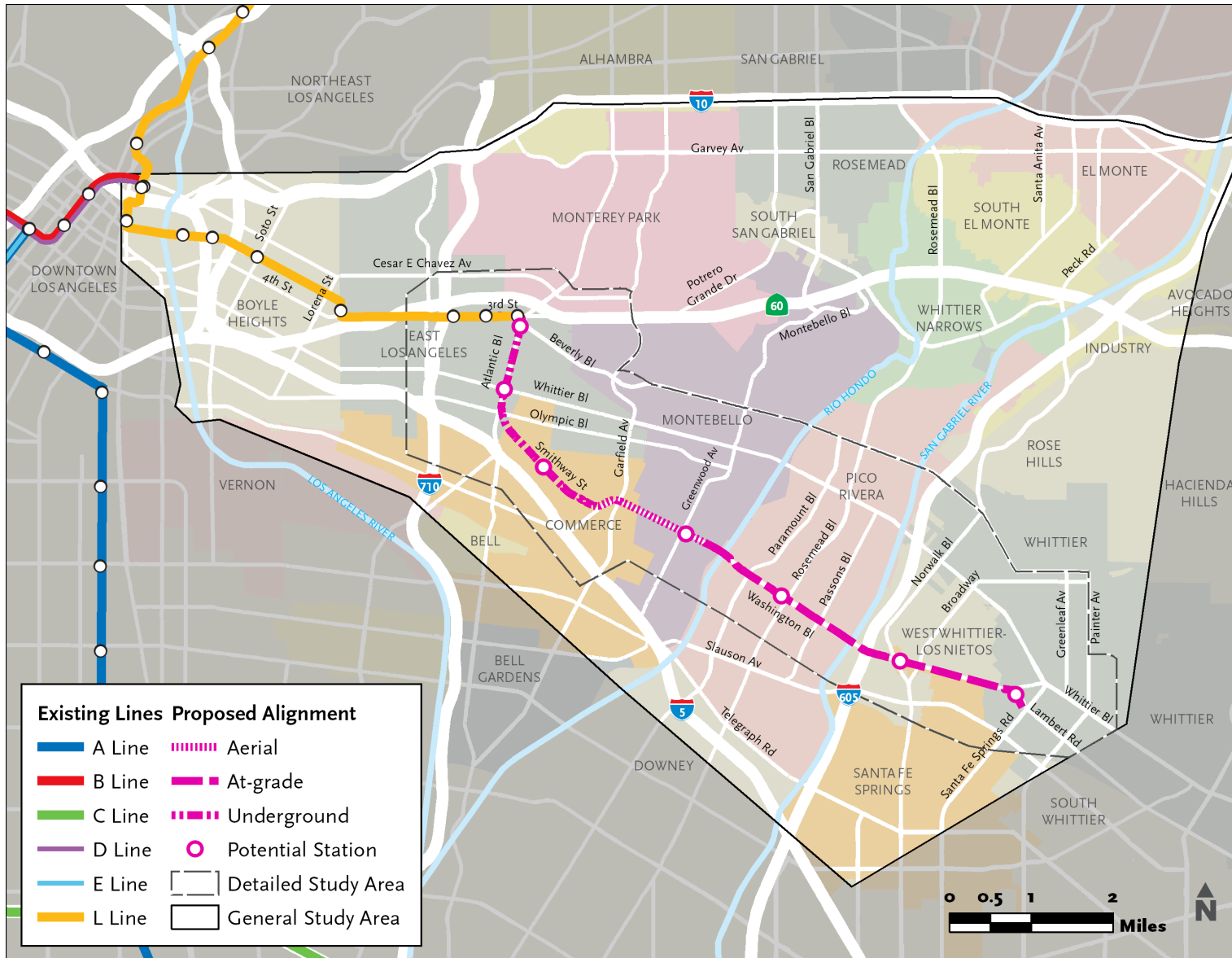
2.0 PROPOSED PROJECT AND ALTERNATIVES

2.1 Project Setting and Description

This impacts report evaluates potential environmental impacts of three Build Alternatives and a No Project Alternative. The Build Alternatives are: Alternative 1 Washington (Alternative 1), Alternative 2 Atlantic to Commerce/Citadel Initial Operating Segment (IOS) (Alternative 2), and Alternative 3 Atlantic to Greenwood IOS (Alternative 3).

For purposes of describing the Project, two study areas have been defined. The GSA is regional in scope and scale, whereas the DSA encompasses an approximately two-mile area from the Project alignment's centerline. The GSA is the same for all three of the Build Alternatives. The purpose of the GSA is to establish the study area for environmental resources that are regional in scope and scale, such as regional transportation, including vehicle miles traveled (VMT) and regional travel demands, population, housing, or employment. The GSA consists of several jurisdictions within Los Angeles County including the cities of Bell, Commerce, El Monte, Industry, Los Angeles, Montebello, Monterey Park, Pico Rivera, Rosemead, South El Monte, Santa Fe Springs, Whittier, unincorporated areas of Los Angeles County, which includes East Los Angeles and West Whittier-Los Nietos, and other cities within the San Gabriel Valley. It is generally bounded by Interstate (I) 10 to the north, Peck Road in South El Monte and Lambert Road in Whittier to the east, I-5 and Washington Boulevard to the south, and I-710 to the west. **Figure 2.1**, **Figure 2.2**, and **Figure 2.3** present the boundaries of the GSA for each of the three Build Alternatives.

The DSA establishes a study area to evaluate environmental resources that are more sensitive to the physical location of the Build Alternatives. The DSA for Alternative 1 Washington generally includes the area within a half-mile to two-mile distance from the guideway centerline, as shown in **Figure 2.1**. It encompasses five cities, Commerce, Montebello, Pico Rivera, Santa Fe Springs, and Whittier, and communities of unincorporated East Los Angeles and Whittier-Los Nietos. The DSA for Alternative 2 Atlantic to Commerce/Citadel IOS and Alternative 3 Atlantic to Greenwood IOS, does not extend as far to the east. As shown in **Figure 2.2** and **Figure 2.3** for Alternative 2 and Alternative 3 respectively, the DSA extends to the Rio Hondo and includes Commerce, Montebello, and unincorporated East Los Angeles.



Source: Metro; CDM Smith/AECOM JV, 2021.

Figure 2.1. Alternative 1 Washington GSA and DSA



Source: Metro; CDM Smith/AECOM JV, 2021.

Figure 2.2. Alternative 2 Atlantic to Commerce/Citadel IOS GSA and DSA



Source: Metro; CDM Smith/AECOM JV, 2021.

Figure 2.3. Alternative 3 Atlantic to Greenwood IOS GSA and DSA

2.2 Build Alternatives

This impacts report evaluates the potential environmental impacts of three Build Alternatives which have the same guideway alignment east of the existing terminus at Atlantic Station but vary in length. Alternative 1 has the longest alignment at approximately 9.0 miles with seven stations (one relocated/reconfigured and six new), two maintenance and storage facility (MSF) site options and would terminate at Lambert station on Lambert Road in the city of Whittier. Alternative 2 is approximately 3.2 miles in length with three stations, one MSF site option, and would terminate at the Commerce/Citadel station in the city of Commerce, with non-revenue lead tracks extending further into the city of Commerce to connect to the Commerce MSF site option. Alternative 3 is approximately 4.6 miles in length with four stations, two MSF site options, and would terminate at Greenwood station in the city of Montebello.

There are also design options under consideration for each of the three Build Alternatives that consist of a variation in the design of the relocated/reconfigured Atlantic Station (applicable to Alternatives 1, 2, and 3) and a variation in the station and alignment profile in Montebello (applicable to Alternatives 1 and 3). Construction and operation of one or both design options are considered and evaluated for Alternative 1 and Alternative 3.

To differentiate the impacts evaluation of a Build Alternative with or without the design option(s) incorporated, a Build Alternative without the design option(s) is referred to as the “base Alternative” (i.e., base Alternative 1). A Build Alternative with a design option incorporated is referred to by using the design option name (e.g., Alternative 1 with the Atlantic/Pomona Station Option and/or the Montebello At-Grade Option). The three Build Alternatives and the design options are described in greater detail below.

2.2.1 Alternative 1 Washington

Alternative 1 would extend the Metro L (Gold) Line LRT approximately 9.0 miles east from the current at-grade station at Atlantic Boulevard to an at-grade terminus at Washington Boulevard/Lambert Road in the city of Whittier. This alternative would include a relocated/reconfigured Atlantic station in an underground configuration and six new stations: Atlantic/Whittier (underground), Commerce/Citadel (underground), Greenwood (aerial), Rosemead (at-grade), Norwalk (at-grade), and Lambert (at-grade). The base Alternative 1 alignment would transition from the existing at-grade alignment to an underground configuration and would transition to an aerial configuration in the city of Commerce before transitioning to at-grade at Montebello Boulevard. The alignment includes approximately 3.0 miles of tunnel, 1.5 miles of aerial, and 4.5 miles of at-grade alignment.

The Alternative 1 alignment crosses the Rio Hondo and San Gabriel River and the Rio Hondo Spreading Grounds. The existing San Gabriel River and Rio Hondo bridges would be replaced with new bridges designed to carry both the LRT facility and the four-lane roadway.

An MSF and other ancillary facilities would also be constructed as part of the Project, including overhead catenary system (OCS), cross passages, ventilation structures, traction power substation (TPSS) sites, crossovers, emergency generators, radio tower poles and equipment shelters, and other supporting facilities along the alignment.

Two design options for Alternative 1 are described below.

2.2.1.1 Guideway Alignment

Under Alternative 1, the guideway would begin at the eastern end of the existing East Los Angeles Civic Center Station, transitioning from at-grade to underground at the intersection of South La Verne Avenue and East 3rd Street. The guideway would turn south and run beneath Atlantic Boulevard to approximately Verona Street and Olympic Boulevard. The underground guideway would then curve southeast, running under Smithway Street near the Citadel Outlets in the city of Commerce. After crossing Saybrook Avenue, the guideway would daylight from underground to an aerial configuration. Depending on the MSF site option that is selected, the aerial guideway would continue parallel to Washington Boulevard, east of Garfield Avenue, and merge into the center median of Washington Boulevard (Commerce MSF site option) or merge into the center median of Washington Boulevard at Gayhart Street (Montebello MSF site option). The alignment would maintain an aerial configuration then transition to an at-grade configuration east of Carob Way and would remain at-grade in the center of Washington Boulevard. The at-grade alignment would terminate at Lambert station in the city of Whittier.

2.2.1.1.1 Design Options

The following design options are being considered for Alternative 1:

Atlantic/Pomona Station Option – The Atlantic/Pomona Station Option would relocate the existing Atlantic Station to a shallow open air underground station with two side platforms and a canopy (Figure 2.4). This station design option would be located beneath the existing triangular parcel bounded by Atlantic Boulevard, Pomona Boulevard, and Beverly Boulevard. The excavation depth of the station invert would be approximately 20 to 25 feet from the existing ground elevation.

This option would also impact the guideway alignment and location of the tunnel boring machine (TBM) extraction pit. The underground guideway would be located east of Atlantic Boulevard and require full property acquisitions at its footprint between Beverly Boulevard and 4th Street. The alignment would connect with the base Alternative 2 alignment just north of the proposed Atlantic/Whittier station. The TBM extraction pit would be east of Atlantic Boulevard between Repetto Street and 4th Street. Limits for the excavation would occur between the TBM extraction pit and the intersection of Pomona Boulevard and Beverly Boulevard.

Montebello At-Grade Option – This design option consists of approximately one mile of at-grade guideway along Washington Boulevard between Yates Avenue and Carob Way in the city of Montebello. In this design option, after crossing Saybrook Avenue, the LRT guideway would daylight from underground to an aerial configuration to avoid disrupting existing Burlington Northern Santa Fe (BNSF) Railway tracks. The aerial guideway would continue parallel to Washington Boulevard, then merge into the center median east of Garfield Avenue. At Yates Avenue, the guideway would transition from aerial to an at-grade configuration and remain at-grade until terminating near Lambert Road in the city of Whittier. This design option includes an at-grade Greenwood station located west of Greenwood Avenue. The lead tracks to the MSF site option would also be at-grade. Alternative 1 with the Montebello At-Grade Option would have approximately 3.0 miles of underground, 0.5 miles of aerial, and 5.5 miles of at-grade alignment.



Source: Metro; ACE Team, January 2022.

Figure 2.4. Atlantic/Pomona Station Option

2.2.2 Alternative 2 Atlantic to Commerce/Citadel IOS

Alternative 2 would extend the Metro L (Gold) Line approximately 3.2 miles from the current terminus at Atlantic Boulevard to an underground terminal station at the Commerce/Citadel station in the city of Commerce with lead tracks connecting to the Commerce MSF site option. Alternative 2 would include a relocated/reconfigured Atlantic station and two new stations: Atlantic/Whittier (underground), and Commerce/Citadel (underground). The base Alternative 2 alignment includes approximately 3.0 miles of underground, 0.1 miles of aerial, and 0.1 miles of at-grade alignment.

An MSF and other ancillary facilities would also be constructed as part of the Project, including OCS, tracks, cross passages, ventilation structures, TPSSs, track crossovers, emergency generators, radio tower poles and equipment shelters, and other facilities along the alignment.

2.2.2.1 Guideway Alignment

Under Alternative 2, the guideway would follow the same alignment as under Alternative 1. The guideway would begin at the eastern end of the existing East Los Angeles Civic Center Station, transitioning from at-grade to underground at the intersection of South La Verne Avenue and East 3rd Street. The guideway would turn south and run beneath Atlantic Boulevard to approximately Verona Street and Olympic Boulevard. The underground guideway would then curve southeast, running under Smithway Street near the Citadel Outlets in the city of Commerce. The alignment would terminate at the Commerce/Citadel station with non-revenue lead tracks connecting to the Commerce MSF site option.

2.2.2.1.1 Design Option

One design option, the Atlantic/Pomona Station Option described in **Section 2.2.1.1.1** and shown on **Figure 2.4** is being considered for Alternative 2.

2.2.3 Alternative 3 Atlantic to Greenwood IOS

Alternative 3 would extend the Metro L (Gold) Line approximately 4.6 miles east from the current terminus at Atlantic Boulevard to an aerial terminal station at the Greenwood station in the city of Montebello. This alternative would include a relocated/reconfigured Atlantic station and three new stations: Atlantic/Whittier (underground), Commerce/Citadel (underground), and Greenwood (aerial). The base Alternative 3 alignment includes approximately 3.0 miles of underground, 1.5 miles of aerial, and 0.1 miles of at-grade alignment.

An MSF and other ancillary facilities would also be constructed as part of the Project, including OCS, tracks, cross passages, ventilation structures, TPSSs, track crossovers, emergency generators, radio tower poles and equipment shelters, and other facilities along the alignment.

Two design options for Alternative 3 are described below.

2.2.3.1 Guideway Alignment

Under Alternative 3, the guideway would follow the same alignment as under Alternative 1. The guideway would begin at the eastern end of the existing East Los Angeles Civic Center Station, transitioning from at-grade to underground at the intersection of South La Verne Avenue and East 3rd Street. The guideway would then turn south and run beneath Atlantic Boulevard to approximately Verona Street and Olympic Boulevard. The underground guideway would then curve southeast, running under Smithway Street near the Citadel Outlets in the city of Commerce. After crossing Saybrook Avenue, the guideway would daylight from underground to an aerial configuration. Depending on the MSF site option that is selected, the aerial guideway would continue parallel to Washington Boulevard, east of Garfield Avenue, and merge into the center median of Washington Boulevard (Commerce MSF site option) or merge into the center media of Washington Boulevard at Gayhart Street (Montebello MSF site option). The aerial guideway would terminate at the Greenwood station in the city of Montebello.

2.2.3.1.1 Design Option

Two design options described in **Section 2.2.1.1.1**, the Atlantic/Pomona Station Option and the Montebello At-Grade Option are being considered for Alternative 3. Alternative 3 with the Montebello At-Grade Option would have approximately 3.0 miles of underground, 0.5 miles of aerial, and 1.1 miles of at-grade alignment.

2.3 Maintenance and Storage Facilities

The Project has two MSF site options: the Commerce MSF site option and the Montebello MSF site option. One MSF site option would be constructed. The MSF would provide equipment and facilities to clean, maintain, and repair rail cars, vehicles, tracks, and other components of the system. The MSF would enable storage of light rail vehicles (LRVs) that are not in service and would connect to the mainline with one lead track. The MSF would also provide office space for Metro rail operation staff, administrative staff, and communications support staff. The MSF would be the primary physical employment centers for rail operation employees, including train operators, maintenance workers, supervisors, administrative, security personnel and other roles.

The Commerce MSF site option is located in the city of Commerce, and the Montebello MSF site option is located in the city of Montebello. The Commerce MSF site option is located where it could support any of the three Build Alternatives. The Montebello MSF site option is located where it could support either Alternative 1 or Alternative 3.

2.3.1 Commerce MSF

The Commerce MSF site option is located in the city of Commerce, west of Washington Boulevard and north of Gayhart Street. The site is approximately 24 acres and is bounded by Davie Avenue to the east, Fleet Street to the north, Saybrook Avenue to the west, and an unnamed street to the south. Additional acreage would be needed to accommodate the lead track and construction staging. As shown in a dashed line on **Figure 2.5**, the guideway alignment with the Commerce MSF site option would daylight from an underground to aerial configuration west of the intersection of Gayhart Street

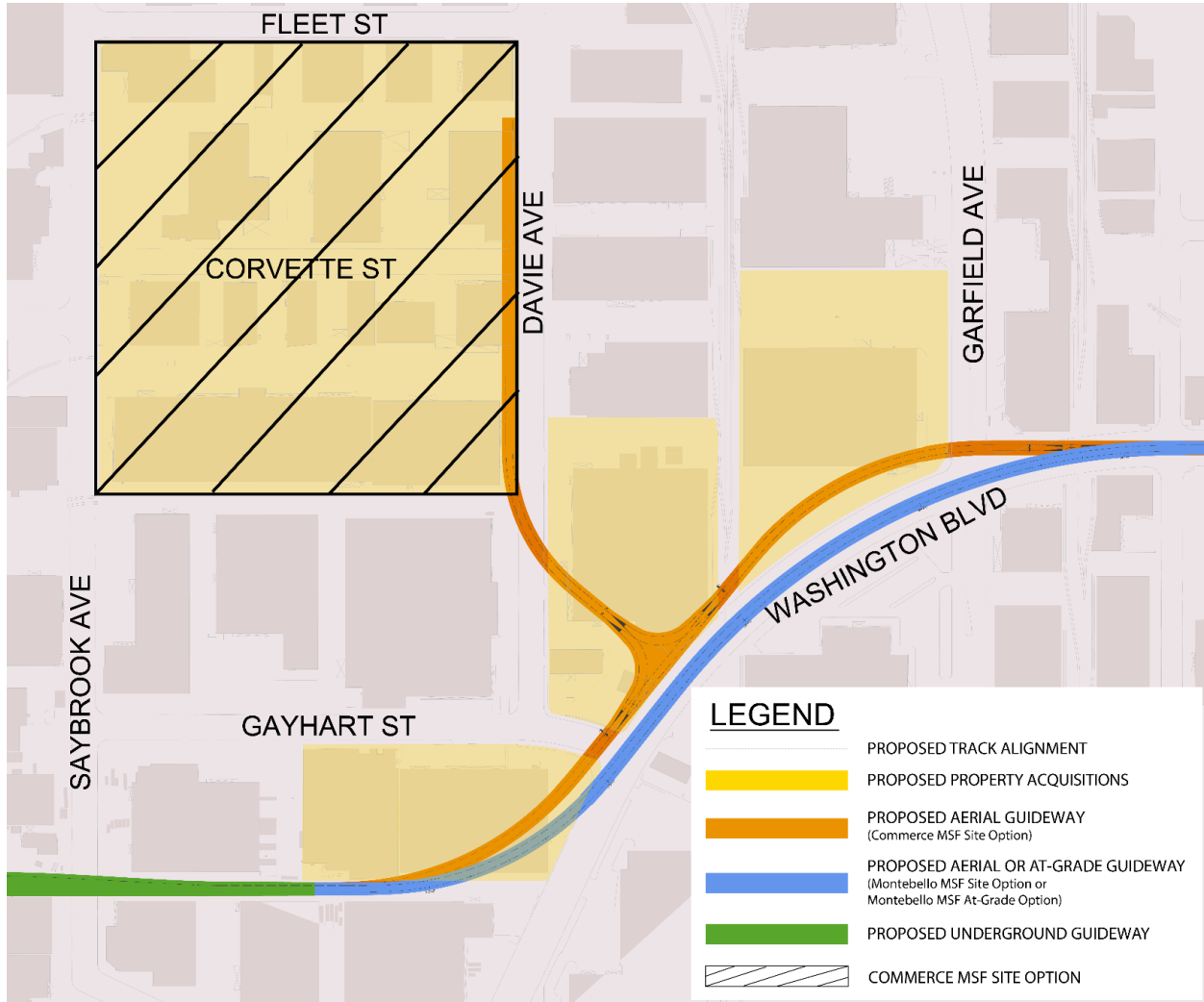
and Washington Boulevard and would run parallel to Washington Boulevard from Gayhart Street to Yates Avenue. The lead tracks to the Commerce MSF site option would be located northeast of the intersection of Gayhart Street and Washington Boulevard and extend in an aerial configuration and then would transition to at-grade within the MSF after crossing Davie Avenue. To construct and operate the Commerce MSF site option, Corvette Street would be permanently closed between Saybrook Avenue and Davie Avenue. Corvette Street is an undivided two-lane road and is functionally classified as a local street under the California Road System. The facility would accommodate storage for approximately 100 LRVs.

2.3.2 Montebello MSF

The Montebello MSF site option is located in the city of Montebello, north of Washington Boulevard and south of Flotilla Street between Yates Avenue and S. Vail Avenue. The site is approximately 30 acres in size and is bounded by S. Vail Avenue to the east, a warehouse structure along the south side of Flotilla Street to the north, Yates Avenue to the west, and a warehouse rail line to the south. Additional acreage would be needed to accommodate the lead track and construction staging. As shown on in a solid line on **Figure 2.5**, as with the Commerce MSF site option, the guideway alignment with the Montebello MSF site option would daylight from an underground to an aerial configuration west of intersection of Gayhart Street and Washington Boulevard. The alignment would be located further east than the alignment with the Commerce MSF site option. The aerial guideway for the Montebello MSF site option would transition to the median of Washington Boulevard at Gayhart Street. Columns that would provide structural support for the aerial guideway would be installed in the median of Washington Boulevard and would require roadway reconfiguration and striping on Washington Boulevard.

The lead tracks would be in an aerial configuration from Washington Boulevard, parallel S. Vail Avenue, and then transition to at-grade as it approaches the MSF. The facility would accommodate storage for approximately 120 LRVs.

The Montebello MSF At-Grade Option includes an at-grade configuration for the lead tracks to the Montebello MSF. This design option would be necessary if the Montebello At-Grade Option is selected under Alternative 1 or Alternative 3. In this design option, the lead tracks would be in an at-grade configuration from Washington Boulevard, paralleling S. Vail Avenue and remain at-grade to connect to the Montebello MSF site option. For this design option, through access on Acco Street to Vail Avenue would be eliminated and cul-de-sacs would be provided on each side of the lead tracks to ensure that access to businesses in this area is maintained. Acco Street is an undivided two-lane road and is functionally classified as a local street under the California Road System.



Source: Metro; ACE Team, January 2022.

Figure 2.5. Montebello MSF S-Curve Alignment

2.4 Ancillary Facilities

The Build Alternatives would require a number of additional elements to support vehicle operations, including but not limited to the OCS, tracks, crossovers, cross passages, ventilation structures, TPSS, train control houses, electric power switches and auxiliary power rooms, communications rooms, radio tower poles and equipment shelters, and an MSF. Alternatives 1, 2, and 3 would have an underground alignment of approximately 3 miles in length between La Verne and Saybrook Avenue. Per Metro's Fire Life Safety Criteria, ventilation shafts and emergency fire exits would be installed along the tunnel portion of the alignment. These would be located at the underground stations or public right-of-way (ROW). The alignment for Alternative 1 and Alternative 3 would travel along the median of the roadway for most of the route. The precise location of ancillary facilities would be determined in a subsequent design phase.

2.5 Proposed Stations

The following stations would be constructed under Alternative 1:

- Atlantic (Relocated/Reconfigured) – The existing Atlantic Station would be relocated and reconfigured to an underground center platform station located beneath Atlantic Boulevard south of Beverly Boulevard in East Los Angeles. The existing parking structure located north of the 3rd Street and Atlantic Boulevard intersection would continue to serve this station.
 - Atlantic Pomona Station Option – The Atlantic/Pomona Station Option would relocate the existing Atlantic Station to a shallow underground open-air station with two side platforms and a canopy. This station design option would be located beneath the existing triangular parcel bounded by Atlantic Boulevard, Pomona Boulevard, and Beverly Boulevard. The existing parking structure located north of the 3rd Street and Atlantic Boulevard intersection would continue to serve this station.
- Atlantic/Whittier – This station would be underground with a center platform located beneath the intersection of Atlantic and Whittier Boulevards in East Los Angeles. Parking would not be provided at this station.
- Commerce/Citadel – This station would be underground with a center platform located beneath Smithway Street near the Citadel Outlets in the city of Commerce. Parking would not be provided at this station.
- Greenwood – This station would be aerial with a side platform located in the median of Washington Boulevard east of Greenwood Avenue in the city of Montebello. This station would provide a surface parking facility near the intersection of Greenwood Avenue and Washington Boulevard.
 - Under the Montebello At-Grade Option, Greenwood station would be an at-grade station located west of the intersection at Greenwood and Washington Boulevard.
- Rosemead – This station would be at-grade with a center platform located in the center of Washington Boulevard west of Rosemead Boulevard in the city of Pico Rivera. This station would provide a surface parking facility near the intersection of Rosemead and Washington Boulevards.
- Norwalk – This station would be at-grade with a center platform located in the median of Washington Boulevard east of Norwalk Boulevard in the city of Santa Fe Springs. This station would provide a surface parking facility near the intersection of Norwalk and Washington Boulevards.
- Lambert – This station would be at-grade with a center platform located south of Washington Boulevard just west of Lambert Road in the city of Whittier. This station would provide a surface parking facility near the intersection of Lambert Road and Washington Boulevard.

Alternative 2 would include Atlantic (Relocated/Reconfigured), Atlantic/Whittier, and Commerce/Citadel stations as described above.

Alternative 3 would include Atlantic (Relocated/Reconfigured), Atlantic/Whittier, Commerce/Citadel, and Greenwood stations as described above.

Station amenities would include items in the Metro Systemwide Station Standards Policy (Metro 2018) such as station pin signs, security cameras, bus shelters, benches, emergency/information telephones, stairs, map cases, fare collection, pedestrian and street lighting, hand railing, station landscaping, trash receptacles, bike racks and lockers, emergency generators, power boxes, fire hydrants, and artwork. Escalators and elevators would be located in aerial and underground stations. Station entry portals would be implemented at underground stations. Station access would be ADA-compliant and also have bicycle and pedestrian connections. Details regarding most of these items, including station area planning and urban design, would be determined at a later phase.

2.6 Description of Construction

Construction of the Project would include a combination of elements dependent upon the locally preferred alternative. The major construction activities include guideway construction (at-grade, aerial, underground); decking and tunnel boring for the underground guideway; station construction; demolition; utility relocation and installation work; street improvements including sidewalk reconstruction and traffic signal installation; retaining walls; LRT operating systems installation including TPSS and OCS; parking facilities; an MSF; and construction of other ancillary facilities. Alternative 1 would include construction of bridge replacements over the San Gabriel and Rio Hondo Rivers.

In addition to adhering to regulatory compliance, the development of the Project would employ conventional construction methods, techniques, and equipment. All work for development of the LRT system would conform to accepted industry specifications and standards, including Best Management Practices (BMP). Project engineering and construction would, at minimum, be completed in conformance with the regulations, guidelines, and criteria, including, but not limited to, Metro Rail Design Criteria (MRDC) (Metro 2018), California Building Code, Metro Operating Rules, and Metro Sustainability Principles.

The construction of the Project is expected to last approximately 60 to 84 months. Construction activities would shift along the corridor so that overall construction activities should be relatively short in duration at any one point. Most construction activities would occur during daytime hours. For specialized construction tasks, it may be necessary to work during nighttime hours to minimize traffic disruptions. Traffic control and pedestrian control during construction would follow local jurisdiction guidelines and the Manual of Uniform Traffic Control Devices (MUTCD) standards. Typical roadway construction traffic control methods and devices would be followed including the use of signage, roadway markings, flagging, and barricades to regulate, warn, or guide road users. Properties adjacent to the Project's alignment would be used for construction staging. The laydown and storage areas for construction equipment and materials would be established in the vicinity of the Project within parking facilities, and/or on parcels that would be acquired for the proposed stations and MSF site options. Construction staging areas would be used to store building materials, construction equipment, assemble the TBM, temporary storage of excavated materials, and serve as temporary field offices for the contractor.

2.7 Description of Operations

The operating hours and schedules for Alternatives 1, 2, and 3 would be comparable to the weekday, Saturday and Sunday, and holiday schedules for the Metro L (Gold) Line (effective 2019). It is anticipated that trains would operate every day from 4:00 am to 1:30 am. On weekdays, trains would operate approximately every 5 to 10 minutes during peak hours, every 10 minutes mid-day and until 8:00 pm, and every 15 minutes in the early morning and after 8:00 pm. On weekends, trains would operate every 10 minutes from 9:00 am to 6:30 pm, every 15 minutes from 7:00 am to 9:00 am and from 6:30 pm to 7:30 pm, and every 20 minutes before 7:00 am and after 7:30 pm. These operational headways are consistent with Metro design requirements for future rail services

2.8 No Project Alternative

The No Project Alternative establishes impacts that would reasonably be expected to occur in the foreseeable future if the Project were not approved. The No Project Alternative would maintain existing transit service through the year 2042. No new transportation infrastructure would be built within the GSA aside from projects currently under construction or funded for construction and operation by 2042 via the 2008 Measure R or 2016 Measure M sales taxes. The No Project Alternative would include highway and transit projects identified for funding in Metro's 2020 Long Range Transportation Plan (LRTP) and Southern California Association of Governments (SCAG) *Connect SoCal 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy* (2020 RTP/SCS). The No Project Alternative includes existing projects from the regional base year (2019) and planned regional projects in operation in the horizon year (2042).

3.0 REGULATORY FRAMEWORK

3.1 Federal

There are no federal regulations, guidelines, etc., that apply to assessment of cumulative impacts under CEQA.

3.2 State

State CEQA Guidelines mandate that an Environmental Impact Report (EIR) discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable (Section 15130). "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects (Section 15064(h)(1)). In essence, the lead agency must consider whether a cumulative impact is significant and, if so, whether the project's incremental contribution to that impact is cumulatively considerable. When the project's incremental effect is not cumulatively considerable, the effect need not be considered significant, however the basis for concluding that the incremental effects is not cumulatively considerable must be briefly described.

CEQA Guidelines Sections 15130(b)(1)(A) and (B) identify the following two methodologies for assessing cumulative impacts: (1) a list of past, present, and probable future projects producing related or cumulative impacts; or (2) a summary of projections contained in an adopted local, regional, or statewide plan, or related planning document that describes or evaluates conditions contributing to the cumulative effect. Such plans may include a general plan, regional transportation plan, or plans for reducing greenhouse gas emissions.

3.3 Local

There are no local regulations or guidelines that apply to assessment of cumulative impacts under CEQA.

4.0 METHODOLOGY

Cumulative impacts refer to two or more individual impacts that, when considered together, are considerable or that compound or increase other environmental impacts. As previously discussed, the cumulative impact of a project is the change in the environment that results from the incremental impact of the project when added to other, closely related past, present, or reasonably foreseeable, probable future projects.

The tentative year of opening for the Project is 2035. Due to the long-term nature of Project implementation, the list of projects analyzed in assessing cumulative impacts is speculative. For purposes of this analysis, a good faith attempt has been made to identify relevant public works and private projects. However, it was necessary to rely considerably on long-term plans and to make some assumptions about future development.

The existing conditions baseline year of 2019 generally constitutes the physical conditions by which potential cumulative impacts are evaluated. However, for several resource areas, a “projected future conditions baseline” is considered. In the 2013 *Neighbors for Smart Rail v. Exposition Metro Line Construction Authority* case (57 Cal.4th 439), the California Supreme Court upheld that a lead agency has the discretion to exclusively use a future conditions baseline for the purposes of determination of significance under CEQA in instances where showing an existing conditions analysis would be misleading or without informational value. Further, Section 15125(a)(1)(2) of the State CEQA Guidelines provides for the use of a projected future conditions (beyond the date of project operations) baseline. For the Project, this “projected future conditions baseline” is the 2042 without Project Conditions. The horizon year (2042) of the regional travel demand Corridor Based Model 2018 (CMB18), which incorporates Metro Measure M projects identified in the Measure M Expenditure Plan, roadway improvements, and other transit improvements anticipated to occur throughout the transit corridor, was selected as the Project design year. Use of this 2042 design year represents a characterization of the holistic, long-term benefits of the Project as transit-oriented development expands within the GSA and throughout the region.

Specifically relative to air quality, greenhouse gas (GHG) emissions, and transportation and traffic impacts, use of an existing conditions baseline would not be appropriate for the Project because it would ignore the regional background growth in population, traffic, and transportation infrastructure that would occur between the existing conditions baseline year of 2019 and the future conditions (i.e., the 2019 existing conditions will be substantially altered by regional growth that will occur independent of the Project, which, in turn, would mask the impacts that are attributable to the Project and would not provide the reader with an accurate and meaningful delineation of Project-related impacts). Considering such growth is critical when determining future mitigation for transit projects designed to reduce traffic congestion and associated air quality and GHG impacts.

The approach to the cumulative impacts analysis varies by discipline. Subjects for which cumulative impacts would accrue on a regional basis, such as regional traffic and air quality, are based on applicable planning documents designed to evaluate regional and area-wide conditions and rely on regional projections prepared and adopted by SCAG. For those disciplines where cumulative impacts are more localized (e.g., visual and aesthetic impacts), the analysis also considers specific development projects, which may also have localized impacts, at or adjacent to the Build Alternatives that may contribute to cumulative impacts either during construction or operations.

A cumulative impact assessment has been conducted for each environmental topic evaluated in the EIR. This impacts report summarizes the cumulative impact assessment conducted for those topics. Refer to the separate environmental impacts reports for additional Project information specific to a particular topic.

To accomplish the evaluation, a list of probable future projects with the potential to produce related or cumulative impacts has been identified and is presented in **Section 6.2** and **Section 6.3** of this impacts report to supplement the information already available regarding past and present projects. Future projects were identified through a review of existing plans including municipal (within the area of potential impact) and regional long-term plans for economic/land use and transportation development, the region's and the California Department of Transportation (Caltrans) Transportation Improvement Program (TIP), and specific development proposals along or near the alignment. This list is subject to the limitations described above due to the long-term build out of the proposed Build Alternatives.

This evaluation summarizes expected cumulative impacts produced by these projects and references any additional information that may be used to help determine the impacts.

The methodology used for this analysis follows State CEQA Guidelines (Section 15130), which state that the cumulative impacts can be based on a "summary of projections contained in an adopted local, regional, or statewide plan, or related planning document that describes or evaluates conditions contributing to the cumulative effect."

If the Project's incremental contribution to a significant adverse cumulative impact is cumulatively considerable, then feasible options for mitigating or avoiding the Project's contribution are identified. In some cases, it may be determined that there would be a significant cumulative impact, but the Project's contribution is less than cumulatively considerable because the Project is required to implement or fund its fair share of a mitigation measure(s) that would alleviate the cumulative impact. In other cases, the only feasible mitigation may involve adoption of ordinances or regulations that are outside the jurisdiction of Metro. In cases where the Project will comply with the requirements in a previously approved plan, regulation, or mitigation program that apply within the Project's geographic area but are under another agency's jurisdiction, the impact discussion explains how implementing those particular requirements ensure that the project's incremental contribution to the cumulative impact would not be cumulatively considerable. Note that the State CEQA Guidelines indicate that the mere existence of significant cumulative impacts caused by other projects alone does not constitute substantial evidence that the Project's incremental effects are cumulatively considerable.

A lead agency may also determine that a project's incremental contribution to a cumulative impact is not cumulatively considerable if the project complies with requirements in a previously approved plan or mitigation program (including, but not limited to, water quality control plan, air quality attainment or maintenance plan, integrated waste management plan, habitat conservation plan, natural community conservation plan, plans or regulations for the reduction of greenhouse gas (GHG) emissions) that provides specific requirements that would avoid or substantially lessen the cumulative problem. For these cases, the lead agency should explain how implementing the particular requirements in the plan, regulation, or program ensure that the project's incremental contribution to the cumulative impact is not cumulatively considerable.

For those environmental topics where the combined cumulative impact associated with the Build Alternatives and the other listed projects is not significant, the impact discussion briefly indicates why the cumulative impact is not significant and is not discussed in further detail.

5.0 THRESHOLDS OF SIGNIFICANCE

As prescribed in the CEQA Guidelines, a cumulative impact may be considered significant if the project's incremental effect is cumulatively considerable as previously defined in **Section 3.2**. When considering whether the project's incremental impact is cumulatively considerable, mitigation measures that would be implemented by the project sponsor may be considered. If the mitigation measures alleviate the project's incremental contribution to the cumulatively considerable impact, then the project does not result in a significant impact that is cumulatively considerable.

It should be noted that the limited details available about other projects may also limit the extent of the evaluation possible for some cumulative impacts/effects as compared to that for the evaluation of direct and indirect impacts/effects.

6.0 PLANS AND PROJECTS

This section identifies transportation, land use, and land development plans within the general study area (GSA) and transportation, land use, and land development projects within the detailed study area (DSA). These plans and projects are used as the basis for the cumulative analysis. Literature reviews and website searches were conducted to identify the list of related plans and projects; sources include county and city noticing and planning websites and CEQA net. In addition, Metro obtained information directly from the local jurisdictions within the DSA. **Table 6-1** identifies transportation plans and projects in the vicinity of the proposed Project; **Table 6-2** identifies land use plans and projects related to the cumulative analysis.

6.1 Transportation Plans

6.1.1 Southern California Associations of Governments Regional Transportation Plan

In September 2020, SCAG adopted the 2020 RTP/SCS. The plan is an update to the previous 2016 RTP/SCS plan and outlines more than \$638 billion in transportation system investments through 2045. SCAG's vision for 2045 encompasses compact and connected communities located near public transit to encourage people to live closer to work, school, shopping and other destinations. The 2020 RTP/SCS plan supports implementing and expanding transit signal priority, regional and inter-county fare agreements and media, increased bicycle carrying capacity on transit and rail vehicles, real-time passenger information systems, and implementing first/last mile amenities within a half-mile of existing and future LRT stations.

6.1.2 Metro's Long-Range Transportation Plan

Metro's most recent update to its LRTP was adopted in September 2020. The plan consists of over \$400 billion in planned transportation improvements through 2050 and serves as a blueprint for transportation infrastructure and planning throughout the metropolitan region. Public and community events and surveys, in conjunction with local government and other stakeholder feedback has helped to evolve Metro's role and distill Metro's priorities in the LRTP to focus on enhanced and more accessible transit, reduced roadway and highway congestion, complete streets, and access to opportunity for all communities. The plan is funded by voter-approved sales tax measures including the most recent Measure M. Since the passing of Measure M, Metro refined the scope of the LRTP to be more modular, dynamic, and comprehensive to allow planning and implementation efforts to be flexible when addressing the timing of milestones and to be adaptable in meeting near term and long-range transportation needs. Through this modular approach, the LRTP will thoroughly address stakeholders and partners; meet federal requirements; and achieve a quality, comprehensive transportation plan for Los Angeles County.

Within the 40-year planning period of the LRTP, new technological innovations, already underway, are expected to transform transportation in Los Angeles. The LRTP plan is set to serve as a blueprint for how Metro will spend anticipated revenues in the coming decades, including:

- Operate and maintain the current and planned system
- Continue to deliver on commitments outlined in the 2009 LRTP
- Identify any new projects, programs, or initiatives

6.1.3 Metro Vision 2028 Strategic Plan

The Metro Vision Strategic Plan is a 10-year plan to transform mobility throughout Los Angeles County. Metro has adopted performance outcomes and goals to deliver a mobility system that enables people to travel swiftly and easily throughout Los Angeles County. Metro's vision is operations-based and includes quantifiable metrics. Mobility standards aim to ensure that all Los Angeles County residents will have a 10-minute access shed to a high-quality transit stop, headways will be reduced to 15-minutes during any time of the day, and travel speeds will increase by 30 percent, and reliable options will be available to bypass congestion. Goals focus on the user experience and community building:

- Provide high-quality mobility options that enable people to spend less time traveling
- Deliver outstanding trip experience for all users of the transportation system
- Enhance communities and lives through mobility and access to opportunity
- Transform Los Angeles County through regional collaboration and national leadership
- Provide responsive, accountable, and trustworthy governance within the Metro organization

6.1.4 NextGen Bus Plan

In October 2020, the Metro Board approved and adopted the NextGen Bus Plan, an effort to identify and address the needs of current and future riders throughout the region. The study elicited feedback from over 20,000 residents of Los Angeles County over the course of hundreds of meetings, events, workshops, and presentations. Local governments and other stakeholder groups also provided extensive input to the development of the NextGen Bus Plan. The would update the aging bus system to a competitive world-class bus system that meets the needs of Los Angeles County residents. According to Metro's 2020 LRTP, over the next decade, Metro will continue to work to implement the recommendations in the NextGen Bus Plan. The primary focus of the NextGen Bus Plan improvements will be to create a system that is fast, frequent, reliable and accessible by:

- Doubling the number of frequent Metro bus lines
- Providing more than 80 percent of current bus riders with 10 minute or better frequency
- Improving and expanding midday, evening and weekend service, creating an all-day, 7-day-a-week service
- Ensuring a ¼-mile walk to a bus stop for 99 percent of current riders
- Creating a more comfortable and safer waiting environment

6.1.5 Bus Rapid Transit Vision and Principles Study

In October 2018, the Metro Board approved initiation of the Bus Rapid Transit (BRT) Vision and Principles Study as a part of the Twenty-Eight by 2028 Plan. In November 2020, the Metro visioning BRT report summarized the study findings, which evaluated potential BRT corridors that would serve Los Angeles County. All 34 corridors initially evaluated in Metro's 2013 BRT and Street Design Improvement Study and 39 additional corridors identified through a Technical Advisory Committee consisting of Metro staff, local governments, and municipal transit operators were evaluated to determine the corridors with optimal characteristics for BRT integration. Three corridors from the 2013 study, which are currently in the planning implementation stages of BRT, were not studied in further depth. Five candidate corridors were identified as top candidates eligible for Measure M Countywide BRT program funds, including:

- Atlantic (San Gabriel Valley to the City of Long Beach)
- Broadway (Little Tokyo/Arts District to Imperial Highway)
- La Cienega (Santa Monica Boulevard to Westfield Culver City)
- Sunset (East Los Angeles College to Colorado and Brand [Glendale])
- Venice (Figueroa Street to Pacific Avenue)

An additional 30 high-performing corridors were identified to develop a “core” network of BRT, to which expansion would continue after investment in the top five corridors has completed. A further countrywide network was developed from those 30 core corridors in development of a long-term Strategic BRT network vision.

6.1.6 First/Last Mile Planning

A Metro Board motion filed on May 18, 2016, calls for all future transit projects to include first/last mile (FLM) components that improve access, safety, and user experience in the areas surrounding stations extending the reach of transit and increasing ridership in the long term. Prior to the Metro Board motion, Metro prepared a First/Last Mile Strategic Plan and Planning Guidelines in March 2014. In 2021, Metro updated the First/Last Mile Guidelines to facilitate further integration of FLM planning into future project delivery.

The First/Last Mile Guidelines are used to provide local jurisdictions planning guidelines that outline specific infrastructure improvement strategies that are designed to facilitate easy, safe, and efficient access to the Metro transit network and to ensure comprehensive integration of FLM improvements into future capital projects. The guidelines serve as a resource for Metro, public, and private organizations throughout the region who are working to update programs, land-use plans, planning guidelines, business models, entitlement processes, and other tools that leverage Los Angeles County's significant investment in the public transportation network.

6.2 Transportation Projects

6.2.1 Measure M Expenditure Plan

In November 2016, Los Angeles County voters approved a sales tax measure, Measure M, which is expected to bring up to \$120 Billion (2015) for use in transportation infrastructure capital, operations, and maintenance over a 40-year time frame. The Measure M Expenditure Plan includes delivering approximately 40 major infrastructure projects between 2018 and 2057. The regional transportation network shown on **Figure 6.1** represents the full build-out of Measure M in 2057, and **Figure 6.2** shows the rail and busway network with Measure M transit projects.

The No Project Alternative includes the planned regional projects in operation in the horizon year (2042). In addition to the Regional Connector, the planned regional projects from Measure M, including their estimated completion dates, are listed below:¹

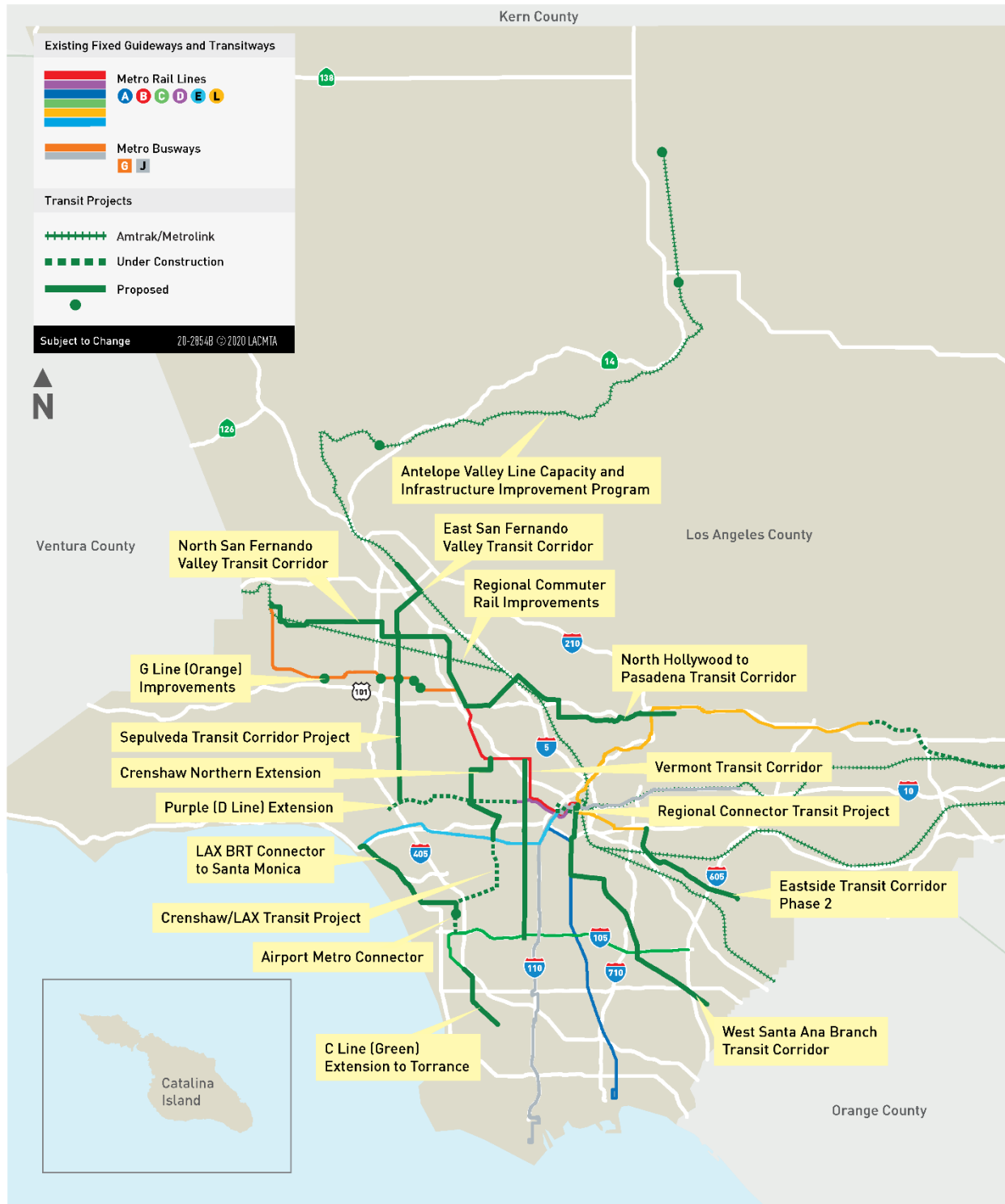
- Metro L (Gold) Line Foothill Extension to Claremont (Glendora to Pomona: 2025, Pomona to Montclair: 2028)
- West Santa Ana Branch Transit Corridor LRT from Artesia to Downtown Los Angeles (2041)
- Airport Metro Connector Aviation Boulevard/96th Street Station to Los Angeles International Airport (LAX) (2024)
- Metro C (Green) Line Extension to Crenshaw Boulevard in Torrance – Redondo Beach to Torrance Transit Center (2030-2033)
- Metro K Line(Crenshaw/LAX) (2022)
- Vermont Transit Corridor BRT – Hollywood Boulevard to 120th (2028-2030)
- Metro Westside D (Purple) Line Extension (Section 1: 2024, Section 2: 2025, Section 3: 2027)
- East San Fernando Valley Transit Corridor Project connecting Orange Line Van Nuys station to the Sylmar/San Fernando Metrolink Station (2028)
- Metro G (Orange) Line BRT Improvements (2026)
- North Hollywood (G Line/B Line) to Pasadena (L Line) BRT Connector (2024)
- Sepulveda Pass Transit Corridor from Expo Line to East San Fernando Valley Line (Phase 1 and 2) (2033-2035)

¹ Measure M also includes The Eastside Transit Corridor Phase 2 project (the Project); however the Project would not be implemented under the No Project Alternative.



Source: Los Angeles County Metropolitan Transportation Authority, 2016.

Figure 6.1. Regional Transportation Network with Measure M Build-Out by 2057



Source: Los Angeles County Metropolitan Transportation Authority, 2017.

Figure 6.2. Metro Rail and Busway with Measure M Transit Projects

6.2.2 MicroTransit

In 2019 Metro initiated a MicroTransit Pilot (MTP) project, called Mobility on Demand (MOD) which included preschedule rideshare trips on 10-passenger vehicles within designated service areas. In 2021, MOD was superseded by the Metro Micro Program, which focused on improving the micro transit design with a new demand-responsive service to improve the user experience for transit users. The new service provides passengers with an on-call service, using a ride hailing application on smartphone devices. Unlike a standard bus, the service follows navigational instructions, using live traffic conditions and real-time requests for pick-up and drop-offs to generate the most efficient possible shared trips for Metro customers. The service is used for short trips under approximately 20 minutes in duration in defined service zones and utilizes vehicles that are smaller than traditional transit vehicles. This three-year pilot program will help to evaluate the viability of micro transit in supporting larger transit capital programs in the region.

6.2.3 Local Transportation Plans and Projects

Table 6-1 lists the various local transportation plans and projects within the DSA, including roadway and signal improvements. Some local jurisdictions also have planned active transportation projects.

Table 6-1. Local Transportation Plans and Projects within the DSA

Name	Type	Jurisdiction	Description
California High-Speed Rail	Transit	State	The California High-Speed Rail Authority, a state agency, is responsible for planning, designing, building and operation of the first high-speed rail system in the nation. By 2029, the system will run from San Francisco to the Los Angeles basin and eventually extend to Sacramento and San Diego, totaling 800 miles with up to 24 stations (anticipated to be complete by 2029)
Caltrans - Pomona Freeway (SR-60) Pavement Rehabilitation	Roadway Improvements	State	Restore the roadway and improve the ride quality by rehabilitating the existing lanes with pavement that will extend the life of the roadway a minimum of 40 years
Vision Zero Enhancements for East Los Angeles	Active Transportation	Los Angeles County	Bicycle facility improvements (anticipated to be complete by 2032)
East Los Angeles Pedestrian Accessibility Improvements	Active Transportation	Los Angeles County	Whittier Boulevard from Indiana to Saybrook Avenue and 3rd Street from Indiana Street to Atlantic Boulevard
Olympic Multi-Modal Transportation Improvements	Traffic Signal Improvements	Los Angeles County	Olympic Boulevard between Indiana and Concourse
Whittier Multi-Modal Transportation Improvements	Traffic Signal Improvements	Los Angeles County	Signal phase and timing (SPaT) deployment on Whittier Boulevard from Indiana Street to Saybrook Avenue and 3rd Street from Indiana to Atlantic Boulevard
East Los Angeles Traffic Signal Enhancements	Traffic Signal Improvements	Los Angeles County	Intelligent Transportation System (ITS) and SPaT deployment between 3rd Street and Telegraph
Atlantic Multi-Modal Transportation Improvements	Traffic Signal Improvements	Los Angeles County	SPaT Improvements on Whittier Boulevard from Indiana to Saybrook Avenue and 3rd Street from Indiana to Atlantic Boulevard
Atlantic Safety, Beautification, and Pavement Rehabilitation Project	Roadway Improvements	Commerce	Roadway improvement for truck mobility and pedestrian enhancements
Washington/Garfield and Garfield/Yates Intersection Improvements	Roadway Improvements	Commerce	Roadway improvements
Garfield/Slauson Intersection Improvements	Roadway Improvements	Commerce	Roadway improvements

Name	Type	Jurisdiction	Description
Garfield/Washington Boulevard Multi-Modal Project	Roadway Improvements	Commerce	Enhance roadway capacity and pedestrian crosswalks
Los Angeles County-City Joint Road Project	Roadway Improvements	Commerce	Roadway Improvements
Mixmaster Traffic Study	Traffic Study	Commerce	Traffic study for Atlantic Boulevard, Telegraph Road, Ferguson Drive, and Goodrich Boulevard intersection
Washington Widening and Reconstruction Project	Roadway Improvements	Commerce	Roadway improvements and enhance roadway capacity
Citywide Pedestrian Bike Connectivity Commerce Active Transportation and Safe Routes to School	Active Transportation	Commerce	Safe Routes to School
Montebello Active Transportation Project	Active Transportation	Montebello	Bicycle and Pedestrian improvements between Lincoln Boulevard to Paramount Boulevard
Via Campo and Wilcox Concrete Pavement Intersection	Roadway Improvement	Montebello	Concrete Pavement Project
Beverly Boulevard Traffic Signal Enhancements	Traffic Signal Improvements	Montebello	Beverly signal synchronization from Pomona Street to Painter Avenue
Pico Rivera Regional Bikeway	Active Transportation	Pico Rivera	Construction of the Pico Rivera Regional Bikeway on Mines Avenue from Paramount Boulevard to the San Gabriel River, across the San Gabriel River, and along Dunlap Crossing Road from the San Gabriel River to Norwalk Boulevard (anticipated to be complete by 2024)
ACE - Durfee Avenue Grade Separation Project	Roadway Improvements	Pico Rivera	Roadway and the railroad tracks separation on Durfee Avenue between Beverly Road and Whittier Boulevard (anticipated to be complete by June 2022)
Mines Avenue Concept Plan	Roadway Improvements	Pico Rivera	Enhance pedestrian safety, traffic calming, and parking
Washington I-605 Arterial Concept Plan	Roadway Improvement	Santa Fe Springs	Enhance roadway capacity and signal improvements
Norwalk/Washington Intersection Improvements	Roadway Improvements	Santa Fe Springs	Enhance Roadway Capacity

Name	Type	Jurisdiction	Description
West Whittier-Los Nietos Norwalk Boulevard/Reichling Lane Intersection Improvements	Traffic Signal Improvements	West Whittier-Los Nietos	Install left-turn phasing for northbound and southbound traffic, upgrade existing traffic signal poles, mast arms, crosswalks and curb ramps, upgrade existing and install additional vehicle and pedestrian heads, upgrade existing pedestrian push buttons and recut advance loop detectors for northbound and southbound traffic for the intersection (anticipated to be complete by spring 2023)
West Whittier- Los Nietos Roadway Resurfacing	Active Transportation	West Whittier-Los Nietos	Resurfacing of 3.0 miles of major roadway with an included 2.46 miles of bike facilities. Routes include Broadway from Mines Boulevard to Norwalk Boulevard, Broadway from Whittier Boulevard to Mines Boulevard, Mines Boulevard from Broadway to Sorensen Avenue, and Mines Boulevard from Norwalk Boulevard to Broadway (anticipated to be complete by summer 2024)

Source: CDM Smith/AECOM JV, 2022

6.3 Land Use Plans and Projects

6.3.1 Metro's Transit-Oriented Communities Policy

The Metro Board adopted the Transit Oriented Communities (TOC) Policy in June 2018. The purpose of the policy is to define the concept of TOCs for Metro and to establish a set of criteria to determine which TOC activities Metro will fund and implement directly as part of a separate process. The TOC policy contains intersectional principles to mobilize, revitalize, and enhance communities. Specific TOC goals and principles include:

- Increase transportation ridership and choice through the promotion of non-motorized modes of transportation. Land use and urban design elements shall enhance FLM elements and create safe, active transportation environments that are inclusive to all ages and protected statuses.
- Stabilize and enhance communities surrounding transit with affordable housing. TOCs shall protect residents from displacement and promote sustained economic vitality for small businesses.
- Engage organizations, jurisdictions, and the public by performing outreach to the community and fostering partnerships with business and labor.
- Distribute transit benefits to all by ensuring investments positively impact disadvantaged and underrepresented communities. Improve the outcomes related to communities' safety, health, social, and economic well-being.
- Capture value created by transit. TOCs shall increase the value of properties surrounding Metro's transit investments.

6.3.2 Related Projects

Table 6-2 contains the land use development projects that are considered in the cumulative impact analysis that may occur in the same vicinity and timeframe of the Project. Related projects include past, present, and reasonably foreseeable future projects located within the DSA. These are shown on **Figure 6.3**.

Table 6-2. Related Projects within the DSA by Jurisdiction

Fig. #	Name	Type	Jurisdiction	Description
1	Third and Dangler	Affordable Housing	East Los Angeles (Unincorporated Los Angeles County)	4-story, 78-unit affordable/permanent supportive housing project on a 0.59 acres lot, with a projected completion date in 2023.
2	Utility Corridor Park Development	Recreation/Open Space	East Los Angeles (Unincorporated Los Angeles County)	Proposed 8.4-acre public park on a utility corridor. Project pending approval for Proposition 68 grant funding and negotiations with SCE regarding use of the corridor. Located at 6254 Hubbard Street.
3	Rosewood Village	Residential	Commerce	133-unit townhome development on a 5.7-acre site at 5550 Harbor Street. The project would replace existing industrial facilities and construction is expected to conclude in late 2023.
4	2113 W. Whittier Boulevard	Residential	Montebello	Five story, 67-unit project approved in 2015 as a Planned Development District. Construction has not begun on the site.
5	605 Warehouse Project	Industrial	Pico Rivera	New industrial warehouse, distribution and office facility totaling 357,903 square feet and a 2,500 square-foot print shop facility; both facilities include surface parking, landscaping, and other ancillary improvements. Located at the southwest corner of Beverly Boulevard and Interstate 60. Project is not yet approved.
6	The Mercury 8825 Washington Boulevard	Mixed Use	Pico Rivera	Development of a 255 unit mixed-use development on a 2.85 acre site located at 8825 Washington Boulevard with 255 units and approximately 5,420 square feet of commercial space. Project is not yet approved.
7	6605 Rosemead Boulevard	Industrial	Pico Rivera	Development of a self-storage facility located at 6605 Rosemead Boulevard. The project consists of new construction of 63,066 square feet, four story (52 feet), self-storage facility on a 28,208 square foot site. Project is not yet approved.
8	Beverly Crossing Commercial Project- 9036 Beverly Boulevard	Commercial	Pico Rivera	Commercial retail space with that includes approximately 53,960 square feet of neighborhood retail and restaurants. Approved in 2020. Construction timeline is uncertain.
9	Sorensen XC, LLC	Industrial	Santa Fe Springs	Development of a 233,779 square foot concrete tilt-up industrial buildings, which is located at 8201 Sorensen Avenue.

Fig. #	Name	Type	Jurisdiction	Description
10	Florence Homes Residential Project	Residential	Whittier	A 1.23-acre single lot map for residential condominium purposes at 8315, 8319, and 8335 Greenleaf Avenue in the City of Whittier, CA
11	Trinity Lutheran Church Campus Modification and Brandywine Homes New 25-Unit Detached Single-Family Condominium Project	Residential	Whittier	Modifications to the existing church facility and subdividing of a 3.59-acre parcel of land located at 11716 Floral Drive for the church and residential development.
12	The Groves (former Fred C. Nelles Youth Correctional Facility)	Mixed Use	Whittier	75.6-acre residential, commercial and open space uses. 189 rental units, 561 for sale. Currently under construction/partially open.
13	10727 Orange Grove Avenue	Residential	Whittier	R-3 Medium Multiple Residential; R-4 Heavy Multiple Residential. 5-unit townhouse project approved in 2017. Construction timeline uncertain.
14	12428 Washington Boulevard	Residential	Whittier	13-unit townhouse development approved. Construction timeline uncertain.
15	8016 Santa Fe Springs Road	Residential	Whittier	2.79-acre site into two parcels; 60-unit apartment complex approved in 2018. Under construction.
16	Whittier Aquatic Center	Recreational	Whittier	Olympic-size swimming pool, practice pool, and 12,000 square foot building with offices, restrooms, and classrooms. Under construction. Expected opening fall 2022.



Source: Metro; CDM Smith/AECOM JV, 2022.

Figure 6.3. Land Use Development Projects within the DSA

7.0 IMPACTS

The following sections analyze the cumulative impacts identified for each resource area relative to the Build Alternatives and transportation plans identified in **Section 6.1** and the list of related projects within the DSA as identified in **Table 6-1** and **Table 6-2**.

The cumulative impacts analysis considers all Build Alternatives and the design option(s) with the applicable MSF site option(s) or MSF design option. Unless otherwise discussed, the cumulative impacts of each Build Alternatives (without or with the design option[s]) and MSF site option applicable to each Build Alternative would be same.

7.1 Transportation and Traffic

Impacts on transportation and traffic are discussed in detail in the Eastside Transit Corridor Phase 2 Transportation and Traffic Impacts Report. The study area for this analysis is the GSA for analyses related to transit ridership and regional transportation/VMT and the DSA for other potential transportation impacts (pedestrian and bicycle impacts, and emergency access). The transportation analysis was conducted using regional growth rates which include planned growth in population and employment in Los Angeles County. As a result, the traffic volumes for the Build Alternatives represent the cumulative future condition based on the effects of regional growth on the transportation system. As described in the Eastside Transit Corridor Phase 2 Transportation and Traffic Impacts Report, future conditions are evaluated using a 2042 future conditions baseline of 2042. In this case, the projected future conditions baseline is the 2042 without Project Conditions; the projected future conditions baseline applies to the cumulative analysis. Background growth in regional population and employment is expected to continue in the future; thus, VMT is also expected to continue to grow. Increased traffic congestion would result, particularly along the major east-west and north-south arterials, such as Atlantic Boulevard and Washington Boulevard. According to the Governor's OPR technical guidance, transit and active transportation projects, including all passenger rail, bus and BRT, and bicycle and pedestrian infrastructure projects, generally reduce VMT and are therefore anticipated to cause less than significant impacts on transportation. Accordingly, the Build Alternatives were found to reduce VMT (Table 8-17 of Section 3.14). Thus, the Build Alternatives is expected to result in reduced VMT, and the Build Alternatives' incremental effect on VMT would not be cumulatively considerable.

Operation of the Build Alternatives would not conflict with adopted regional or local policies or plans related to roadway circulation or transit. Thus, the Build Alternatives would not have a cumulative impact.

The DSA consists of a dense urban environment with existing vehicle traffic; this environment produces existing concerns related to design hazards, pedestrian and bicycle safety, and fire and police protection response times. Operation of Alternative 1 and Alternative 3 with the Montebello At-Grade Option would introduce new at-grade rail and grade crossings. However, as discussed in the Eastside Transit Corridor Phase 2 Transportation Impacts Report and described in PM TRA-1, Metro would coordinate with fire and police protection officials when designing grade crossings to ensure that access for police and fire protection services would be maintained under Alternative 1 and Alternative 3 with the Montebello At-Grade Option. In addition, all new LRT facilities and crossings would be designed in accordance with the MRDC, including the Fire/Life Safety Criteria, to ensure safety and

minimize potential hazards at all locations. Vehicular and pedestrian crossings across the at-grade portion of the alignment would be limited to intersections controlled by traffic signals. Uncontrolled mid-block vehicular crossings of tracks and mid-block left turns would not be permitted and would be physically prohibited by a curb between the roadway and at-grade guideway with a fence between the two tracks in the center of the guideway whenever feasible. Thus, Alternative 1's and Alternative 3 with the Montebello At-Grade Option's incremental effect on design hazards, pedestrian and bicycle safety, and fire and police response times would not be cumulatively considerable.

The simultaneous construction of the Build Alternatives and the related projects in the DSA, would result in a short-term significant cumulative impact to transit and traffic circulation, pedestrian and bicycle access, safety, and emergency response times during construction, related to activities in the ROW, including temporary roadway closures, lane closures, and sidewalk closures throughout the alignment. Planned roadway projects listed in **Table 6-2**, or other developments identified in Section 6.0 directly adjacent to roadways, could require temporary lane and road closures, detours, reduction in lane widths, and reductions in speed limits, which could result in cumulative impacts on circulation patterns, pedestrian and bicycle access, safety, and limited or delayed access for emergency responders. However, similar to the Project, the related projects identified in **Section 6.0** would be required to undergo environmental review and implement construction management plans to reduce traffic impacts during construction. As discussed in the Eastside Transit Corridor Phase 2 Transportation and Traffic Impacts Report, MM TRA-1 would provide traffic control plans, designated haul routes, and a Traffic Management Plan to minimize disruption during construction of the Build Alternatives. Additionally, BMPs would be implemented as project measures to minimize impacts on transportation and traffic, safety, and emergency response times from construction (Section 3.14). Therefore, considered cumulatively with the plans and projects identified in **Section 6.0**, with implementation of MM TRA-1, the Build Alternatives' incremental effect on transportation and traffic circulation, pedestrian and bicycle access and safety, and emergency response times during construction would not be cumulatively considerable.

7.2 Land Use and Planning

As discussed in the Eastside Transit Corridor Phase 2 Land Use and Planning Impacts Report, the DSA is a highly urbanized area. The study area for this analysis is the DSA. The related land development projects identified in **Table 6-2** are site-specific projects and would not cumulatively result in a divided community. The Build Alternatives and related land development projects are also subject to land use regulation by the local jurisdictions in which the project is located that are updated as necessary to reflect current land use planning policies supported by State, regional, and local jurisdictions. Simultaneous construction of some related land development projects and the Build Alternatives could occur, potentially resulting in short-term and temporary construction disruptions to the existing physical environment and localized circulation through temporary street or sidewalk closures. However, the proposed street closures and turning restrictions associated with the Build Alternatives and related projects would not divide existing communities as access to streets and surrounding properties would generally be required to be maintained through the rerouting of traffic within adjacent local streets as specified in traffic management plans. Considered cumulatively with the plans and projects identified in **Section 6.0**, there would not be a significant cumulative impact.

7.3 Community and Neighborhood

Population and housing and public services and recreation impacts are discussed in more detail in the Eastside Transit Corridor Phase 2 Community and Neighborhood Impacts Report. The study area for these analyses is the GSA and DSA. Several of the related land development projects identified in **Table 6-2** provide new housing or commercial opportunities which would result in increases in local population and employment. However, these projects are subject to local city zoning regulations and approvals and must meet state Regional Housing Needs Allocation; therefore, the introduction of new housing or commercial opportunities would not constitute uncontrolled growth. These projects would not result in displacement that would require construction of replacement housing elsewhere. As discussed in the Eastside Transit Corridor Phase 2 Community and Neighborhood Impacts Report, the Build Alternatives would not include new housing or businesses that would directly result in population growth. An increase in transit service in the region may allow for increased development around station areas; however, such development is anticipated in the local jurisdictions' general plans and would be contingent upon local city zoning regulations and approvals. Therefore, development around station areas would not occur in an uncontrolled manner. The Build Alternatives would not result in incremental effects relative to unplanned population growth that could be compounded or increased when considered together with similar effects from other related land development projects. Considered cumulatively with the plans and projects identified in **Section 6.o**, there would not be a significant cumulative impact relative to population and employment growth or displacement.

As discussed above, several of the related land development projects would introduce new housing and commercial uses. Considered cumulatively, the increases in population and employment could require construction or expansion of new community facilities, including police facilities, fire facilities, parks, or recreational facilities, or otherwise increase the use of such facilities. Construction or expansion of these facilities could result in a cumulatively significant impact on community facilities. However, the Build Alternatives would not introduce new housing or commercial uses, directly impact such facilities, generate new users of facilities, or otherwise increase use of such facilities. The Build Alternatives would not result in incremental increases that could be compounded or increased when considered together with similar effects from other land development projects identified in **Table 6-2**. Considered cumulatively with the plans and projects identified in **Section 6.o**, the Build Alternatives' incremental effect would not be cumulatively considerable.

7.4 Visual and Aesthetics

As discussed in the Eastside Transit Corridor Phase 2 Visual and Aesthetics Impacts Report, the DSA, which is the study area for this analysis, is a highly urbanized area. The Project and the related land development projects identified in **Table 6-2** are typical of the urbanized environment and cumulatively would not substantially change the existing visual character. Further, it is anticipated that the related land use development projects would comply with zoning and design requirements of the applicable jurisdiction, including undergoing mandated design review where applicable. Scenic vistas are not substantially present within the DSA. The Build Alternatives and related land development projects would not cumulatively affect scenic vistas. Several of the related land development projects identified in **Table 6-2** are sufficiently substantial in massing and visual presence that they could affect views; however, none of these projects are physically located such that, in combination with the Build Alternatives, a significant cumulative impact to a scenic vista would occur. There are no scenic

highways within the DSA; the Build Alternatives would have no impact on a scenic highway, nor would it contribute to an incremental impact that could be compounded or increased when considered together with similar effects from other land development projects identified in **Table 6-2**. The existing urbanized environment within the DSA experiences a wide range of existing light and glare sources, including industrial and commercial uses, vehicular light, streetlights, parking facilities. Related land development projects identified in **Table 6-2** are consistent with the light and glare profile within the DSA, and the Build Alternatives would not contribute light and glare such that there would result a significant impact. Although the Project and the projects identified in **Table 6-2** could create temporary visual changes and introduce new visual elements from construction staging, equipment, lighting, and spoils, these changes would be temporary and would occur in highly urbanized environments. Considered cumulatively with the plans and projects identified in **Section 6.o**, there would not be a significant cumulative impact.

7.5 Air Quality

As discussed in the Eastside Transit Corridor Phase 2 Air Quality Impacts Report, the air quality analysis for the Build Alternatives is inherently cumulative in nature, being based on a given project's net contributions or reductions to airborne pollutants and using thresholds established based on a regional characterization of air quality conditions. Thus, the potential air quality impacts of the related land development projects identified in **Table 6-2** are already accounted for in the analysis. The Build Alternatives would result in a less than significant net increase of emissions of volatile organic compounds (VOC), and a net reduction in operational regional emissions of carbon monoxide (CO), nitrogen oxides (NO_x), sulfur dioxide (SO₂), inhalable particulate matter or particulate matter with an aerodynamic diameter less than or equal to 10 micrometers (PM₁₀), fine particulate matter or particulate matter with an aerodynamic diameter less than or equal to 2.5 micrometers (PM_{2.5}). In addition, the Build Alternatives would not expose sensitive receptors to toxic air contaminants (TAC) that would be likely to cause a substantial increase in human health risks. The Build Alternatives were considered regionally in the South Coast Air Quality Management District (SCAQMD) 2016 Air Quality Management Plan (AQMP) for the South Coast Air Basin, which was prepared in support of the state implementation plan and approved by California Air Resources Board and submitted to the U.S. Environmental Protection Agency for its final approval on April 27, 2017. Project consistency was determined based on a finding that the Project does not result in an increase to the frequency or severity of an existing air quality violation, the Project does not cause or contribute to new air quality violations, the Project does not delay the timely attainment of the air quality standards or the interim emission reductions specified in the AQMP, the Project is consistent with the population and employment growth projections upon which the AQMP forecasted emission levels are based, Project development is consistent with AQMP land use policies, and the Project is consistent with the applicable mitigation measures assumed in preparation of the AQMP. Additionally, in 2003, SCAQMD published a white paper on cumulative impacts and potential control strategies which considers the cumulative implications of air quality impacts under CEQA and indicates that projects which would not exceed the project-specific thresholds established by SCAQMD would generally not be considered to have a cumulatively considerable contribution to the respective air quality impact (SCAQMD 2003). The Build Alternatives would reduce VMT and associated emissions of criteria air pollutants and TAC during operation, and would not exceed SCAQMD's established construction thresholds for regional or localized impacts. Therefore, considered cumulatively, the Build Alternatives' incremental effect would not be cumulatively considerable.

7.6 Climate Change and Greenhouse Gases

Greenhouse gas emission impacts are inherently cumulative in nature. The Project's potential to result in greenhouse gas emission impacts are discussed in more detail in the Eastside Transit Corridor Phase 2 Climate Change and Greenhouse Gas Impacts Report. The study area for climate change and greenhouse gas emissions is the GSA. Several of the related land development projects identified in **Table 6-2** provide new housing or commercial opportunities which would result in increases in local population, employment, and VMT with accompanying increases in localized GHG emissions. As described in the Eastside Transit Corridor Phase 2 Climate Change and Greenhouse Gas Impacts Report, Project GHG emissions are evaluated using a 2042 projected future conditions baseline. In this case, the adjusted environmental baseline is the 2042 without Project Conditions; the projected future conditions baseline applies to the cumulative analysis. The Project would result in a reduction in VMT from regional traffic, as well as an increase in GHG emissions from electricity necessary to operate the system. Overall, a small net decrease or small net increase in regional operational GHG emissions would be expected as compared to the 2042 projected future conditions baseline depending on the Build Alternative and MSF selected. Considered cumulatively, the change in GHG emissions from the Build Alternatives and related projects would result in a cumulatively significant impact. However, as discussed in the Eastside Transit Corridor Phase 2 Climate Change and Greenhouse Gases Impacts Report, the Project is a component in the Connect SoCal Program EIR analysis, which found the Project to be a contributor to cumulative reductions in regional VMT and associated reductions in cumulative GHG emissions projected in that analysis. In addition, the Project contributes to California's goal to increase mass transit under the AB 32 Scoping Plan. Implementation of Alternative 1 would enhance regional transportation systems and contribute to planning efforts to reduce VMT and GHG emissions from transportation sources. Because the Build Alternatives support the statewide AB 32 scoping plan and were contemplated in the 2020 RTP/SCS Connect SoCal Program EIR analyses and found to be a contributor to cumulative reductions in regional VMT, the Build Alternatives' incremental effect would not be cumulatively considerable.

7.7 Noise and Vibration

As discussed in the Eastside Transit Corridor Phase 2 Noise and Vibration Impacts Report, the noise assessment criteria for the Build Alternatives are based on the Project's potential noise generation and the existing ambient conditions; the analysis is therefore cumulative in nature insofar as it accounts for the combined noise effects of past and present projects.

None of the future operational noise levels under the Build scenario were found to exceed the Federal Transit Administration (FTA) severe impact criterion; of the representative receptors, Mo7 (6735 Keltonview Drive) was the receptor with the predicted build noise closest to the severe impact criterion at 4 dBA below the severe impact threshold. The FTA screening distances of 350 feet (unobstructed noise screening distance) and 150 feet (unobstructed vibration screening distance) were used to develop the population of receptors included in the noise and vibration modeling analyses.

As described in the Eastside Transit Corridor Phase 2 Noise and Vibration Impacts Report, noise is logarithmic and it takes a doubling of sound energy (or a 100 percent increase) to produce a 3 dBA increase. Thus, a related land development project would need to produce operational noise greater than the Project itself for there to be a cumulative increase in operational noise that reached the FTA severe impact criterion for Mo7, the representative receptor closest to the severe impact criterion. However, there are no related land development projects located within the FTA screening distances

of 350 feet unobstructed or 150 feet obstructed with which operational noise from the Project could combine. Further, the related land development projects identified in **Table 6-2** would be subject to land use regulation by the local jurisdictions and which would limit operational noise. Considered cumulatively with the plans and projects identified in **Section 6.o**, there would not be a significant cumulative impact relative to operational noise.

Although the construction methods of the related land development projects vary based on the structure type, height, and configuration, if construction of the Build Alternatives, including construction of staging areas, were to occur concurrently with construction of related land development projects in the same vicinity, this could result in a significant cumulative noise impact. The Build Alternatives were found to have a significant Project-level noise impact as a result of construction noise. However, with the mitigation measures presented in the Eastside Transit Corridor Phase 2 Noise and Vibration Impacts Report, all Project-related noise impacts would be reduced to less than significant. In addition, there are no related land development projects identified in **Table 6-2** within the FTA screening distances of 350 feet unobstructed or 150 feet obstructed with which construction noise from the Project could cumulatively combine. Therefore, considered cumulatively with the plans and projects identified in **Section 6.o**, and with implementation of MM NOI-1 through MM NOI-11, as shown in **Table 8-1**, the Build Alternatives' incremental effect would not be cumulatively considerable relative to construction noise.

The related land development projects identified in **Table 6-2** would be subject to land use regulation by the local jurisdictions and would not be expected to exceed operational or construction vibration limitations. However, the Build Alternatives were found to have a significant vibration impact if not mitigated, which would result in a significant cumulative vibration impact. MM NOI-2, MM NOI-4, MM NOI-5, MM NOI-7, MM NOI-8, MM NOI-9, MM NOI-12, MM NOI-13, NOI-14, and MM NOI-15 would mitigate the Project's potential vibration impacts to a less than significant level. Considered cumulatively with the plans and projects identified in **Table 6-2**, and with implementation of mitigation as shown in **Table 8-1** the Build Alternatives' incremental effect would not be cumulatively considerable relative to vibration.

7.8 Biological Resources

Impacts on biological resources are discussed in the Eastside Transit Corridor Phase 2 Biological Resources Impacts Report. The biological resources specialized study area, known as the biological resources study area (BRSA), for each of the Build Alternatives is the area within a 500-foot buffer of the LRT guideway and includes the station, TPSSs, and MSF site option footprints, which is the area analyzed in field surveys. Alternative 1 would have a significant Project-level impact on bats from construction of replacement bridges over the Rio Hondo and San Gabriel River. Alternatives 2 and 3 would not require replacement of the bridges across the Rio Hondo and San Gabriel River, and would therefore have less than significant impacts on bats. The impact on bats would result from bridge modification; the related land development projects identified in **Table 6-2** would not result in continued modification of bridges, and therefore the significant impact on bats resulting from bridge replacement would not be cumulatively affected by the related plans and projects. With incorporation of MM BIO-1 through MM BIO-3, as shown in **Table 8-1**, impacts on bats from Alternative 1 would be reduced to less than significant. Therefore, there would not be a significant cumulative impact relative to bats.

As discussed in the Eastside Transit Corridor Phase 2 Biological Resources Impacts Report, the Build Alternatives would have a significant Project-level impact on migratory birds from nesting habitat

destruction during construction or tree trimming during operation. Related land development projects identified in **Table 6-2** could likewise impact migratory birds and therefore result in a cumulatively significant impact. Project-level MM BIO-4 would ensure that construction and tree-trimming would not occur in the vicinity of active nests. Considered cumulatively with the plans and projects identified in **Section 6.o**, and with implementation of MM BIO-4, as shown in **Table 8-1**, the Build Alternatives' incremental effect would not be considerable relative to migratory birds.

Construction of related land development projects within the DSA, which encompasses the BRSA, and Build Alternatives would have the potential to spread invasive species. Considered cumulatively, the potential to spread invasive species from construction of the Build Alternatives and related projects would result in a cumulatively significant impact. However, with incorporation of mitigation measures, all Project-related impacts under BIO-2 would be reduced to less than significant. The significant impact from the spread of invasive species would not be cumulatively affected by the related plans and projects because it would be reduced by mitigation measures to clean construction equipment and avoid the spread of soil and plant material; therefore, the Project would not contribute any incremental impact. Considered cumulatively with the plans and projects identified in **Section 6.o**, and with implementation of MM BIO-5 and MM BIO-6, as shown in **Table 8-1**, the Build Alternatives' incremental effect would not be cumulatively considerable relative to invasive species.

The BRSA is an urbanized area which does not include wetlands or terrestrial wildlife corridors. Additionally, it does not support sensitive vegetation communities or sensitive species. The related land development projects and the Build Alternatives would be subject to local policies or ordinances protecting biological resources, and there would not be a cumulatively significant impact. There is no potential for the Build Alternatives to contribute any incremental impact under BIO-3 or BIO-4. Considered cumulatively with the plans and projects identified in **Section 6.o**, there would not be a significant cumulative impact relative to wetlands, wildlife corridors, sensitive vegetation communities, and consistency with local policies and ordinances.

7.9 Geology, Soils, Seismicity and Paleontological Resources

Geology, seismicity, soils, and paleontological impacts from the Project are discussed in more detail in the Eastside Transit Corridor Phase 2 Geology and Soils Impacts Report. The study area for geology, soils, and paleontological resources is the GSA to provide a regional context of the geological conditions, and the DSA for specific context. The related land development projects identified in **Table 6-2** are all located within the DSA on similar geologic units and soil types and would all be subject to the same building codes and standard engineering practices; the Project would not affect the cumulative level of exposure to seismic shaking, liquefaction, or landslides, nor contribute incrementally to a cumulative impact. Considered cumulatively with the plans and projects identified in **Section 6.o**, there would not be a significant cumulative impact relative to seismic shaking, liquefaction, or landslides.

As discussed in the Eastside Transit Corridor Phase 2 Geology, Soils, Seismicity and Paleontological Resources Impacts Report, the DSA is a highly urbanized area. The related land development projects involve land disturbance to varying degrees; they would be subject to applicable building codes and requirements of local jurisdictions. There is no potential for the Project to contribute an incremental impact to soil erosion or stability. Considered cumulatively with the plans and projects identified in **Section 6.o**, there would not be a significant cumulative impact relative to soil erosion or stability.

As discussed in the Eastside Transit Corridor Phase 2 Geology, Soils, Seismicity and Paleontological Resources Impacts Report, due to the unique nature of sub-grade tunnel boring activity, there would be no feasible way to monitor or mitigate paleontological impacts from boring and impacts with respect to paleontological resources would be significant. Other construction activities, including cut-and-cover construction of underground stations and the installation of support footings along the Alternative 1 and Alternative 3 aerial guideway and the Alternative 2 aerial guideway that leads to the Commerce MSF site option would also have the potential to result in significant impacts to paleontological resources, although mitigation measures would be adopted to reduce the impact from cut-and-cover construction and aerial guideway footing construction. The significant impact from tunnel boring activities could not be reduced by mitigation measures and would remain significant and unavoidable. Several of the related land development projects identified in **Table 6-2** involve ground excavation and disturbance; however, none involve tunnel boring or excavation at the same depth as the Project. Project-level mitigation measures would be implemented to lessen the significant Project-level impact; however, the impact would remain significant and unavoidable for Alternative 1, Alternative 2, and Alternative 3. Considered cumulatively with the plans and projects identified in **Section 6.0**, and even with implementation of MM GEO-1 through MM GEO-5, as shown in **Table 8-1**, there would be a significant cumulative impact. The incremental impact from Alternative 1, Alternative 2, and Alternative 3 would be cumulatively considerable.

7.10 Hazards and Hazardous Materials

As discussed in the Eastside Transit Corridor Phase 2 Hazards and Hazardous Materials Impacts Report, the hazards and hazardous materials specialized study area, known as the resource study area (RSA), for each of the Build Alternatives is the area within a one-mile buffer of the LRT guideway and includes a half-mile buffer of the stations, TPSSs, and MSF site option footprints. There are 30 affected properties that have documented releases in the RSA. Additionally, the eastern portion of the Project (from approximately Sorensen Avenue to Lambert Road/Santa Fe Springs Road) is situated within Operable Unit 2 (OU2) of the Omega Superfund Site. The potential for hazardous materials to occur is specific to each project site and is dependent on the nature of prior activities both on- and off-site; therefore, hazardous materials concerns generally do not combine to form cumulative impacts. All potential development projects in the DSA, which encompasses the RSA, including the Build Alternatives, would be required to comply with local, state, and federal regulations for transport, use, storage, and disposal of hazardous materials. Application of these regulations is mandatory; therefore, the overall cumulative impact from the routine transport, storage, use, and disposal of hazardous materials would be less than significant. Likewise, the overall cumulative impact from the handling of hazardous materials within one-quarter mile of a school would be less than significant.

With respect to the release of hazardous materials, the cumulative effects would be limited to the combined effect of the Build Alternatives and related land development projects in the DSA with the potential to result in hazardous emission exposures to the same populations that would potentially be exposed by hazardous material use for the Project. Due to the fact that health effects from hazardous substances can result from both acute or chronic exposures, the temporal context for cumulative effects relating to hazardous materials would include any past, present, or reasonably foreseeable development projects. Other projects in the DSA that may be contaminated with hazardous materials are required to be individually evaluated and remediated, with mitigation measures recommended as needed to reduce potential impacts. As discussed in the Eastside Transit Corridor Phase 2 Hazards and Hazardous Materials Impacts Report, Metro would implement MM HAZ-1 through MM HAZ-5, as shown in **Table 8-1**, which would reduce the risk for environmental and human health hazards during construction to a less than significant level. Furthermore, any necessary measures related to

hazardous material exposure at other project sites in the DSA would be confined to those specific project sites and would not be additive in nature. Considered cumulatively with the plans and projects identified in **Section 6.o**, there would not be a significant cumulative impact relative to hazardous material exposure.

As discussed above, the potential for hazardous materials to occur is specific to each project site and is dependent on the nature of prior activities both on- and off-site; therefore, hazardous materials concerns generally do not combine to form cumulative impacts. There are various sites with known soil and groundwater contamination in the vicinity of the Build Alternatives; the potential hazards from these sites do not combine with sites from the related land development projects to result in a cumulative impact. Therefore, there would not be a cumulatively significant impact relative to hazardous sites. For construction of the Commerce MSF site option or Montebello MSF site option, Metro would implement Project-level MM HAZ-1 through MM HAZ-5, as shown in **Table 8-1**, which would reduce environmental and human health hazards during construction to a less than significant level. Considered cumulatively with the plans and projects identified in **Section 6.o**, there would not be a significant cumulative impact relative to hazardous sites.

The geographic context for cumulative impacts from impairment of emergency response plans would be limited to those cumulative projects in the immediate vicinity of the Project with the potential to result in temporary or permanent disruption to the same roading network that the Project would temporarily impact. The temporal context for cumulative effects relating to impairment of emergency response plans would be limited to those projects which have construction periods that could overlap with those of the given Build Alternatives construction schedule. Similar to the Project, each of the projects identified in **Section 6.o** would be required to follow Occupational Safety and Health Administration and other safety practices and would implement standard construction and safety plans, construction transportation plans, and traffic control plans, as necessary, to minimize interference with emergency response plans. Considered cumulatively with the plans and projects identified in **Section 6.o**, there would not be a significant cumulative impact relative to emergency response plans.

7.11 Hydrology and Water Quality

As discussed in the Eastside Transit Corridor Phase 2 Hydrology and Water Quality Impacts Report, the DSA is a highly urbanized area. The study area for this analysis is the DSA. Projects within the DSA, including the related land development projects identified in **Table 6-2**, would result in modifications to local drainage systems, may increase or decrease impervious surface area, or affect groundwater. However, projects within the DSA are subject to applicable state, regional, and local water quality regulations and, thus, would be designed and executed in compliance with these regulations. As applicable, these projects would be subject to National Pollutant Discharge Elimination System (NPDES) permits, incorporate BMPs to control pollutant discharges, incorporate erosion and siltation BMPs, and incorporate SWRCB's Construction General Permit and Los Angeles County Department of Public Works' Municipal Separate Storm Sewer System (MS4) Permit conditions. A portion of Alternative 1 intersects Federal Emergency Management Agency (FEMA) flood zones. As a project measure (Section 3.9), operation of the trains would not occur if a flood inundates the portion of tracks within the flood zone. Additionally, if a flood event occurs during construction, construction activities shall cease and equipment and materials would be moved to an area outside of floodwaters. Alternative 2 and Alternative 3 would not cross the floodplain and would thus not impact floodplains.

MM HWQ-1, MM HWQ-2, MM HAZ-2, and MM HAZ-3 for Alternative 1 and MM HAZ-2 and MM HAZ-3 for Alternative 2 and Alternative 3 would reduce Project-level impacts from contaminated groundwater and dewatering and erosion and siltation, and on stormwater drainage capacity and flood zones to a less than significant level.

Considered cumulatively with the plans and projects identified in **Section 6.o**, and with implementation of MM HWQ-1, MM HWQ-2, MM HAZ-2, and MM HAZ-3 for Alternative 1 and MM HAZ-2 and MM HAZ-3 for Alternative 2 and Alternative 3, as shown in **Table 6-1**, the Build Alternatives' incremental effect would not be cumulatively considerable.

7.12 Energy Conservation and Utilities Service/Systems

Energy impacts from the Project are discussed in more detail in the Eastside Transit Corridor Phase 2 Energy Conservation and Utilities/Service System Impacts Report. The study area for the energy analysis is the GSA to provide a regional context and DSA to for specific context. Projects within the DSA, including the Build Alternatives and the related land development projects identified in **Table 6-2**, would be subject to compliance with applicable building codes and energy efficiency and management codes and regulations, including, but not limited to, the California Building Standards Code Energy Efficiency Standards (Title 24 Parts 6 and 11) and the Los Angeles County Green Building Standards Code, as well as other provisions of municipal jurisdictions. As discussed in the Eastside Transit Corridor Phase 2 Energy Conservation and Utilities/Service System Impacts Report, the evaluation of existing energy resources and energy forecasting is inherently cumulative based on long-term regional utility and energy demand plans and projections from energy utility providers. Based on the published long term plans and projections, there is no anticipated cumulative shortfall in energy supplies or services. Thus, considered cumulatively with the plans and projects identified in **Section 6.o**, there would not be a significant cumulative impact.

Utilities and service systems impacts from the Project are discussed in more detail in the Eastside Transit Corridor Phase 2 Energy Conservation and Utilities/Service System Impacts Report. The study area for this analysis is the GSA and DSA. The evaluation of existing utilities and service systems and future needs is inherently cumulative based on long-term regional utility demand plans and projections from utility providers. Based on the published long term plans and projections² there is no anticipated cumulative shortfall in utility service and service systems. Considered cumulatively with the plans and projects identified in **Section 6.o**, there would not be a significant cumulative impact.

² Plans and projects include, but are not limited to, the Urban Water Management Plans (Metropolitan Water District, Central Basin Municipal Water District, California Water Service, Pico Water District, Suburban Water Systems, and San Gabriel Valley Water Company), the Los Angeles County Sanitation 2019 Districts Sewer System Management Plan (SSMP), the Los Angeles County Department of Public Works (LACDPW) 2018 SSMP, the LACDPW Countywide Integrated Waste Management Plan 2019 Annual Report, the California Energy Commission (CEC) 2019 Integrated Energy Policy Report, the Los Angeles Department of Water and Power (LADWP) 2016 Final Power Integrated Resource Plan, the Southern California Gas Company (SoCalGas) Aspire 2045, Sustainability and Climate Commitment to Net Zero, and the CEC 2018 California Energy Demand 2018-2030 Revised Forecast.

7.13 Cultural Resources

Cultural Resource impacts from the Project are discussed in more detail in the Eastside Transit Corridor Phase 2 Transportation Cultural Resources Impacts Report. The specialized study area for Cultural Resources is referred to as the area of potential effect (APE). For archaeological resources, the area of direct impact (ADI) includes the right-of-way (ROW) and any areas of direct ground disturbance during project construction, including staging areas. For built environment/architectural resources, the APE includes all proposed ROW and acquisition and construction areas, and all parcels adjacent to permanent site improvements and facilities. For elevated alignments, the APE includes any additional parcels where the elevated structure may alter the character, use, or setting of a potential historical resource.

The DSA, which encompasses the APE and ADI, is heavily urbanized and historic structures and districts exist throughout the area. Impacts to historic structures are evaluated in terms of direct impacts (modification or demolition) or indirect impacts (affecting the setting in a manner that impacts the historic significance of a structure). Development of the related land development projects identified in **Table 6-2** could cumulatively impact historic resources within the DSA. At a Project-level, the Build Alternatives would result in a significant Project-level impact; construction of the Build Alternatives with the Commerce MSF site option, which would require acquisition and demolition of certain historic resources and could result in temporary noise, vibration, and ground-settlement impacts to others. Project-level mitigation measures would reduce Project-level impacts on historic resources; however, acquisition and demolition of historic resources associated with construction of the Build Alternatives if the Commerce MSF site option is selected would remain significant and unavoidable. Considered cumulatively with the plans and projects identified in **Section 6.o**, if the Commerce MSF site option is selected, even with implementation of MM CUL-1 through MM CUL-6 for Alternative 1; MM CUL-1, MM CUL-5, and MM CUL-6 for Alternative 2; and MM CUL-1, MM CUL-2, MM CUL-3, MM CUL-5, and MM CUL-6 for Alternative 3, as shown in **Table 8-1**, there would be a significant cumulative impact. If the Commerce MSF site option is selected, the Build Alternatives' incremental effect would be cumulatively considerable.

If Alternative 1 or Alternative 3 with the Montebello MSF site option is selected, implementation of MM CUL-1 and MM CUL-4 for Alternative 1 and MM CUL-1 for Alternative 3, Project-level impacts on historic resources would be reduced as shown in **Table 8-1**. The incremental effects of Alternative 1 and Alternative 3 with the Montebello MSF site option would not be cumulatively considerable relative to historic resources.

Since significant buried archaeological resources may exist within the DSA, it is possible that materials could be unearthed during project excavation activities. Construction of the Build Alternatives has the potential to disturb or destroy a significant archaeological resource. This disturbance of significant archaeological resources in combination with other reasonably foreseeable development projects in the DSA could result in significant cumulative impacts to archaeological resources. However, Project mitigation measures would reduce the Project's cumulative contribution to archaeological resources impacts, if any such resources are found during construction, to less than significant levels. Considered cumulatively with the plans and projects identified in **Section 6.o**, and with implementation of MM CUL-7 and MM CUL-8 for Alternative 1, and MM CUL-8 for Alternative 2 and Alternative 3, as shown in **Table 8-1**, the Build Alternatives' incremental effect would not be cumulatively considerable relative to archaeological resources.

Similarly, it is possible that human remains, including those interred outside of formal cemeteries, may exist within the DSA, and it is possible that remains could be unearthed during project excavation activities. Construction of the Build Alternatives has the potential to disturb human remains. This disturbance, in combination with other reasonably foreseeable development projects in the DSA, could result in significant cumulative impacts to human remains. However, Project mitigation measures would reduce the Project's cumulative contribution to impacts to human remains, if any are found during construction, to less than significant levels. Considered cumulatively with the plans and projects identified in **Section 6.0**, and with implementation of MM CUL-9 for Alternative 1, Alternative 2, and Alternative 3, as shown in **Table 8-1**, the Build Alternatives incremental effect would not be cumulatively considerable relative to human remains.

7.14 Tribal Cultural Resources

Tribal Cultural Resource impacts from the Project are discussed in more detail in the Eastside Transit Corridor Phase 2 Tribal Cultural Resources Impacts Report. For the purpose of analyzing potential impacts to TCRs, the specialized study area is the ADI, which consists of the three-dimensional limits of proposed ground disturbance, including temporary ground disturbance. As discussed in the Eastside Transit Corridor Phase 2 Tribal Cultural Resources Impacts Report, Metro sent a letter to each of the AB 52 tribes on the consultation list to initiate consultation in compliance with AB 52. On December 10, 2019, the Gabrieleño Band of Mission Indians – Kizh Nation, responded and requested consultation. Accordingly, a consultation meeting was held between the Gabrieleño Band of Mission Indians – Kizh Nation and Metro on March 25, 2020. On April 27, 2020, the Gabrieleño Band of Mission Indians – Kizh Nation provided additional information regarding their tribal lineage and ties to the ADI via email.

Since significant buried tribal cultural resources may exist within the DSA, and it is possible that these materials could be unearthed during project excavation activities, construction of the Build Alternatives has the potential to disturb or destroy a significant tribal cultural resource. This disturbance of significant tribal cultural resources in combination with other regional development projects would result in a significant cumulative impact to tribal cultural resources. Project-level construction requires ground disturbance, including grading, excavation, and boring. Although the DSA is heavily disturbed and urbanized, some of these activities would extend into undisturbed Holocene sedimentary deposits, which have the potential to preserve buried cultural resources. However, Project mitigation measures would reduce the Project's cumulative contribution to tribal cultural resources impacts, if any such resources are found during construction, to less than significant levels. Considered cumulatively with the plans and projects identified in **Section 6.0**, and with implementation of MM CUL-6, as shown in **Table 8-1**, the Build Alternatives' incremental effect would not be cumulatively considerable.

7.15 Growth Inducing

Growth inducing impacts from the Project are discussed in more detail in the Eastside Transit Corridor Phase 2 Transportation Growth Inducing Impacts Report. The study area for this analysis is the GSA and DSA. As discussed in the Eastside Transit Corridor Phase 2 Growth-Inducing Impacts Report, and also under **Section 7.3**, several of the related land development projects identified in **Table 6-2** provide new housing or commercial opportunities which would result in increases in local population and employment. However, land development Projects in the DSA are subject to local city zoning regulations and approvals; therefore, the introduction of new housing or commercial

opportunities would not constitute uncontrolled growth. Considered cumulatively, the Build Alternatives and the related land development projects could not increase development activity beyond that permitted by local jurisdictions' general plans and zoning regulations; growth inconsistent with these regulations would require discretionary approvals by local jurisdictions within the DSA. The Build Alternatives and related land development projects do not introduce new mechanisms to bypass municipal control over land development potential. Considered cumulatively with the plans and projects identified in **Section 6.o**, there would not be a significant cumulative impact.

8.0 MITIGATION MEASURES

Section 7.0 presents the cumulative impacts of the Project for each evaluated environmental topic and the effects of any applicable mitigation measures. Applicable mitigation measures are identified in the environmental topic's respective Eastside Transit Corridor Phase 2 Impacts Report and are listed in Table 8-1.

Table 8-1. Summary of Mitigation Measure Applicability

Mitigation Measure	Alternative 1 With Commerce MSF or Montebello MSF Site Option	Alternative 2 With Commerce MSF	Alternative 3 With Commerce MSF or Montebello MSF Site Option
Transportation and Transit			
MM TRA-1	Applicable	Applicable	Applicable
Land Use and Planning			
None required	N/A	N/A	N/A
Community and Neighborhood			
None required	N/A	N/A	N/A
Visual and Aesthetics			
None required	N/A	N/A	N/A
Air Quality			
None required	N/A	N/A	N/A
Greenhouse Gas Emissions			
None required	N/A	N/A	N/A
Noise and Vibration			
MM NOI-1	Applicable	Applicable	Applicable
MM NOI-2	Applicable	Applicable	Applicable
MM NOI-3	Applicable	Applicable	Applicable
MM NOI-4	Applicable	Applicable	Applicable
MM NOI-5	Applicable	Applicable	Applicable
MM NOI-6	Applicable	Applicable	Applicable
MM NOI-7	Applicable	Applicable	Applicable
MM NOI-8	Applicable	Applicable	Applicable
MM NOI-9	Applicable	Applicable	Applicable
MM NOI-10	Applicable	Applicable	Applicable
MM NOI-11	Applicable	Applicable	Applicable
MM NOI-12	Applicable	Applicable	Applicable
MM NOI-13	Applicable	Applicable	Applicable
MM NOI-14	Applicable	Applicable	Applicable
MM NOI-15	Applicable	Applicable	Applicable

Mitigation Measure	Alternative 1 With Commerce MSF or Montebello MSF Site Option	Alternative 2 With Commerce MSF	Alternative 3 With Commerce MSF or Montebello MSF Site Option
Biological Resources			
MM BIO-1	Applicable	N/A	N/A
MM BIO-2	Applicable	N/A	N/A
MM BIO-3	Applicable	N/A	N/A
MM BIO-4	Applicable	Applicable	Applicable
MM BIO-5	Applicable	Applicable	Applicable
MM BIO-6	Applicable	Applicable	Applicable
Geology, Soils, Seismicity and Paleontological Resources			
MM GEO-1	Applicable	Applicable	Applicable
MM GEO-2	Applicable	Applicable	Applicable
MM GEO-3	Applicable	Applicable	Applicable
MM GEO-4	Applicable	Applicable	Applicable
Hazardous Materials			
MM HAZ-1	Applicable	Applicable	Applicable
MM HAZ-2	Applicable	Applicable	Applicable
MM HAZ-3	Applicable	Applicable	Applicable
MM HAZ-4	Applicable	Applicable	Applicable
MM HAZ-5	Applicable	Applicable	Applicable
Hydrology and Water Quality			
MM HWQ-1	Applicable	N/A	N/A
MM HWQ-2	Applicable	N/A	N/A
MM HAZ-2	Applicable	Applicable	Applicable
MM HAZ-3	Applicable	Applicable	Applicable
Utilities Service/Systems and Energy Conservation			
None required	N/A	N/A	N/A
Cultural Resources			
MM CUL-1	Applicable	Applicable	Applicable
MM CUL-2	Applicable (Commerce MSF only)	N/A	Applicable (Commerce MSF only)
MM CUL-3	Applicable (Commerce MSF only)	N/A	Applicable (Commerce MSF only)
MM CUL-4	Applicable	N/A	N/A
MM CUL-5	Applicable (Commerce MSF only)	Applicable	Applicable (Commerce MSF only)
MM CUL-6	Applicable (Commerce MSF only)	Applicable	Applicable (Commerce MSF only)

Mitigation Measure	Alternative 1 With Commerce MSF or Montebello MSF Site Option	Alternative 2 With Commerce MSF	Alternative 3 With Commerce MSF or Montebello MSF Site Option
MM CUL-7	Applicable	N/A	N/A
MM CUL-8	Applicable	Applicable	Applicable
MM CUL-9	Applicable	Applicable	Applicable
Tribal Cultural			
MM TCR-1	Applicable	Applicable	Applicable
MM TCR-2	Applicable	Applicable	Applicable
MM TCR-3	Applicable	Applicable	Applicable
Growth Inducing			
None required	N/A	N/A	N/A

9.0 NO PROJECT ALTERNATIVE

The No Project Alternative does not include any major transportation service improvements or new transportation facilities or infrastructure beyond what is presented in Metro's LRTP. A variety of bus services are currently provided in the GSA, including Metro Local, Limited, Express, and Rapid buses, as well as local bus lines. In addition to bus services, the No Project Alternative includes two Metrolink commuter rail routes, each of which has one station located within the GSA: Riverside Line and Orange County/91 Lines. The Metrolink stations would be served by bus.

The No Project Alternative would not include any Project-related construction and thus would avoid construction-related cumulative impacts to geology, soils, seismicity and paleontological resources and to cultural resources which would be incurred by implementation of a Build Alternative. Moreover, as detailed in the Eastside Transit Corridor Phase 2 Impact Report for the following respective environmental topics, the No Project Alternative would not result in significant direct or indirect impacts related to the following resource topics:

- Community and Neighborhood
- Visual and Aesthetics
- Climate Change and Greenhouse Gases
- Noise and Vibration
- Biological Resources
- Geology, Soils, Seismicity and Paleontological Resources
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Cultural Resources
- Tribal Cultural Resources
- Growth Inducing

Therefore, this alternative would not contribute to any adverse cumulatively considerable impacts with respect to those environmental topics.

The No Project Alternative would make a cumulatively considerable and unavoidable contribution to a significant cumulative impact after mitigation in the following resource areas:

- Land Use and Planning
 - The No Project Alternative would have a significant and unavoidable impact under LUP-2 as it conflicts with adopted plans, policies, and regulations encouraging circulation improvements, community access and development, and air pollutant emissions and GHG reductions within the GSA. As this conflict could exacerbate other conflicts with plans or represent an incremental impact, the No Project Alternative would have a cumulatively considerable and unavoidable impact under LUP-2.
- Transportation and Traffic
 - The No Project Alternative would have a significant and unavoidable impact under TRA-1 as it conflicts with adopted plans. As this conflict could exacerbate other conflicts with plans or represent an incremental impact, the No Project Alternative would have a cumulatively considerable and unavoidable impact under TRA-1.
- Air Quality
 - The Project was assumed to be implemented and was included in the regional growth and transportation projections of the 2016-2040 and 2020-2045 RTP/SCS. Thus, the No Project Alternative would have a cumulatively considerable and unavoidable impact with respect to consistency with applicable air quality plans under AQ-1.
- Utilities Service/Systems and Energy Conservation
 - The No Project Alternative would not involve construction of a new LRT service in the GSA. SCAG's 2020 RTP/SCS incorporated the regional VMT benefits (and associated fossil fuel reductions) of the Project in its growth and transit projections. Further, the No Project Alternative would not contribute to a regional shift in transportation energy demand away from fossil fuels toward grid power. Therefore, the No Project Alternative would conflict with the regional VMT benefits assumed in 2020 RTP/SCS and would have a cumulatively considerable and unavoidable impact with respect to consistency with the applicable energy plans under ENG-2.

10.0 SUMMARY OF ALTERNATIVES

Section 7.0 presents the cumulative impacts of the Project for each evaluated environmental topic and the effects of any applicable mitigation measures. Applicable mitigation measures are detailed in the environmental topic's respective Eastside Transit Corridor Phase 2 Impact Report and are listed by environmental topic in Table 8-1.

A summary of cumulative impacts for each Build Alternative after the implementation of applicable mitigation measures is presented in Table 10-1.

Table 10-1. Summary of Cumulative Impacts Determinations With Implementation of Mitigation

Environmental Topic	No Project Alternative	Alternative 1 With Commerce MSF or Montebello MSF Site Option	Alternative 2 With Commerce MSF	Alternative 3 With Commerce MSF or Montebello MSF Site Option
Transportation and Transit	Cumulatively Considerable	Project Contribution Not Cumulatively Considerable after Mitigation	Project Contribution Not Cumulatively Considerable after Mitigation	Project Contribution Not Cumulatively Considerable after Mitigation
Land Use and Planning	Cumulatively Considerable	NA - No Significant Cumulative Impact	NA - No Significant Cumulative Impact	NA - No Significant Cumulative Impact
Community and Neighborhood	Not Cumulatively Considerable	Project Contribution Not Cumulatively Considerable without Mitigation	Project Contribution Not Cumulatively Considerable without Mitigation	Project Contribution Not Cumulatively Considerable without Mitigation
Visual and Aesthetics	Not Cumulatively Considerable	NA - No Significant Cumulative Impact	NA - No Significant Cumulative Impact	NA - No Significant Cumulative Impact
Air Quality	Cumulatively Considerable	Project Contribution Not Cumulatively Considerable without Mitigation	Project Contribution Not Cumulatively Considerable without Mitigation	Project Contribution Not Cumulatively Considerable without Mitigation
Greenhouse Gas Emissions	Not Cumulatively Considerable	Project Contribution Not Cumulatively Considerable without Mitigation	Project Contribution Not Cumulatively Considerable without Mitigation	Project Contribution Not Cumulatively Considerable without Mitigation
Noise and Vibration	Not Cumulatively Considerable	Project Contribution Not Cumulatively Considerable after Mitigation	Project Contribution Not Cumulatively Considerable after Mitigation	Project Contribution Not Cumulatively Considerable after Mitigation
Biological Resources	Not Cumulatively Considerable	Project Contribution Not Cumulatively Considerable after Mitigation	Project Contribution Not Cumulatively Considerable after Mitigation	Project Contribution Not Cumulatively Considerable after Mitigation

Environmental Topic	No Project Alternative	Alternative 1 With Commerce MSF or Montebello MSF Site Option	Alternative 2 With Commerce MSF	Alternative 3 With Commerce MSF or Montebello MSF Site Option
Geology, Soils, Seismicity and Paleontological Resources	Not Cumulatively Considerable	Project Contribution Cumulatively Considerable after Mitigation	Project Contribution Cumulatively Considerable after Mitigation	Project Contribution Cumulatively Considerable after Mitigation
Hazardous Materials	Not Cumulatively Considerable	NA - No Significant Cumulative Impact	NA - No Significant Cumulative Impact	NA - No Significant Cumulative Impact
Hydrology and Water Quality	Not Cumulatively Considerable	Project Contribution Not Cumulatively Considerable after Mitigation	Project Contribution Not Cumulatively Considerable after Mitigation	Project Contribution Not Cumulatively Considerable after Mitigation
Utilities Service/Systems and Energy Conservation	Cumulatively Considerable	NA - No Significant Cumulative Impact	NA - No Significant Cumulative Impact	NA - No Significant Cumulative Impact
Cultural Resources	Not Cumulatively Considerable	Project Contribution Cumulatively Considerable after Mitigation (Commerce MSF site option only)	Project Contribution Cumulatively Considerable after Mitigation	Project Contribution Cumulatively Considerable after Mitigation (Commerce MSF site option only)
Tribal Cultural Resources	Not Cumulatively Considerable	Project Contribution Not Cumulatively Considerable after Mitigation	Project Contribution Not Cumulatively Considerable after Mitigation	Project Contribution Not Cumulatively Considerable after Mitigation
Growth Inducing	Not Cumulatively Considerable	NA - No Significant Cumulative Impact	NA - No Significant Cumulative Impact	NA - No Significant Cumulative Impact

11.0 PREPARERS QUALIFICATIONS

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Matthew Egge	Environmental Planner	MPL – Urban Planning, University of Southern California, 2011 BA – Urban Studies and Planning, University of California, San Diego, 2009	11
Anthony Skidmore	Senior Environmental Planner/Technical Specialist	MPA – Public Administration, California State University, Long Beach BA – Sociology, California State University, Long Beach	40

12.0 REFERENCES CITED

Los Angeles County Metropolitan Transportation Authority, 2016. Board Approves Taking Measure M to Voters. Available at: <https://thesource.metro.net/2016/06/23/live-blog-todays-metro-board-meeting-and-the-potential-ballot-measure/>. Accessed April 4, 2022.

Los Angeles County Metropolitan Transportation Authority. 2017. L.A. Olympics and Paralympics: What Our Transit System will Look Like in 2028. Available at: <https://thesource.metro.net/2017/09/13/l-a-olympics-and-paralympics-what-our-transit-system-will-look-like-in-2028/>. Accessed April 4, 2022.

South Coast Air Quality Management District (SCAQMD). 2003. White Paper on Potential Control Strategies to Address Cumulative Impacts From Air Pollution. Available at: <https://www.aqmd.gov/docs/default-source/Agendas/Environmental-Justice/cumulative-impacts-working-group/cumulative-impacts-white-paper.pdf?sfvrsn=2>. Accessed June 15, 2022.