2.0 DESCRIPTION OF ALTERNATIVES

This chapter outlines the No Build Alternative and Build Alternative evaluated in this EA. **Section 2.1** summarizes the Project's history, and **Section 2.2** and **Section 2.3** detail both alternatives. The Build Alternative, approved as the Locally Preferred Alternative by the Metro Board on December 1, 2022, with the Final Environmental Impact Report (EIR) certified in May 2024, is carried forward for environmental analysis with refinements based on engineering updates and input from the Corridor Cities (see Section 1.1.2.4 in **Appendix E** [Project Description and Alternatives Considered] for details).

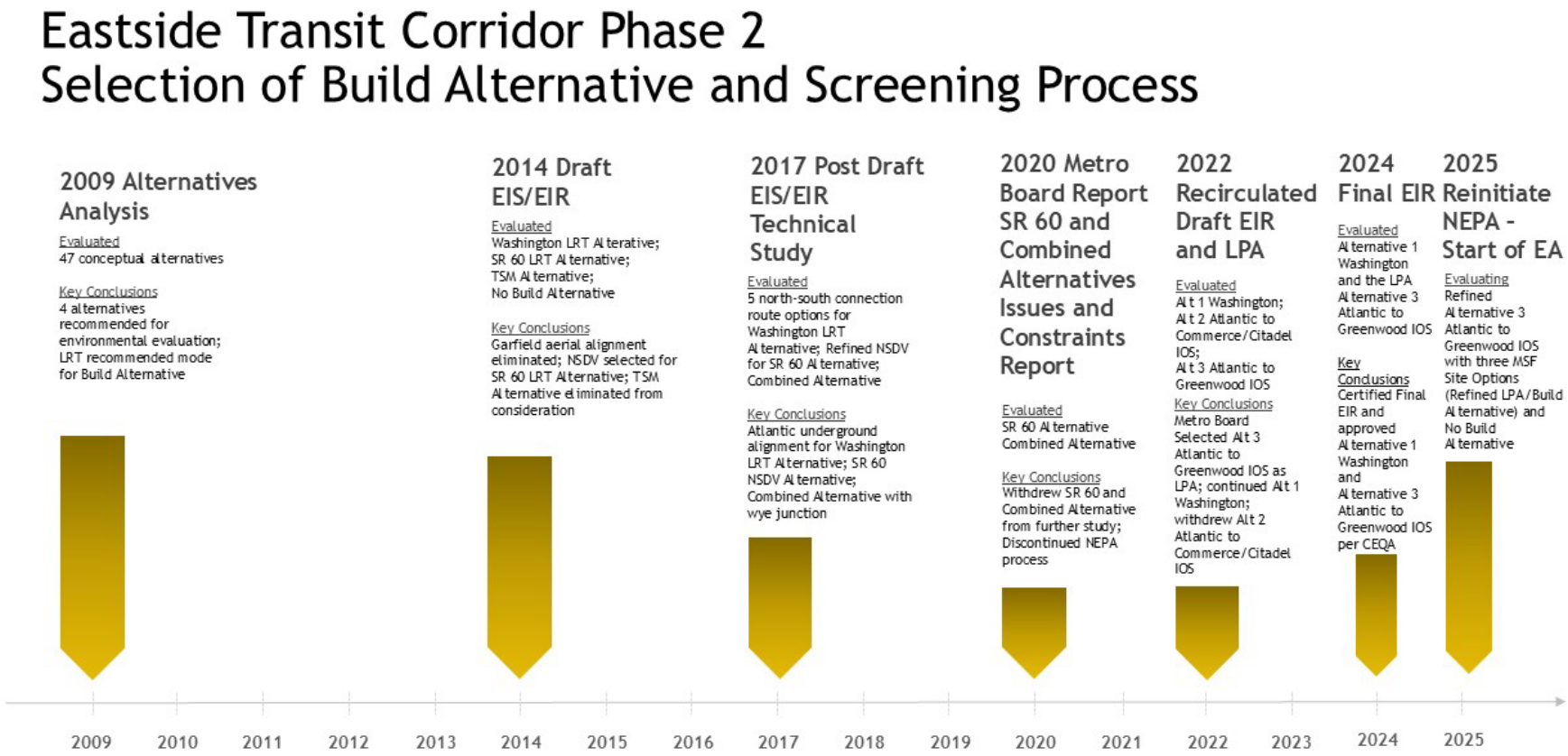
The United States Environmental Protection Agency is serving as a Cooperating Agency, the California Department of Transportation is a Participating Agency, and the United States Army Corps of Engineers declined participation on the Project. The FTA and Metro has coordinated and will continue to coordinate with these and other agencies throughout the process (see **Appendix Q** [Public Outreach Report] for agency coordination details).

2.1 Alternatives Screening and Selection Process

As described in greater detail in **Appendix E** and summarized in **Figure 2.1**, the Project has undergone extensive planning and environmental review, beginning with an Alternatives Analysis published in 2009 that screened 47 concepts. This was subsequently narrowed down to four alternatives that were analyzed in a joint NEPA/California Environmental Quality Act (CEQA) Draft Environmental Impact Statement (EIS)/EIR in 2014. The four alternatives included a No Build Alternative, Transportation Systems Management Alternative, a 6.9 mile State Route 60 Alternative, and a 9.5 mile Washington Boulevard Alternative. Based on agency and public comments, no Final EIS or Final EIR was issued. The Metro Board directed that further study be conducted on the State Route 60 Alternative and Washington Boulevard Alternative and that a new north-south connection to Washington Boulevard be identified. Following further study and stakeholder coordination, the Metro Board approved the preparation of Recirculated Draft EIR pursuant to CEQA to evaluate the Washington Boulevard alignment and eliminated consideration of the State Route 60 Alternative in February 2020. At the same time, the Metro Board directed the NEPA process to be discontinued to streamline the environmental clearance process. The Recirculated Draft EIR, published in June 2022, evaluated three build alternatives (with two design options), two maintenance and storage facility (MSF) site options, and a No Project Alternative. On December 1, 2022, the Metro Board selected the Atlantic-to-Greenwood Initial Operating Segment as the Locally Preferred Alternative and advanced the alignment for the Final EIR, which was certified in May 2024.

In 2025, Metro began coordination with FTA to discuss federal environmental clearance for federal funding opportunities to carry out the engineering and construction for the Build Alternative. On May 7, 2025, Metro requested an environmental Class of Action determination from FTA to advance into the NEPA process with an EA. On May 22, 2025, FTA informed Metro that based on the project information submitted, the Project would require an EA to comply with NEPA.[4] The Locally Preferred Alternative identified during the CEQA process, with refinements, is the Build Alternative for this EA.

[4] Given the proposed alignment for the Build Alternative and results of technical studies conducted during the CEQA evaluation, it was determined that the evaluation of the Project would not require an EIS to comply with NEPA.



Key: Alt = Alternative; CEQA = California Environmental Quality Act; EA = Environmental Assessment; EIS = Environmental Impact Statement; EIR = Environmental Impact Report; IOS = Initial Operating Segment; LPA = Locally Preferred Alternative; LRT = light rail transit; MSF = maintenance and storage facility; NEPA = National Environmental Policy Act; NSVD = North Side Design Variation; SR = State Route; TSM = Transportation Systems Management.

Source: Metro; CDM Smith/AECOM JV 2026.

Figure 2.1 Development of the Alternatives and Screening Process

2.2 No Build Alternative

The No Build Alternative evaluates the reasonably foreseeable effects within the Study Area, described in **Section 3.1.1,** if the Build Alternative were not approved. The No Build Alternative would maintain existing transit service through the year 2050. No new transportation infrastructure would be built within Los Angeles County aside from projects currently under construction or funded for construction and operation by 2050 via the 2008 Measure R or 2016 Measure M sales taxes. The No Build Alternative would include existing transit and roadway projects identified for funding in Metro's 2020 LRTP and Southern California Association of Governments' Connect SoCal 2024-2050 Regional Transportation Plan (2024 RTP). The No Build Alternative would include existing projects from the base year (2025) and planned regional projects in operation in the horizon year (2050). Planned regional transit projects assumed in operation by 2050 are included in **Table 2.1**. The No Build Alternative would not require any right-of-way acquisitions, beyond what is required for these existing and already planned projects, would incur no project costs, and would not require project funding.

The No Build Alternative is used for comparison purposes to assess the relative benefits and impacts of constructing a new transit project in the Study Area versus implementing only currently planned and funded projects. The No Build Alternative evaluates the reasonably foreseeable effects (Chapter 3.0) if the Build Alternative were not approved. The No Build Alternative is required for comparison under NEPA.

Table 2.1 Planned Regional Transit Projects Assumed to be in Operation by 2050

Regional Transit Project
Metro Foothill Extension, Glendora to Montclair
Metro Southeast Gateway Line, Los Angeles to Artesia
Metro Los Angeles International Airport/Metro Transit Center Station
Metro C Line (Green) Extension to Torrance
Metro Crenshaw/ Los Angeles International Airport Transit Project
Metro Vermont Transit Corridor Bus Rapid Transit
Metro D Line Subway Extension Project
Metro East San Fernando Valley Light Rail Transit Project
Metro G Line Improvements Project
North Hollywood to Pasadena Transit Corridor
Sepulveda Transit Corridor Project

Source: CDM Smith/AECOM JV 2026, Metro Gold Line Foothill Extension Construction Authority 2025.

The No Build Alternative would not provide a rail transit option for communities in eastern Los Angeles County and therefore would not satisfy the purpose of the Project. The No Build Alternative would not address growing population and employment densities, local and arterial roadway congestion, quality of life issues, or high transit demand in the Study Area; therefore, the No Build Alternative would not satisfy the Project need.

2.3 Build Alternative

The Build Alternative is an electric-powered light rail transit service extension in eastern Los Angeles County. It would consist of approximately 4.7 miles of reconfigured and new light rail transit guideway[5] to extend the Metro E Line east from the current terminus at Atlantic Boulevard to an at-grade terminal station at the Greenwood station in the City of Montebello. The 4.7 miles would include reconfiguration of 0.4 mile of existing track for a transition to a new 4.3-mile extension. The configuration includes an approximately 3.1-mile underground guideway, 0.9-mile aerial guideway, and 0.7-mile at-grade guideway. It also includes a relocated underground Atlantic/Pomona station and three new stations. As described in **Section 2.3.3**, the Build Alternative would also include guideway and system facilities to support vehicle operations, such as overhead catenary systems, radio communications, and train control houses that would be constructed along the alignment; a modification to existing tracks west of the proposed alignment extension (Maravilla Crossover); and an MSF. Three site options for the MSF are being evaluated in this EA based on project requirements, constructability, environmental impacts, operational efficiency, and compatibility with surrounding land uses, but only one would be selected. Of the evaluated MSF site options, two are in the City of Montebello (MSF Sites 1 and 2) and one is in the City of Commerce (MSF Site 3). **Figure 2.2** shows the Study Area and the alignment with the locations of the proposed stations and MSF site options.

The Build Alternative would construct a light rail transit option for communities in eastern Los Angeles County, enhancing regional connectivity, supporting transit dependent populations, and serving high-density urban areas. The Build Alternative satisfies the purpose and need of the Project because it would expand transit opportunities in eastern Los Angeles County, provide a transportation alternative to local and arterial roadways during periods of congestion, improve quality of life by enhancing mobility and access options, and serve a population with high transit demand.

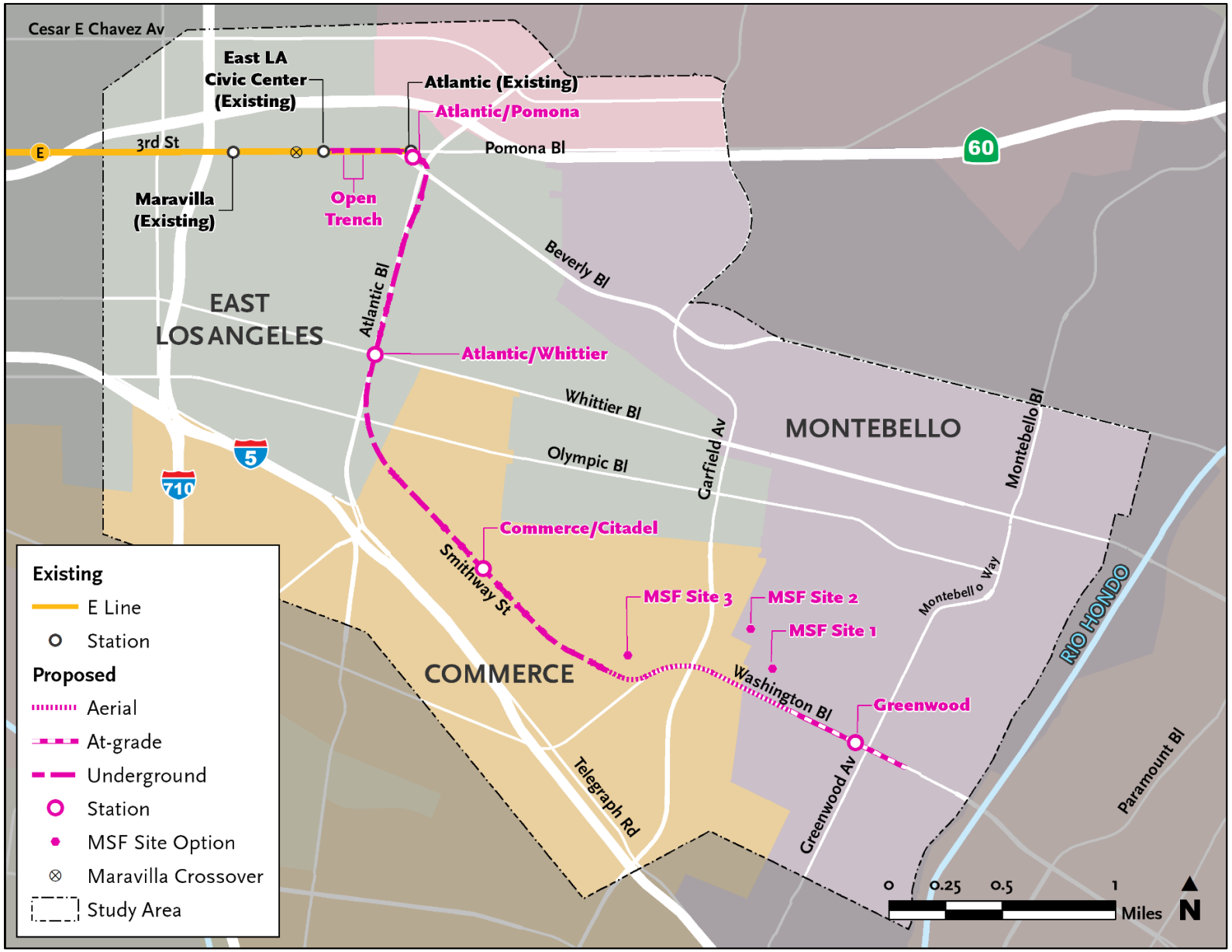
2.3.1 Guideway Alignment

The Build Alternative includes modifications to the existing Metro E Line tracks west of the existing East Los Angeles Civic Center Station and a new guideway extension that begins east of the station in East Los Angeles (unincorporated Los Angeles County).

The existing tracks would be reconfigured to install a new at-grade double crossover[6] on 3rd Street between Arizona Avenue and Kern Avenue, as shown in **Figure 2.3**. The new crossover, referred to as the Maravilla Crossover, is required to meet operational requirements of the guideway extension. Construction of the Maravilla Crossover would involve a minor shift of the existing tracks to the east and roadway resurfacing within the existing right-of-way. A train control house with electric power switches and auxiliary power room would be constructed at the vacant lot owned by Metro on the south side of 3rd Street between Arizona Avenue and Mednik Avenue (see **Figure 2.3**). This site is adjacent to an existing traction power substation that is surrounded by a block wall. The block wall would be extended to include the train control house site.

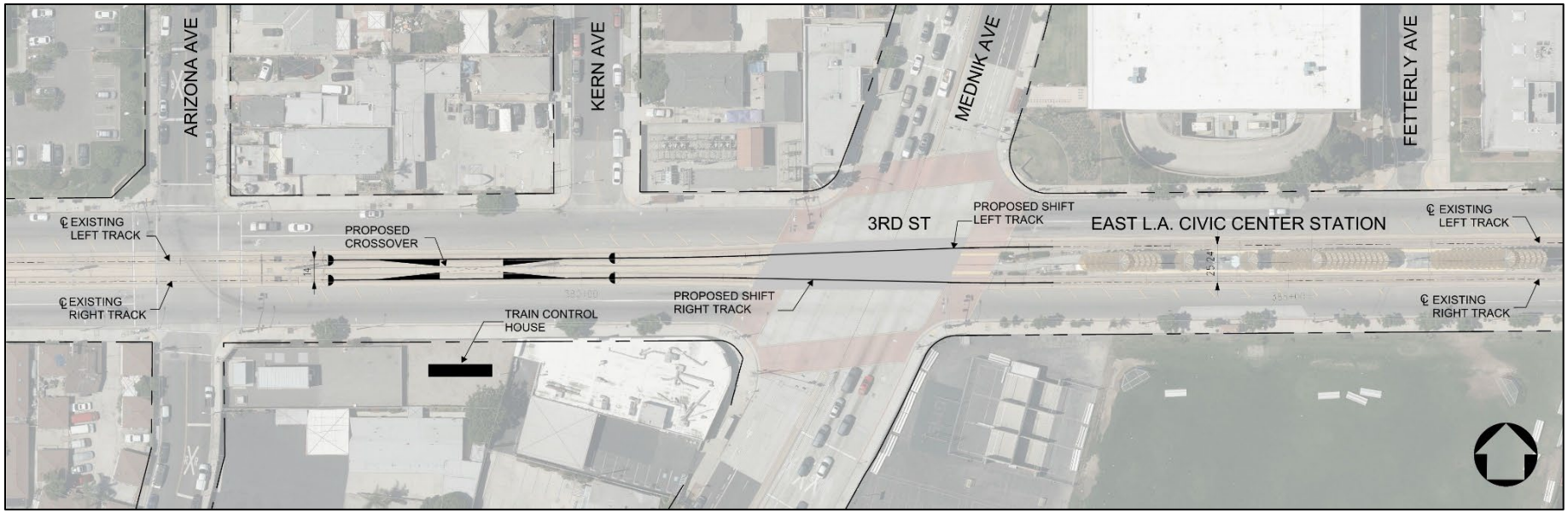
[5] According to the FTA, a guideway refers to a public transportation facility using and occupying a separate right-of-way or rail line for the exclusive use of public transportation (FTA 2025). The Build Alternative guideway is the proposed rail line, including the underground, aerial, and at-grade configurations. The centerline refers to the center line between the guideway light rail transit tracks or structures that supports, contains, and physically guides the light rail transit vehicles.

[6] Track crossovers allow a train to reverse direction and use adjacent track to continue operation. The Build Alternative includes the Maravilla Crossover and crossovers along the alignment extension as addressed in **Section 2.3.3**.



Source: Metro; CDM Smith/AECOM JV 2026.

Figure 2.2 Study Area and Build Alternative



Source: HNTB/Cordoba 2026.

Figure 2.3 Maravilla Crossover Exhibit

The new guideway would begin with a transition from the existing at-grade guideway to an underground guideway within an open trench extending from east of Civic Center Way to east of La Verne Avenue as shown in **Figure 2.4**. The trench would eliminate vehicle and pedestrian crossings of 3rd Street at La Verne Avenue and thus, left turns to and from La Verne Avenue would be prohibited during construction and operation of the Build Alternative. Left turns would also be eliminated at Civic Center Way; however, the pedestrian crosswalk at this location would remain. To facilitate traffic movement to and from La Verne Avenue and Civic Center Way, eastbound traffic on 3rd Street would be allowed to make a U-turn on Woods Avenue to reverse direction. Westbound traffic would continue to be allowed to make a U-turn at Mednick Avenue to reverse direction. Additionally, a new access road would be constructed to allow Sheriff's Department vehicles to turn left from the Sheriff's Department driveway onto 3rd Street. A new high-visibility crosswalk would provide pedestrian access across 3rd Street between the existing pedestrian access at Civic Center Way and Woods Avenue.

Once underground, the guideway would follow 3rd Street to the proposed relocated underground Atlantic/Pomona station located east of Beverly Boulevard. The underground guideway would then turn south, running east of Atlantic Boulevard until south of 4th Street and then underneath Atlantic Boulevard to approximately Verona Street and Olympic Boulevard. Then, the underground guideway would curve southeast, running under Smithway Street near the Citadel Outlets in the City of Commerce.

After crossing Saybrook Avenue, the guideway would transition from underground to an aerial configuration. If MSF Site 1 or 3 is selected, the aerial guideway would continue east and merge into the center of Washington Boulevard at Gayhart Street. However, if MSF Site 2 is selected, the aerial guideway would continue east immediately to the north of Washington Boulevard and merge into the center of Washington Boulevard east of Garfield Avenue.

Under all three MSF site options, the aerial guideway would transition to an at-grade configuration between Vail Avenue and Maple Avenue. The alignment would remain at-grade in the center of Washington Boulevard until the intersection of Washington Boulevard and Greenwood Avenue in the City of Montebello, where it would shift slightly south of the center of Washington Boulevard. Revenue service would terminate at Greenwood station to the west of Greenwood Avenue and tail tracks would continue further east to Montebello Boulevard to allow for the light rail transit to reverse direction. The guideway and trackwork design would comply with the Metro Rail Design Criteria.

2.3.1.1 Traffic Circulation Changes

Traffic circulation changes that would occur under the Build Alternative include removal of left turns at some signalized intersections and rerouting of traffic and reduction of traffic lanes. Left turns in and out of driveways along the at-grade portion of the guideway on Washington Boulevard would also be removed.

At the intersection of Washington Boulevard and Montebello Boulevard, removal of left turns is one of two options being considered:

- Montebello Boulevard Option 1 (no left turn) – This option would remove left-turn pockets on Washington Boulevard, eliminating left-turns onto Montebello Boulevard from both directions. Only through traffic movement and right turns would be allowed from Washington Boulevard at this intersection.
- Montebello Boulevard Option 2 (left-turn pockets) – This option would retain left-turn pockets on Washington Boulevard for traffic in both directions. This option would require widening of Washington Boulevard and involve additional property acquisitions.

Additionally, to accommodate the traffic circulation changes, at-grade light rail transit movements, at-grade and aerial guideway, and pedestrian access to and from stations, minor changes, such as lane re-striping and new or modified traffic signals, and driveway widening at some industrial properties along Washington Boulevard may be required. Primary circulation changes, including removal of left turns and traffic circulation changes, are identified in **Table 2.2**. Lane reductions are identified in **Table 2.3**.

Source: HNTB/Cordoba 2026.

Figure 2.4 Conceptual 3rd Street Modifications

Table 2.2 Left Turns Eliminated and Circulation Changes

Intersection Location	Left Turn Removed	Circulation Change	Reason for Change
3rd Street and Civic Center Way	Civic Center Way onto eastbound 3rd Street	Left turn traffic from Civic Center Way rerouted to Mednick Avenue	Required to maintain California Public Utilities Commission rail crossing safety due to the construction of the Build Alternative trench
3rd Street and Civic Center Way	Eastbound 3rd Street onto Civic Center Way	Left turn traffic from eastbound 3rd Street onto Civic Center Way rerouted to Mednick Avenue intersection with Civic Center Way	Required to maintain California Public Utilities Commission rail crossing safety due to the construction of the Build Alternative trench
3rd Street and La Verne Avenue	Westbound 3rd Street onto La Verne Avenue	Left turn traffic from westbound 3rd Street onto La Verne Avenue rerouted to U-turn or left turn at Mednick Avenue	Accommodate the open trench
3rd Street and La Verne Avenue	La Verne Avenue onto westbound 3rd Street	Left turn traffic from La Verne Avenue onto westbound 3rd Street rerouted to a U-turn at Woods Avenue	Accommodate the open trench
3rd Street and La Verne Avenue	Not applicable	Sheriff's Department access road improved via a new designated left turn movement from the existing Sheriff's Department driveway	Accommodate the open trench and maintain emergency vehicle access from Sheriff's Driveway
Washington Boulevard and Maple Avenue	Eastbound and westbound Washington Boulevard onto Maple Avenue	Left turn traffic traveling along Washington Boulevard rerouted from Maple Avenue to Vail Avenue.	Accommodate the proposed retaining wall where the aerial guideway transitions to at-grade
Washington Boulevard between Vail Avenue and Montebello Boulevard	Private driveways from the eastbound and westbound Washington Boulevard.	Left turn traffic turning into private driveways from the eastbound and westbound Washington Boulevard center median rerouted to nearby street intersections.	To allow for center-running at-grade guideway
Montebello Boulevard Option 1: Washington Boulevard and Montebello Boulevard	Left turns eliminated from eastbound and westbound Washington Boulevard onto Montebello Boulevard	Left turn traffic traveling along Washington Blvd rerouted from Montebello Boulevard to Greenwood Avenue and Bluff Road.	Accommodate the proposed at-grade guideway and minimize right-of-way impacts since left turn traffic volumes were low at Montebello Boulevard

Source: Metro; HNTB/Cordoba 2026.

Table 2.3 Lane Reduction

Intersection Location	Lane Reduction	Reason for Elimination
Eastbound 3rd Street between Civic Center Way and new Sheriff's Department access road	Reduction from two through lanes to one through lane	To allow for track lowering and ensure pedestrian crossing safety
Washington Boulevard between Saybrook Avenue and Carob Way	Reduction from three through lanes to two through lanes	To allow for center-running aerial and at-grade guideway

Source: Metro; HNTB/Cordoba 2026.

2.3.2 Proposed Stations

Table 2.4 provides a summary of the proposed stations for the Build Alternative. The locations of the stations are shown in **Figure 2.2** and conceptual station site plans are shown in **Figure 2.5** through **Figure 2.8**. Station features would include, but would not be limited to: station signs, entrance portal canopies at the underground stations, platform canopies at the at-grade station, plaza paving and landscaping, interior architectural finishes and furnishings, lighting, passenger telephones, sound attenuation features, customer information panels, real-time information digital screens, fare gates, fare vending machines, integrated public art, security cameras, and bike racks and lockers. Station entry portals with escalators and elevators would provide access to underground stations. Access to all stations would be compliant with the Americans with Disabilities Act and would have bicycle and pedestrian connections. Details, including station area planning and urban design, would be determined during the Build Alternative's final design phase in compliance with Metro design standards and policies for Metro rail stations. In coordination with Metro Art, efforts would be made, as feasible, to relocate existing artwork from the Atlantic Station to the new Atlantic/Pomona station.

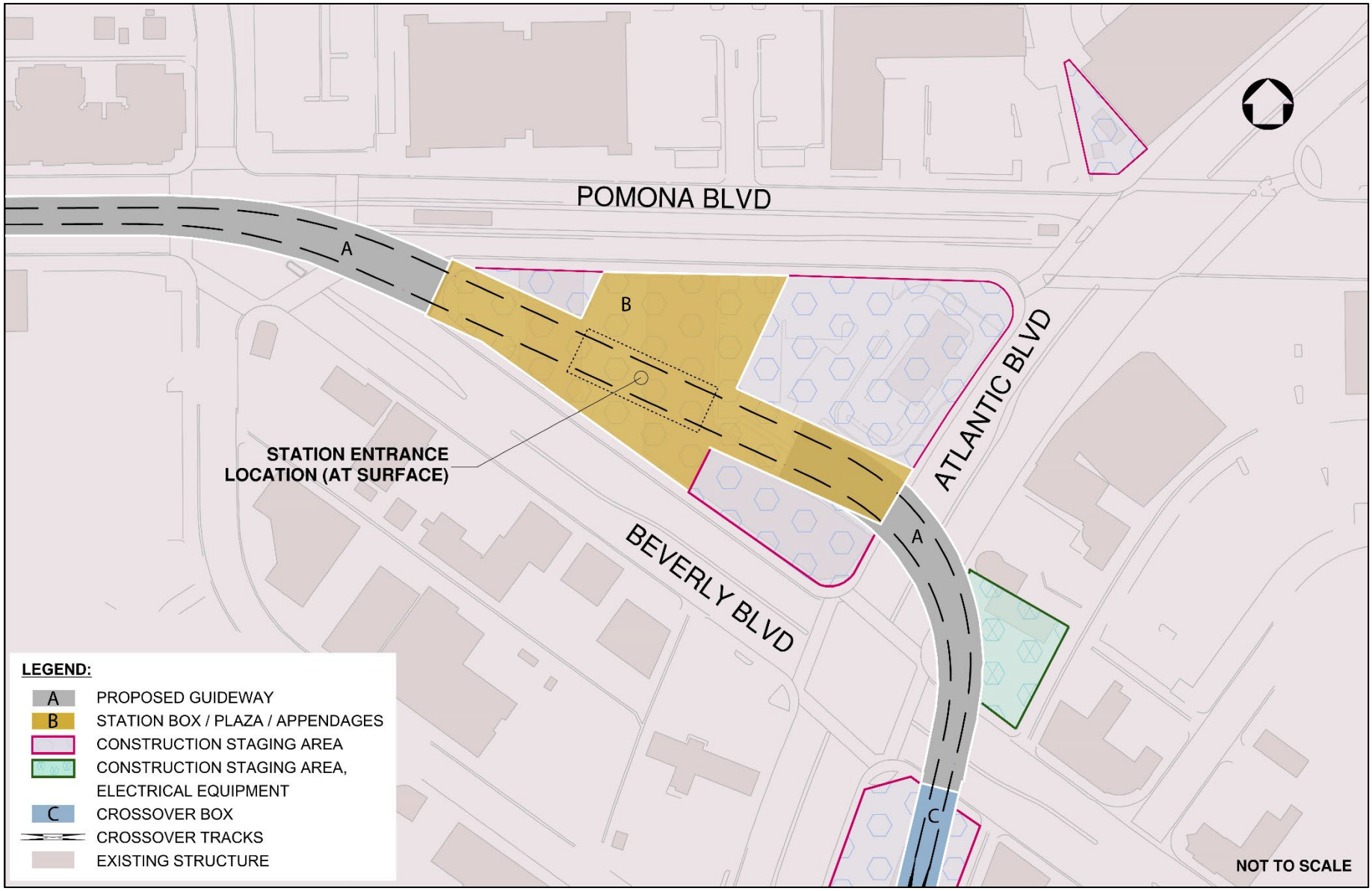
Table 2.4 Proposed Stations for the Build Alternative

Proposed Station	Station Location	Jurisdiction	Station Configuration	Platform Configuration	Parking Provided?
Atlantic/ Pomona[1]	Triangular parcel bounded by Atlantic Boulevard, Pomona Boulevard, and Beverly Boulevard	East Los Angeles (unincorporated Los Angeles County)	Underground	Center Platform	Yes, 280 existing parking spaces in the structure north of Pomona Boulevard/ Atlantic Boulevard
Atlantic/ Whittier	Atlantic Boulevard/ Whittier Boulevard Intersection	East Los Angeles (unincorporated Los Angeles County)	Underground	Center Platform	No
Commerce/ Citadel	Beneath Smithway Street and the Citadel Outlets	City of Commerce	Underground	Center Platform	No
Greenwood	Washington Boulevard west of Greenwood Avenue	City of Montebello	At-grade	Center Platform	Yes, 270-370 proposed new surface parking spaces near Greenwood Avenue/ Washington Boulevard

Source: Metro; CDM Smith/AECOM JV 2026.

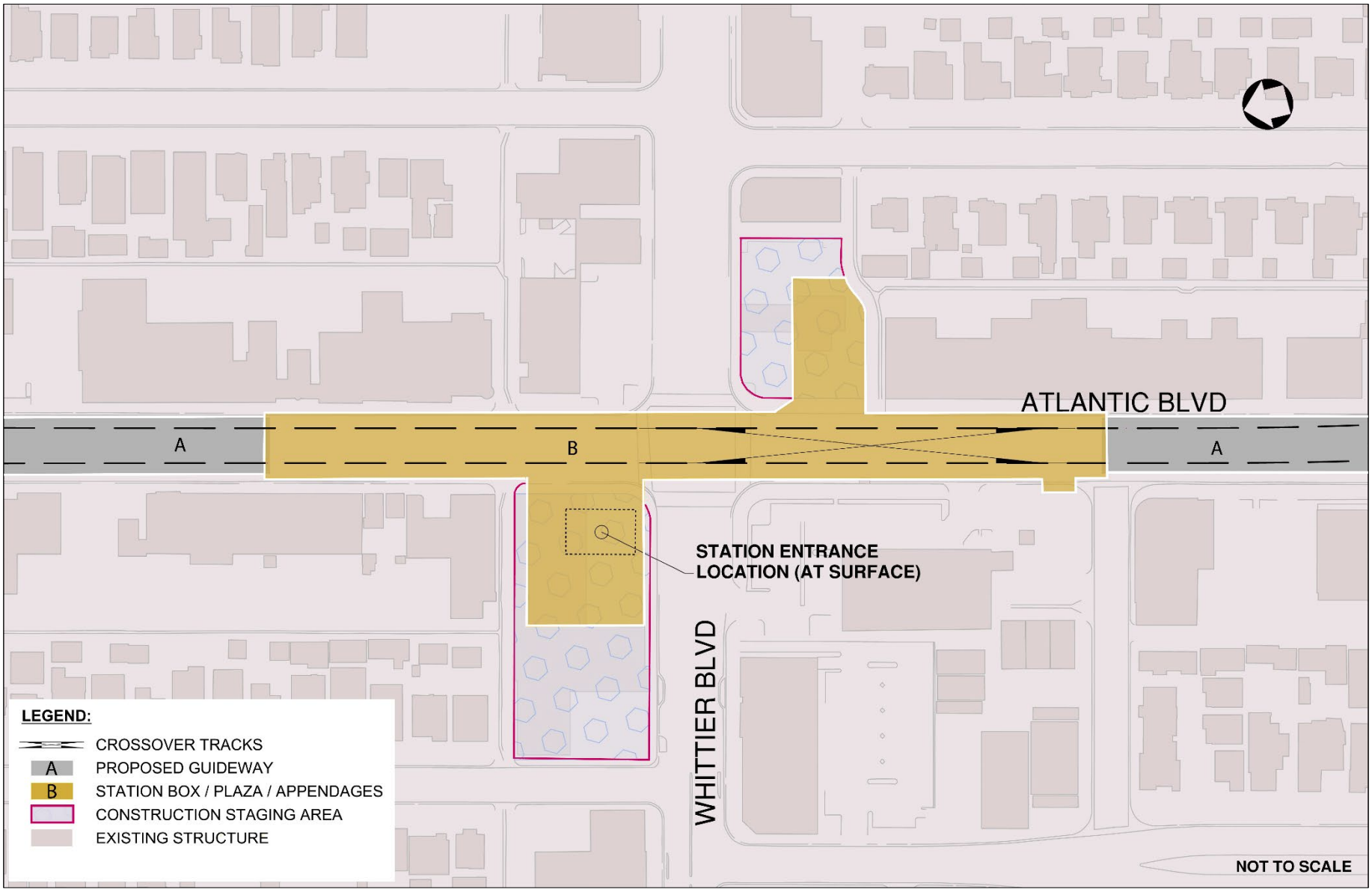
Note:

[1] The existing Atlantic Station would be demolished and the existing traction power substation would be reconfigured and updated to meet underground station requirements.



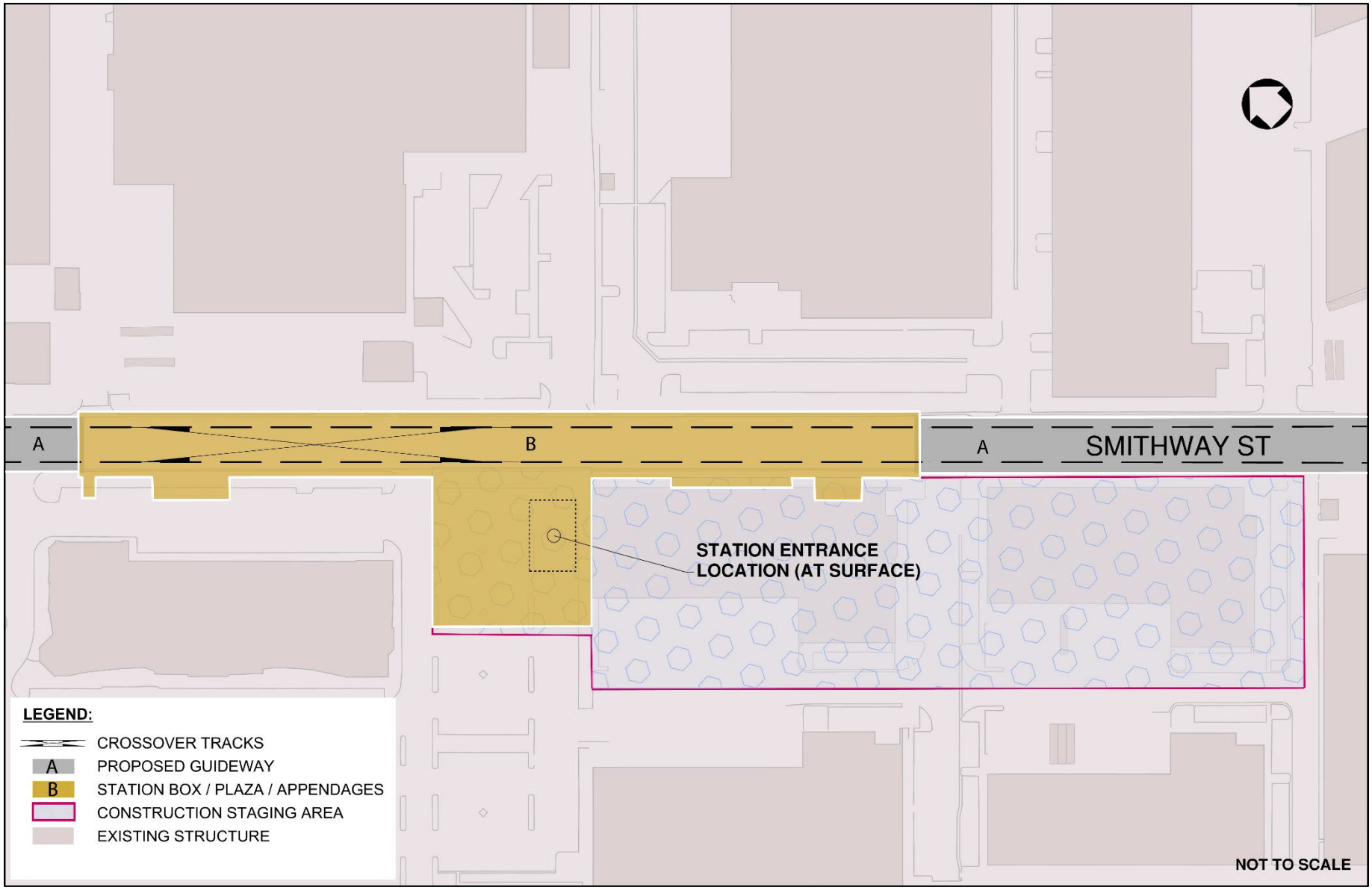
Source: HNTB/Cordoba 2026.

Figure 2.5 Atlantic/Pomona Station Conceptual Site Plan



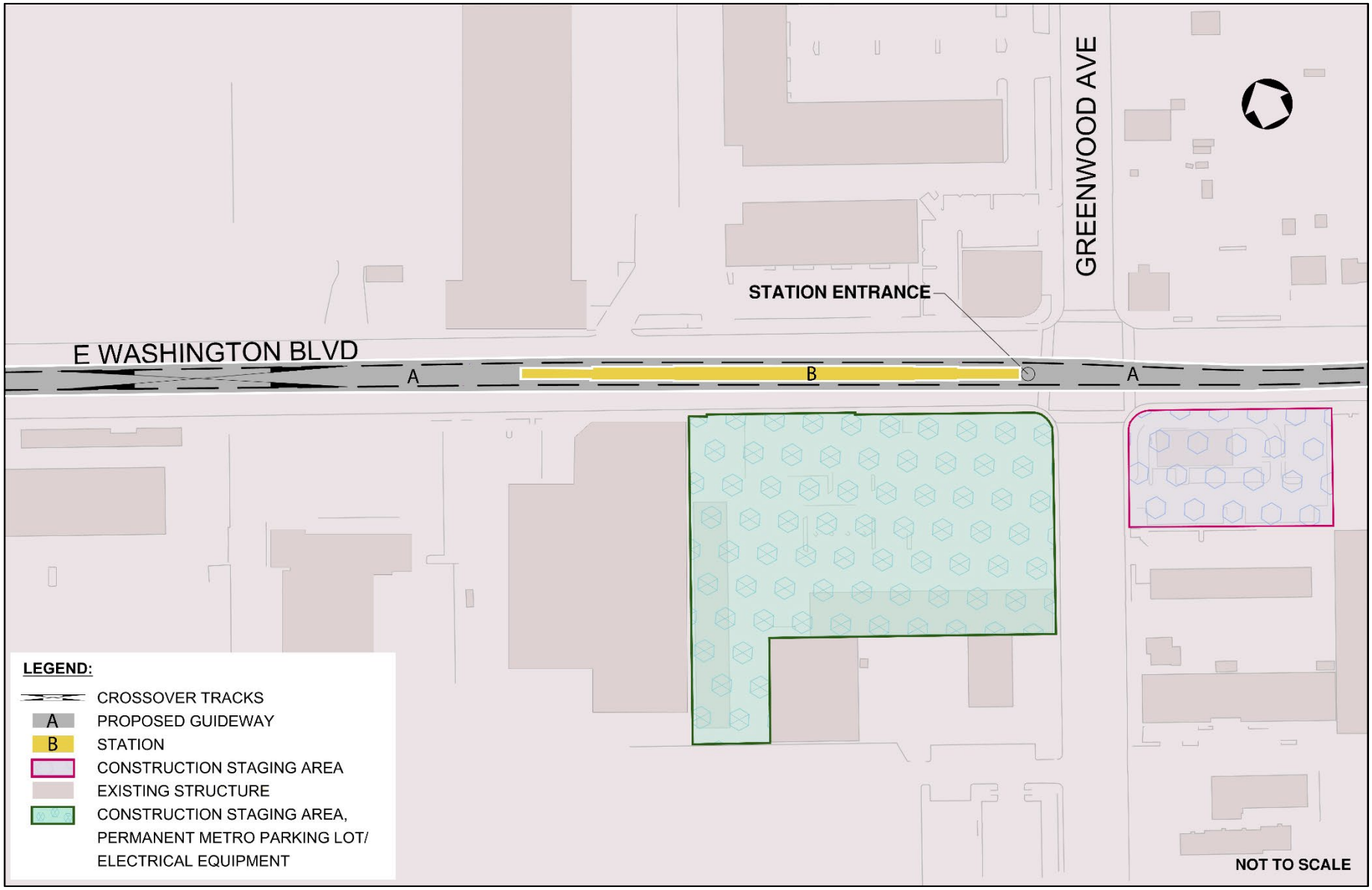
Source: HNTB/Cordoba 2026.

Figure 2.6 Atlantic/Whittier Station Conceptual Site Plan



Source: HNTB/Cordoba 2026.

Figure 2.7 Commerce/Citadel Station Conceptual Site Plan



Source: HNTB/Cordoba 2026.

Figure 2.8 Greenwood Station Conceptual Site Plan

2.3.3 Guideway and Systems Facilities

The Build Alternative would include additional elements to support vehicle operations, including but not limited to the overhead catenary system, tracks, crossovers, cross passages, ventilation structures, emergency fire exits, traction power substations, train control houses with electric power switches and auxiliary power rooms, radio communications, and an emergency generator as described in **Table 2.5**, and the MSF described in **Section 2.3.4**. The precise location of these facilities would be determined in a subsequent design phase.

Table 2.5 Additional Elements Supporting Build Alternative Operations

Element	Description
Overhead Catenary System	Network of overhead wires that distribute electricity to the light rail transit (**Figure 2.9**). Includes steel poles to support an electrical power line that would be suspended above the light rail transit tracks. A pantograph or "arm" on the roof of light rail transit vehicles would slide along the underside of the contact wire and deliver electric power to the vehicles. Overhead catenary system poles would be approximately 30 feet tall and typically located every 90 to 170 feet between two light rail transit tracks.
Overhead Conductor Rails	Network of overhead rails that distribute electricity to the light rail transit in the underground portion of the guideway. Overhead conductor rails would power the light rail transit similar to the overhead catenary system (see description of Overhead Catenary System); however, overhead rails would be hung from the tunnel ceiling.
Tail Tracks	Tracks that extend beyond the revenue service tracks to allow for reversing direction. Tail tracks for the Build Alternative would be located at the end-of-the-line ending at Montebello Boulevard.
Crossovers	Track crossovers that allow a train to reverse direction and use adjacent track to continue operation. The Build Alternative includes the Maravilla Crossover and crossovers along the alignment extension, generally near the proposed stations (see **Table 2.6**).
Cross Passages	Short tunnel segments that connect two parallel tunnels in underground segments and allow emergency access from one tunnel to another. Cross passages for the Build Alternative would be approximately 15 feet high and 10 feet wide and located about every 750 to 800 feet along tunnel alignments.
Ventilation Structures	Ventilation structures allow for climate control and emergency ventilation of tunnels and underground stations. Ventilation gratings would be located on sidewalks (or other public areas), typically on both sides of all underground stations.
Emergency Fire Exits	Emergency fire exits to the surface for rail staff and passenger egress and emergency personnel access would be installed along the tunnel portion of the alignment as required by the current version of Metro's Fire Life Safety Criteria. Exits would typically be a vertical exit door at a surface building or surface level hatch.
Traction Power Substations	Electrical substations that would typically be placed every 1 to 1.5 miles along the alignment and at the MSF to provide electrical power for light rail transit vehicles (see **Figure 2.10**). Location would be at points along the alignment where maximum power draw is expected (such as stations and inclines). Size of each traction power substations unit would be approximately 60 feet by 80 feet and 12 to 14 feet high. Traction power substations would feed power to the overhead catenary system through underground feeders in duct banks and up a pole to a connection with the contact wire. Traction power substations may be located underground at underground stations, within the public right-of-way, in parking facilities, or on acquired parcels. For the purposes of the EA, potential traction power substations locations were evaluated and are included in **Table 2.7**.

Element	Description
Radio Communications	Equipment used to receive, process and transmit communication signals would require antenna structures that are approximately 70 to 80 feet tall. A distributed antenna system is used to allow wireless signal coverage for cellular service and wi-fi in otherwise unserviceable areas, such as the underground stations and tunnels; it places several smaller, less-powerful antennas in different locations instead of one large, powerful antenna. Pole height is subject to the total number of required radio channels and bands. Communication cables would connect the antennas to the station train control and communications rooms. Antennas may be located near stations and at the MSF. At the Commerce/Citadel station, an aboveground outdoor shelter may be required if the underground control room cannot support additional equipment.
Train Control House and Electrical Power Switches	The train control house contains signal equipment and electric power switches (housed in metal, box-like enclosures) that transfer electric power from utility providers to underground traction power and other rail systems. Communications and electrical power switches would be located at each station. For the purposes of the EA, the potential train control house locations were evaluated and are included in **Table 2.7**.
Emergency Generator	Serves as a secondary source of electrical power when the primary power supply is disrupted.

Source: Metro; CDM Smith/AECOM JV 2026.

Source: Metro 2021.

Figure 2.9 Metro Overhead Catenary System for Light Rail Transit Vehicles

Table 2.6 Crossover Locations

Number	General Area	Location	Guideway	Crossover Type
1	West of East Los Angeles Civic Center Station	Along the existing Metro E Line on 3rd Street between Arizona Avenue and Mednik Avenue (referred to as the Maravilla Crossover)	At-Grade	Double Crossover
2	Atlantic/Pomona Station	Beverly Boulevard and Via Corona Street	Underground	Double Crossover
3	Atlantic/Whittier Station	South of the proposed station, at the intersection of Whitter Boulevard and Atlantic Boulevard	Underground	Double Crossover
4	Commerce/Citadel Station	West of the station within Smithway Street	Underground	Double Crossover
5[1]	Saybrook Avenue	East of Saybrook Avenue	Underground	Single Crossover
6[2]	Yates Avenue (MSF Sites 1 and 3) Garfield Avenue (MSF Site 2)	East of intersection of Yates Avenue and Washington Boulevard (MSF Site 1 or 3) East of Garfield Avenue and Washington Boulevard (MSF Site 2)	Aerial	Double Crossover
7	Maple Avenue	East of Maple Avenue and Washington Boulevard intersection	At-Grade	Double Crossover
8	Greenwood Avenue	East of intersection of Greenwood Avenue and Washington Boulevard	At-Grade	Double Crossover

Source: Metro; HNTB/Cordoba 2026.

Note:

[1] This crossover would accommodate moves in and out of the MSF Site 3 and is only required for MSF Site 3.

[2] This crossover would be in the aerial guideway section of the alignment for all MSF options; however, the location changes slightly depending on which MSF site option is selected.

Source: Metro Gold Line Foothill Extension Construction Authority 2012.

Figure 2.10 Typical Light-Rail Traction Power Substations

Table 2.7 Traction Power Substations and Train Control House Locations

Element	General Area	Location	Type
Traction Power Substation	Atlantic/Pomona Station	Corner of Atlantic Boulevard and Beverly Boulevard	Surface
Traction Power Substation	Atlantic/Whittier Station	Within the Atlantic/Whittier station	Underground
Traction Power Substation	Commerce/Citadel Station	Within the Commerce/Citadel station	Underground
Traction Power Substation	Gayhart Street	Near Gayhart Street and Washington Boulevard	Surface
Traction Power Substation	Maple Avenue	East side of Maple Avenue south of Washington Boulevard	Surface
Traction Power Substation	Greenwood Avenue	Southwest corner of the Greenwood station site	Surface
Train Control House	West of East Los Angeles Civic Center Station	At site of an existing traction power substation on the southeast corner of 3rd Street and Arizona Avenue	Surface
Train Control House	Atlantic/Pomona Station	Within Atlantic/Pomona station	Underground

Element	General Area	Location	Type
Train Control House	Atlantic/Whittier Station	Within Atlantic/Whittier station	Underground
Train Control House	Commerce/Citadel Station	Within Commerce/Citadel station	Underground
Train Control House	Gayhart Street	Near Gayhart Street and Washington Boulevard, collocated with a traction power substation	Surface
Train Control House	Yates Avenue	Yates Avenue: ▪ MSF Site 1 or MSF Site 2: on private property identified for MSF ▪ MSF Site 3: within the median of Washington Boulevard east of Yates Avenue beneath the aerial guideway	Surface (applies to all MSF site options)
Train Control House	Maple Avenue	East side of Maple Avenue south of Washington Boulevard, collocated with a traction power substation	Surface
Train Control House	Greenwood Avenue	Southwest corner of the Greenwood Station site, collocated with a traction power substation	Surface

Source: Metro; HNTB/Cordoba 2026.

2.3.4 Maintenance and Storage

The Build Alternative would include equipment and facilities for cleaning and maintenance of rail cars and to store vehicles that are not in service. This would be supported by a new MSF that would be constructed in an industrial zone in the City of Montebello or in the City of Commerce.

Three site options for the MSF are evaluated in this EA, including two site options in the City of Montebello (MSF Sites 1 and 2) that would include facilities for repairing rail cars and one site option in the City of Commerce (MSF Site 3) that would not include repair facilities. Only one of the three sites would be selected and constructed. MSF Sites 1 and 2 would be located north of Washington Boulevard and south of Flotilla Street. MSF Site 1 would be located west of Vail Avenue with mid-block yard lead tracks and MSF Site 2 would be located west of MSF Site 1, with yard lead tracks on Yates Avenue. MSF Site 3 would be located west of MSF Sites 1 and 2, at the tunnel boring machine launch site at Gayhart Street east of Saybrook Avenue. The yard lead tracks for MSF Sites 1 and 2 would connect to the mainline alignment in an aerial configuration and transition to at-grade as the track approaches the MSF. Tracks into MSF Site 3 would connect to the mainline alignment at-grade as the underground alignment transitions to the aerial alignment.

Table 2.8 provides additional information on MSF Sites 1, 2, and 3. **Figure 2.11** shows the location of the three MSF site options and **Figure 2.12**, **Figure 2.13**, and **Figure 2.14** show conceptual layouts of MSF Sites 1, 2, and 3, respectively.

Table 2.8 MSF Sites 1, Site 2, and Site 3 Comparison

Element	MSF Site 1: Mid-Block Yard Lead Tracks	MSF Site 2: Yates Avenue Yard Lead Tracks	MSF Site 3: Satellite Yard at Gayhart Street
MSF Operation	▪ Provide equipment and facilities to clean, maintain, and repair rail cars, tracks, and other system components and enable storage of light rail vehicles that are not in service and Metro's highway and railway (hi-rail) service vehicles ▪ Provide office space for Metro staff, including rail operation and administrative staff	Same as MSF Site 1	Same as MSF Site 1, except would not provide equipment and facilities for repairing rail cars and storage area for light rail vehicle would be reduced
MSF Features	Rail yard, maintenance facility, administrative offices, paint and body shop, maintenance of way shop, cleaning platform and train wash, storage, traction power substations, equipment shelter, radio antenna, and parking	Same as MSF Site 1	Same as MSF Site 1, but would not provide paint and body shop, or maintenance of way shop
MSF Location	West side of Vail Avenue between Flotilla Street and Washington Boulevard	One parcel along the south frontage of Flotilla Street between Yates and Vail Avenues, one adjacent parcel immediately to the south, east of Yates Avenue	South of Gayhart Street, east of Saybrook Avenue
MSF Jurisdiction	City of Montebello	City of Montebello (yard lead tracks are in City of Commerce)	City of Commerce
MSF Connection to the Main line Alignment	Aerial yard lead tracks mid-block west of Vail Avenue with wye junction[1] at the mainline alignment	Aerial yard lead tracks on Yates Avenue with wye junction1 at the mainline alignment Yates Avenue would retain one vehicle lane in both directions	Direct at-grade track connection to the mainline alignment in the light rail vehicle right-of-way east of Saybrook Avenue
MSF Size (in acres)	25[2]	28[2]	9
Full Property Acquisition for the MSF and Yard Lead Tracks	5	7	5 (parcels would also be used for transition from tunnel to aerial tracks, construction staging, and launching of the tunnel boring machine)
Partial Property Acquisitions for the MSF and Yard Lead Tracks	2	10	0

Element	MSF Site 1: Mid-Block Yard Lead Tracks	MSF Site 2: Yates Avenue Yard Lead Tracks	MSF Site 3: Satellite Yard at Gayhart Street
Additional Partial Property Acquisitions Needed for the MSF[3]	Yes	Yes	No
Street Vacation Needed	Yes	No	No
Light Rail Vehicle Storage Capacity at the MSF	84	84	39
Employee Parking Stalls at the MSF	204 (6 Americans With Disabilities Act parking)	255 (7 Americans With Disabilities Act parking)	62 (3 Americans With Disabilities Act parking)
Additional Design Elements for the MSF	▪ Partial vacation of Acco Street to accommodate yard lead tracks o Elimination of through-access from Yates Avenue to Vail Avenue o Addition of cul-de-sac west of lead tracks to provide access to businesses from Yates Avenue ▪ Main line alignment in the median near Garfield Avenue	▪ Two aerial easements required from Burlington Northern Santa Fe (BNSF) Railway ▪ Main line alignment north of Washington Boulevard near Garfield Avenue	Main line alignment in the median near Garfield Avenue

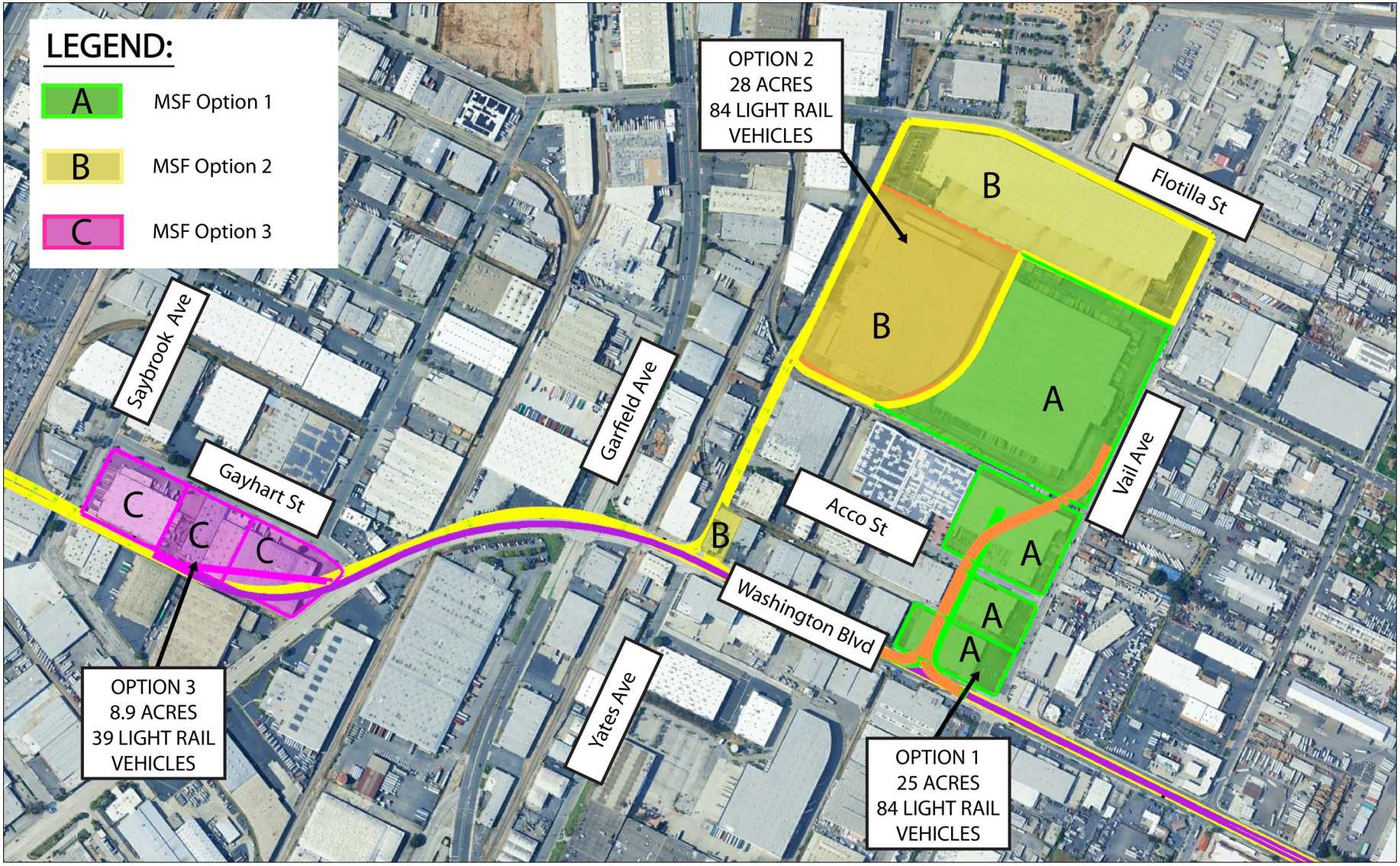
Source: Metro; CDM Smith/AECOM JV 2026.

Notes:

[1] A wye junction is the joining of three track segments.

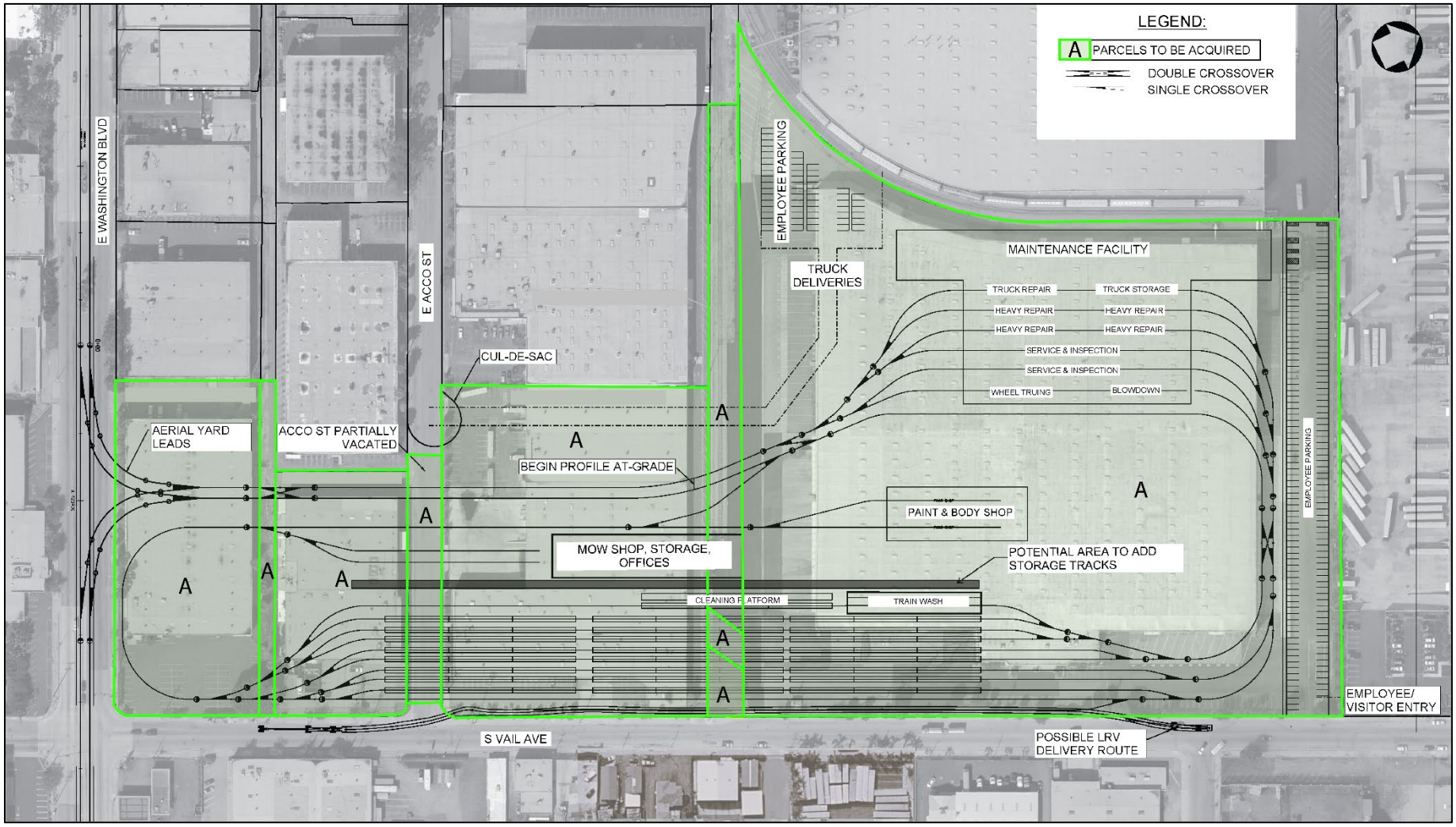
[2] Additional acreage would be needed to accommodate the wye junction, lead tracks, and construction staging

[3] Indicates if partial property acquisitions would be needed in addition to full property acquisitions for construction and operation of the MSF site and guideway.



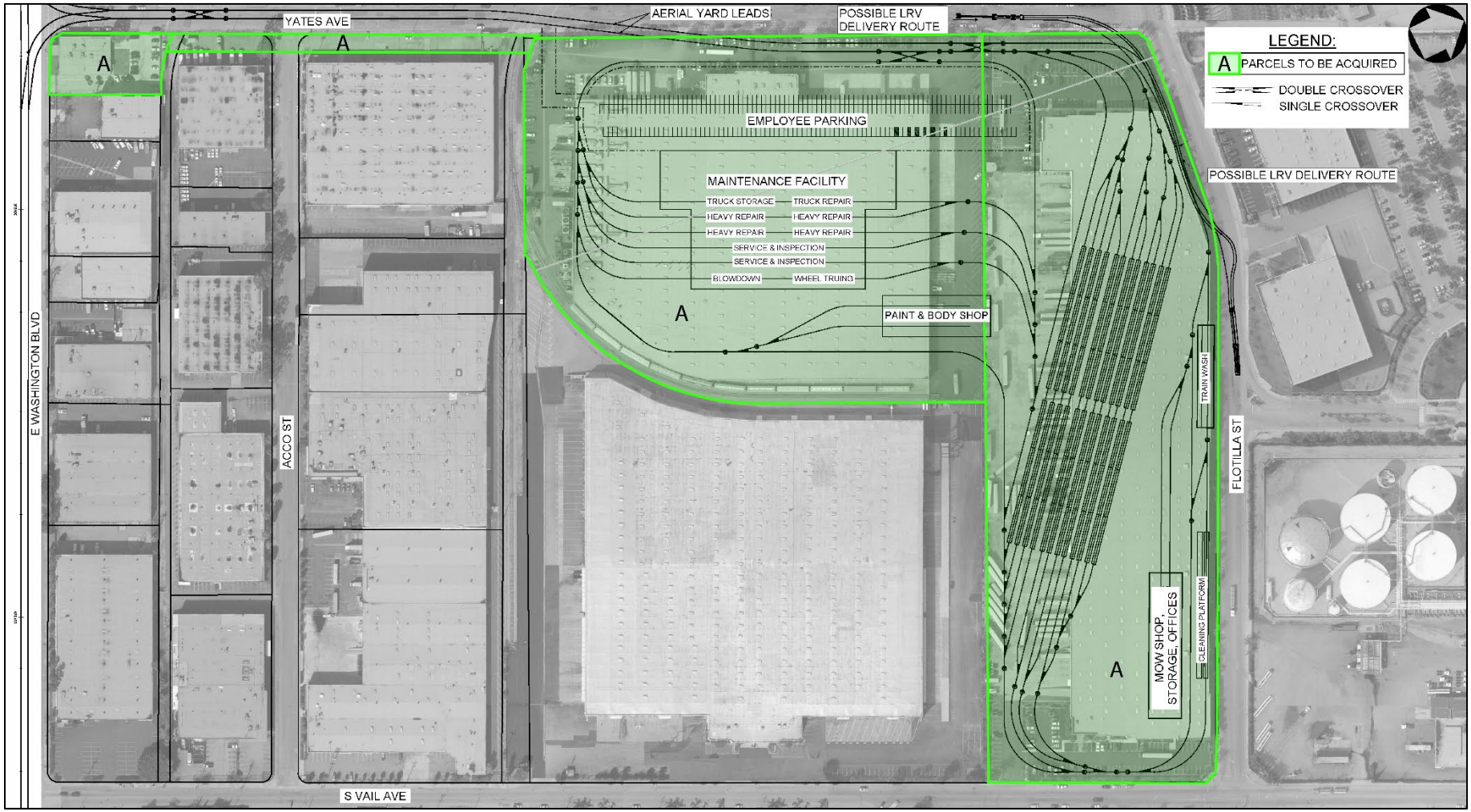
Source: HNTB/Cordoba 2026.

Figure 2.11 Maintenance and Storage Facility Site Options



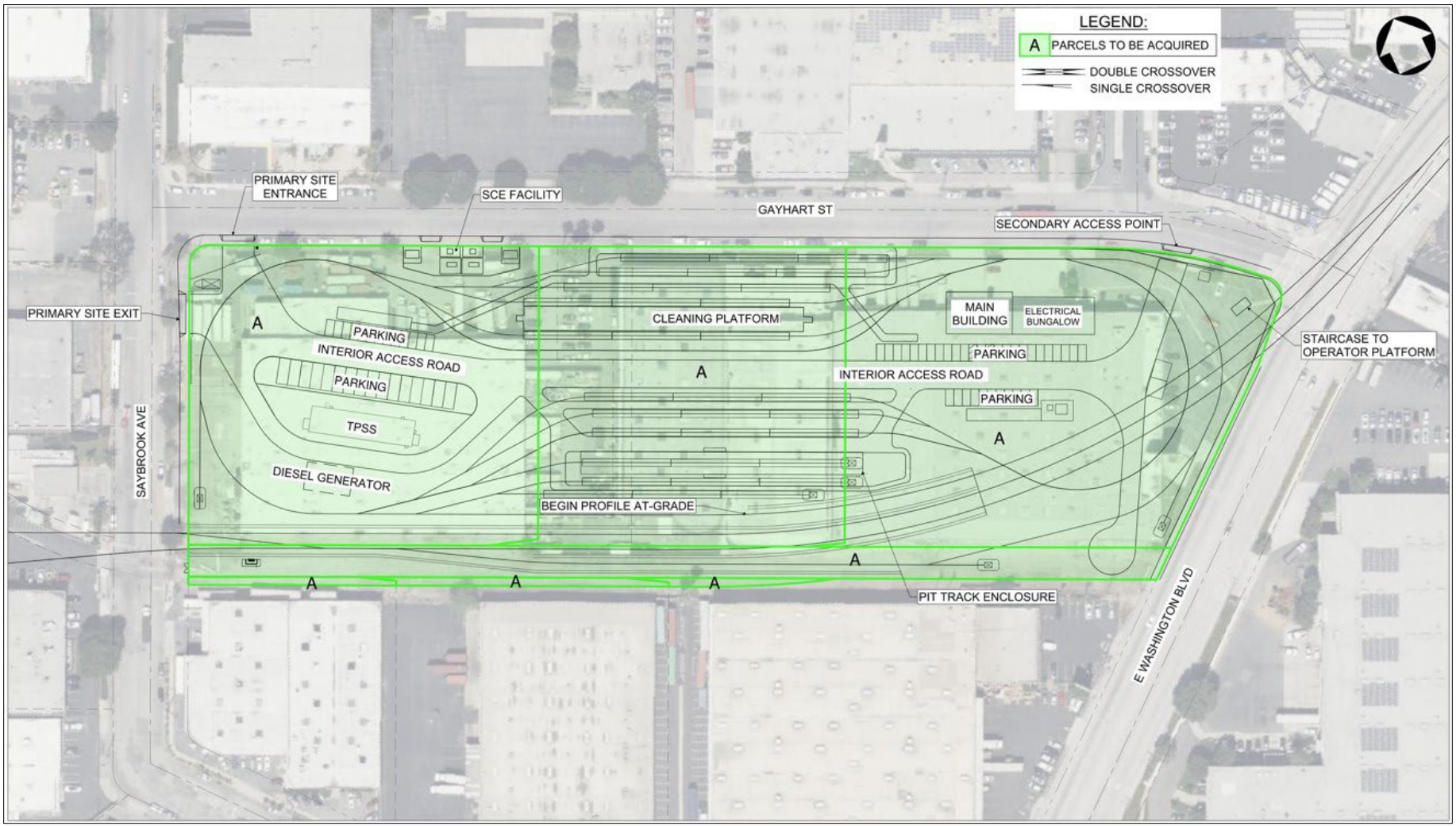
Source: HNTB/Cordoba 2026.
Key: LRV = Light Rail Vehicle; MOW = Maintenance of Way

Figure 2.12 Maintenance and Storage Facility Site 1



Source: HNTB/Cordoba 2026.
Key: LRV = Light Rail Vehicle; MOW = Maintenance of Way

Figure 2.13 Maintenance and Storage Facility Site 2



Source: HNTB/Cordoba 2026.
Key: LRV = Light Rail Vehicle; SCE = Southern California Edison; TPSS = traction power

Figure 2.14 Maintenance and Storage Facility Site 3

2.3.5 Construction

The Build Alternative would include the construction of an underground, aerial, and at-grade guideway for light rail transit. Key construction activities associated with the guideway construction (at-grade, aerial, underground) would include temporary roadway decking for the cut and cover sections and tunnel boring for the underground guideway. Additional activities would include underground and at-grade station construction, demolition, utility relocations, street improvements (such as sidewalk reconstruction and traffic signal installation), retaining walls, and light rail transit operating systems installation including traction power substations and overhead catenary system. The Build Alternative would also include construction of a parking lot, other railroad system facilities, the Maravilla Crossover and other crossovers along the alignment, potential street widening, and the MSF. Utility relocation work would generally occur within the affected right-of-way and on adjacent and nearby streets.

Table 2.5 provides a description of typical construction activities to support at-grade, aerial, and underground light rail transit construction, including detail on the activity, typical duration, and equipment required. This table summary is meant to be representative, not all inclusive.

In addition to compliance with regulatory requirements, the development of the Build Alternative would employ conventional construction methods, techniques, and equipment. All work for development of the light rail transit system would conform to accepted industry specifications and standards, including best management practices. Build Alternative engineering and construction would, at minimum, be completed in conformance with applicable regulations, guidelines, and criteria. Cooperation with the corridor cities and Los Angeles County would occur throughout the construction process.

Applicable regulations, guidelines, and criteria would include, but not be limited to, Metro Rail Design Criteria, Architectural Standard and Directive Drawings, California Public Utilities Commission regulations, California Building Code, Metro Operating Rules, Metro Sustainability Principles, and Metro standard and directive drawings from other engineering disciplines as needed.

Build Alternative construction is anticipated to last approximately 60 to 84 months. Construction activities for the at-grade alignment, aerial alignment, and underground alignment would occur simultaneously. The construction of the underground stations is anticipated to take 36 to 48 months, while the construction of the at-grade station is expected to last approximately 12 to 18 months, as shown in **Table 2.9**. Most construction activities would occur during daytime hours. For specialized construction tasks (e.g., tunnel boring machine tunneling), it may be necessary to work during nighttime hours to minimize traffic disruptions and disruptions to businesses and other land uses along the alignment. Traffic control and pedestrian control during construction would follow local jurisdiction guidelines and the Manual of Uniform Traffic Control Devices standards. Standard traffic control methods and devices would be used, including the use of signage, roadway markings, flagging, and barricades to regulate, warn, or guide road users. Laydown and storage areas (staging area) for construction equipment and materials would be in the vicinity of the Build Alternative within parking facilities, and/or on parcels that would be acquired for the proposed stations and the MSF.

Table 2.9 Summary of Construction Activities for the Build Alternative

Alignment	Activity	Typical Duration (Total Months)	Description	Equipment Required
At-Grade Alignment	Utility Relocation	16-24	Relocate utilities from temporary and permanent elements related to the construction and/or operation of the Build Alternative.	Saw cutter, backhoes, jackhammers, excavators, hydro excavation trucks, dump trucks, cement trucks, asphalt pavers, forklift, manlift, cranes, bucket trucks, cable-pull trucks
At-Grade Alignment	Construction Staging Laydown Yard	3-6	Demolish existing buildings to store construction equipment and materials including the tunnel boring machines, office space, and preparation for the MSF.	Bulldozer, excavators, dump trucks, backhoes
At-Grade Alignment	Roadway	12-36	Reconfigure roadway, demolition of existing roadway, installation of curb and gutter, and other public right-of-way improvements. Install relocated traffic signals and stripe roadway.	Excavators, backhoes, compactors, milling machines, jackhammers, asphalt pavers, pavement breakers, manlifts, forklifts, dump trucks, cement trucks, road-striping trucks
At-Grade Alignment	Guideway	24	Install slab and embedded track.	Forklift, dump trucks, excavators, cement trucks, rail installation equipment, and truck mounted welders
At-Grade Alignment	Station Construction	12-18	Excavate and grade to the bottom of the station elevation. Install mechanical, electrical, and plumbing. Form foundation, platform, structural components, and train control and communications room; install rebar, and pour concrete. Install canopies, faregates, ticketing, finishes, stairs, walkways, and station artwork.	Forklifts, generator sets, loaders, welders, cement trucks, cranes, manlifts
At-Grade Alignment	Light Rail Transit Systems Installation	14-24	Install overhead catenary system, overhead catenary system electrical and communication ducts, overhead catenary system foundations, traction power substations, and train control and communications equipment and bungalows.	Excavators, backhoes, forklifts, Hi-Rail vehicles, cranes, manlifts
At-Grade Alignment	Parking Lot	3-6	Demolition of existing pavement, grade, form and pour hardscape, pave parking facility, install irrigation, plant landscaping.	Forklifts, cement trucks, pavement breakers, diamond saws, compressors, paving machines, loaders, haul trucks

Alignment	Activity	Typical Duration (Total Months)	Description	Equipment Required
At-Grade Alignment	MSF (Sites 1, 2, or 3)	18-24	Install mechanical, electrical, and plumbing; special track; specialized washing equipment; and rebar. Pour concrete.	Crane, forklifts, cement trucks
Aerial Alignment	Utility Relocation	12-18	Relocate underground and/or overhead utilities from temporary and permanent elements related to the construction and/or operation of the Build Alternative.	Saw cutter, backhoes, jackhammers, excavators, hydro excavation trucks, dump trucks, cement trucks, asphalt pavers, cranes, bucket trucks, forklift, manlift, cable-pull trucks
Aerial Alignment	Civil Roadway	12-24	Reconfigure roadway to accommodate aerial guideway. Demolish existing roadway installation of curb and gutter, sidewalks and drainage. Install relocated traffic signals and stripe roadway.	Excavators, backhoes, compactors, milling machines, jackhammers, asphalt pavers, pavement breakers, manlifts, forklifts, dump trucks, cement trucks, road-striping
Aerial Alignment	Retaining Walls	6-12	Structure would allow for transition from underground or at-grade into an aerial configuration.	Excavators, cranes, compactors, cement truck, forklifts, dump trucks
Aerial Alignment	Elevated Guideway	12-18	Install foundation columns, falsework, track slabs, track, and elevated sections.	Cast-in-drilled-hole drill rig or pile driver, cranes, forklifts, compressors, haul trucks, manlifts, loaders, cement trucks
Aerial Alignment	Light Rail Transit Systems Installation	14-24	Install catenary overhead wire system, traction power substations, train control and communications equipment, etc.	Excavators, backhoes, forklifts, Hi-Rail vehicles, cable pull truck, cranes, manlifts
Underground Alignment	Utility Relocation	12-18	Relocate and hang underground utilities from temporary and permanent elements related to the construction and operation of the Build Alternative.	Saw cutter, backhoes, jackhammers, excavators, hydro excavation trucks, dump trucks, cement trucks, pavers, forklift, manlift, jack and bore, horizontal directional drilling drill
Underground Alignment	Open Cut and Cut and Cover Construction	18-24	Supports the construction of the tunnel boring machine launching and receiving pit, underground stations. Install soldier piles for beam and lag support of excavation and excavation. Cover excavation with temporary decking.	Mobile cranes tower cranes, excavators, cast-in-drilled-hole drill rigs or pile drivers, skid steers, loading shovel, 360 excavator, backhoes, loaders, dump trucks, concrete delivery trucks, concrete pumps, forks, generators.

Alignment	Activity	Typical Duration (Total Months)	Description	Equipment Required
Underground Alignment	Bored Tunnel	15-20 (3-4 Month Lag on Starting 2nd Bore)	Construction of underground guideway.	Tunnel boring machines, rail mounted equipment and material/labor/tunnel liner delivery vehicles, spoil retrieval conveyors, earth moving vehicles, substation, air compressor, grouting plant, soil conditioning plant, cranes (tower, gantry, crawler, mobile, etc.) drilling rigs, concrete mixers and pumping equipment, flatbed trucks, electric power supply equipment, generator, tunnel ventilation equipment, sand and gravel delivery trucks, dump trucks, ripper teeth or roadheader mounted excavators, drill jumbo, grouting equipment, shotcrete pump and nozzle, hyperbaric apparatus, loading shovel, 360 excavator, tunnel spoil conveyor, conveyor trains, materials muck delivery, drill jumbo, and concrete breaker.
Underground Alignment	Station Construction	36-48	Install mechanical, electrical, and plumbing, rebar, ventilation fans, sump pump system, fire suppression, canopies, faregates, ticketing, finishes, elevators, escalators, and station artwork.	Tower crane, skid steer, cast-in-drilled-hole drill rig or pile driver, forklifts, generator sets, loaders, welders
Underground Alignment	Light Rail Transit Systems Installation	14-24	Installation of traction power substations, train control and communications equipment, overhead conductor rail, signal switches, and testing.	Forklifts, skid steer, Highway and Rail vehicles
Underground Alignment	Underground Guideway	12-18	Install special trackwork and track.	Forklifts, compressors

Source: CDM Smith/AECOM JV and HNTB/Cordoba JV 2026.

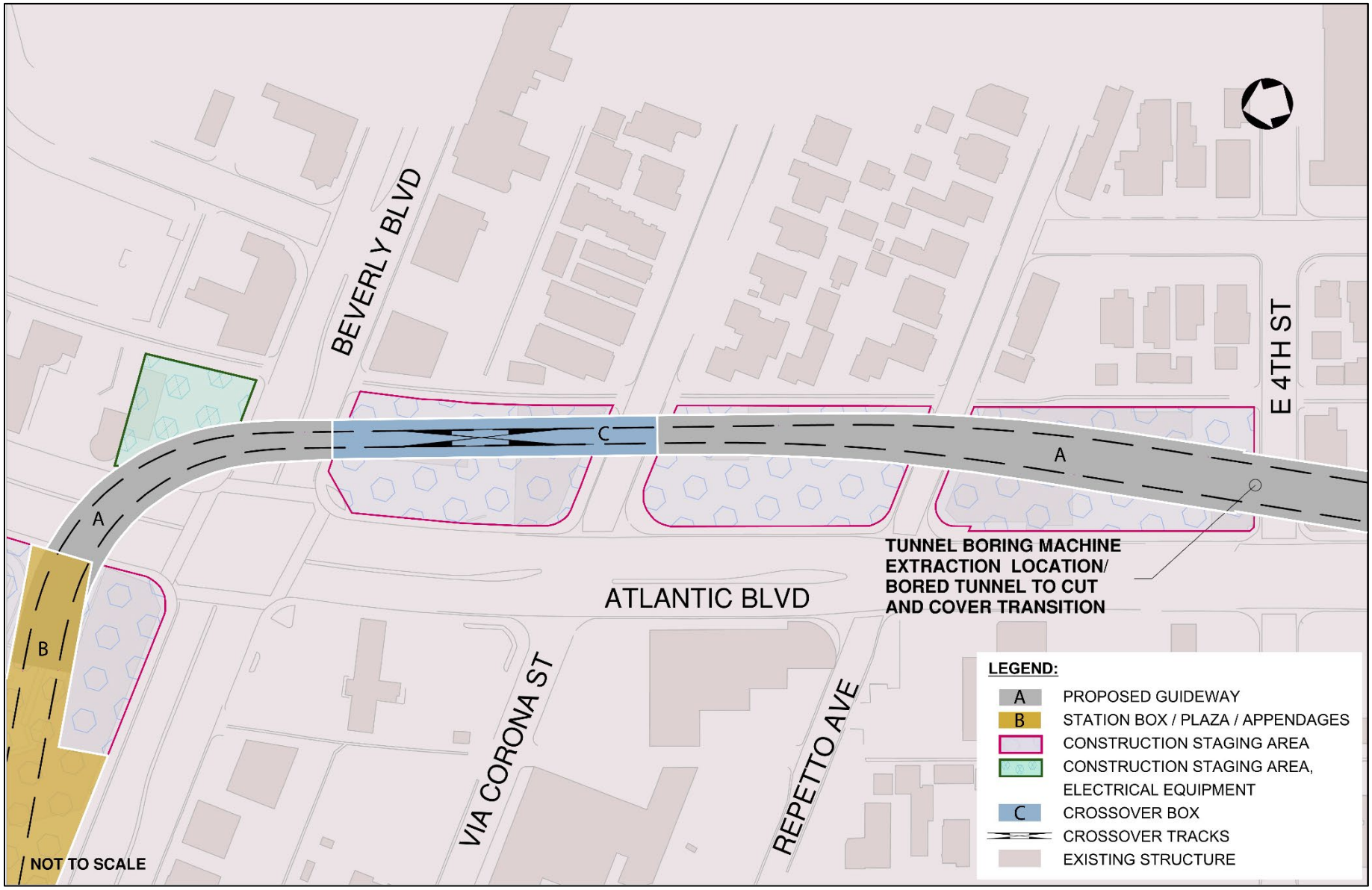
Staging areas could be used to store building materials and construction equipment, assemble the tunnel boring machines, temporarily store excavated materials, and house temporary field offices for the contractor. The staging areas would be established in the vicinity of the Build Alternative within parking facilities, and/or on parcels that would be acquired for the proposed stations, traction power substations sites, and the MSF and yard lead tracks. Site clearance and demolition of existing structures at the construction staging areas would occur before major construction activities begin. The size of the construction staging areas would range from approximately 0.7 acres (29,865 square feet) to 5 acres (217,800 square feet). There would be potential future Joint Development opportunities within these areas after Metro is finished with construction. The MSF site could also be used as a staging area. Potential construction staging areas related to the Build Alternative are listed in **Table 2.10**.

Table 2.10 Potential Construction Staging Area Locations

Build Alternative Component	Potential Location Description
Atlantic/Pomona Station	At the Atlantic/Pomona station site between Pomona Boulevard, Beverly Boulevard and Atlantic Boulevard (See **Figure 2.5**).
Tunnel Boring Machine Extraction Site	East of Atlantic Boulevard between Repetto Avenue and 4th Street. Additional sites for the tunnel would be used East of Atlantic Boulevard between Repetto Ave and one parcel north of Beverly Boulevard (See **Figure 2.15**).
Atlantic/Whittier Station	Northeast parcel and southwest parcel at the intersection of Atlantic Boulevard and Whittier Boulevard (See **Figure 2.6**).
Commerce/Citadel Station	Near the Commerce/Citadel station site off Smithway Street and within the existing Citadel Outlet parking lot (See **Figure 2.7**).
Tunnel Boring Machine Launching Site/MSF Site 3	Southern limit of the tunnel near Saybrook Avenue and Gayhart Street northwest of Washington Boulevard (See **Figure 2.16**).
MSF Sites 1 and 2	At or near MSF Site 1 or 2 between Yates Avenue and Vail Avenue north of Washington Boulevard.
Greenwood Station	Near intersection of Washington Boulevard and Greenwood Avenue (See **Figure 2.8**).
Standalone Traction Power Substations Sites	Varies.

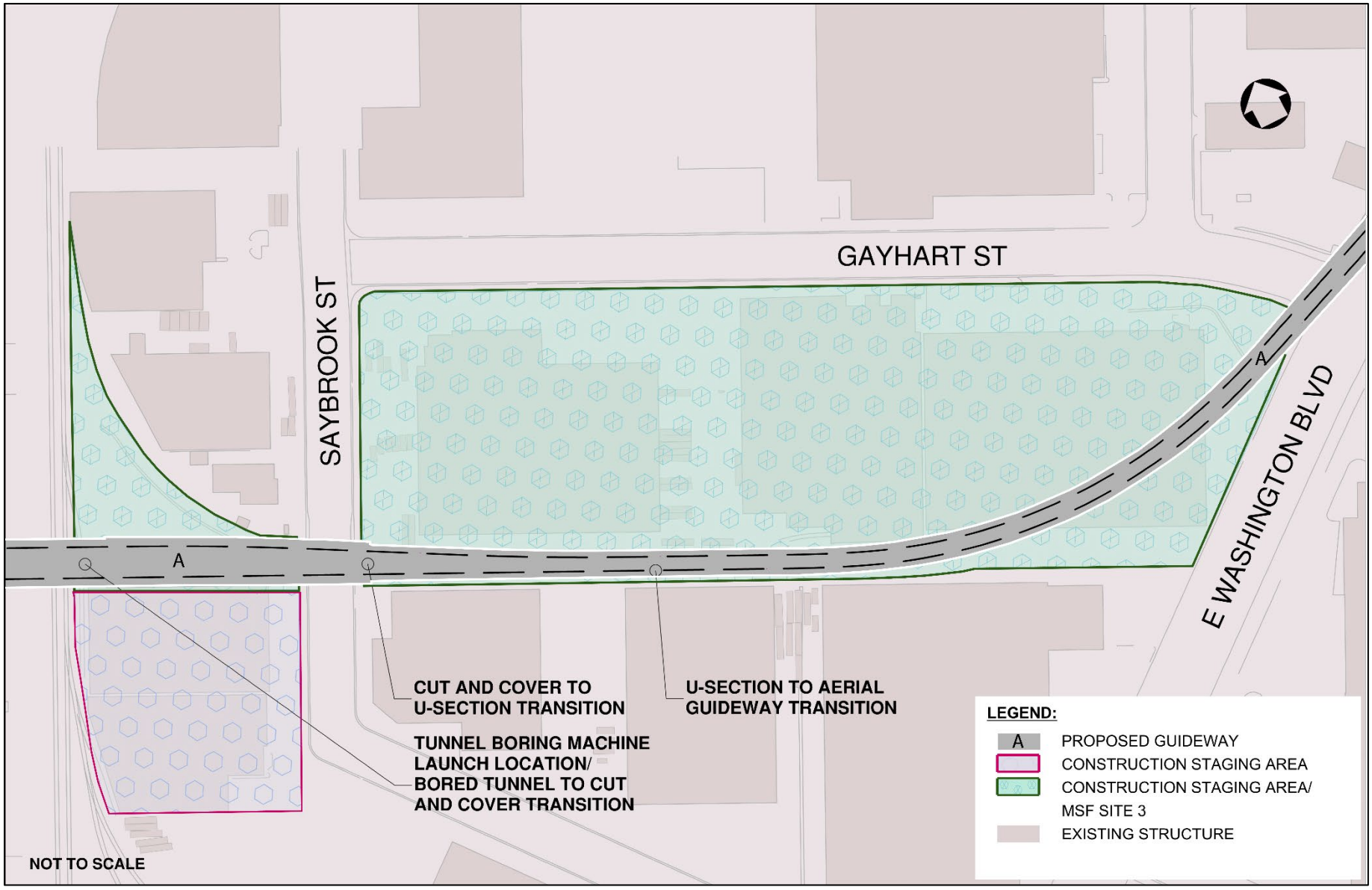
Source: Metro; CDM Smith/AECOM JV 2026.

The tunnel boring machine would be extracted near the intersection of Atlantic Boulevard and 4th Street. In this area, the cut and cover method would be used east of Atlantic Boulevard in a north-south orientation, starting north of 4th Street and then transition in an east-west orientation along Beverly Boulevard and 3rd Street. The cut and cover would end on 3rd Street between Woods Avenue and La Verne Avenue where the tunnel connects to existing tracks. Cut and cover activities would deck portions of existing roadways that support live traffic. Such activities would occur at Atlantic Boulevard between Beverly Boulevard and Pomona Boulevard (east of the proposed Atlantic Pomona station), and east of Atlantic Boulevard at Beverly Boulevard, Via Corona Street, Repetto Avenue, and 4th Street (see **Figure 2.15**). A temporary electrical conduit would be extended from the existing Vail Substation north of Flotilla Street to the tunnel boring machine launch site to power the tunnel boring machine. This would involve installing the temporary conduit in a trench within right-of-way of Yates Avenue and Washington Boulevard. Building the service feed would include the following construction activities: excavating the trench line, installing shoring to support the trench, laying conduit, installing vaults, encasing the conduit with concrete, backfilling the trench with slurry and/or compacted soil, and placing steel plates over the trench line. Wires would be pulled into the conduit between vaults and then energized during a tie-in to the existing power grid. Excavation for the trench would be approximately 3 feet wide and about 20 feet deep.



Source: Metro; HNTB/Cordoba 2026.

Figure 2.15 Cut-and-Cover Tunnel and Mid-Line Crossover Structures



Source: Metro; HNTB/Cordoba 2026.

Figure 2.16 Tunnel Boring Machine and Staging Area Sites

The underground guideway would typically contain two twin bored tunnels. These bored tunnels would be constructed using an earth pressure balance tunnel boring machine. Tunnel boring machines are horizontal drills that continuously excavate circular tunnel sections. The tunnel boring machine would be launched at the southern limit of the tunnel near Saybrook Avenue and Gayhart Street northwest of Washington Boulevard (See **Figure 2.16**). The tunnel boring machine would then excavate the first tunnel and advance north towards the excavation pit located at East of Atlantic Boulevard between Repetto Avenue and 4th Street. The tunnel boring machine would be turned at the excavation pit and relaunched towards the launch pit to bore the second tunnel. The tunnel boring machine would be disassembled and lifted from the launch pit.

The contractor would determine the method of removing material and hauling it away from the job site in compliance with existing regulations. Excavated material is anticipated to be loaded into trucks and transported along the Eastside Transit Corridor right-of-way and/or major streets to construction staging areas or to or from the nearest freeway (e.g., Interstate 5, State Route 60, and Interstate 605). Potential haul routes would be identified based on the location of the construction activities with respect to major streets leading to freeways.

Excavated material from major Los Angeles construction sites is typically disposed of at sites on the Interstate 10 corridor or accessed from State Route 14. The northern haul routes are shown in **Figure 2.17**. The southern haul routes, which would be where the tunnel boring machine is launched, are shown in **Figure 2.18**. The Build Alternative may utilize Interstate 5 as a haul route during construction activities. Consistent with local plans, truck routes that may be used for transporting and hauling construction-related materials include Washington Boulevard, Atlantic Boulevard, Whittier Boulevard, Saybrook Avenue, Gayhart Street, Telegraph Road, Paramount Boulevard, Rosemead Boulevard, Slauson Avenue, Smithway Street, Vail Avenue, Yates Avenue, and Greenwood Avenue. Hauling would also occur on Beverly Boulevard and 3rd Street within East Los Angeles (unincorporated Los Angeles County) with approval from the Los Angeles County Department of Public Works through a Haul Route Permit. Estimates of the total number of haul trucks are provided in **Table 2.11**. This would translate to approximately 15 additional trucks on the roadway during each morning peak (6 am – 9 am) and afternoon/evening peak (3 pm – 7 pm).

Table 2.11 Total Number of Anticipated Haul Trucks

Configuration	Total Number of Trucks
Aerial	1,828
At-Grade	1,540
Underground	70,233
Total	73,601

Source: Metro; CDM Smith/AECOM JV 2026.

Final design and actual construction methods, sequencing, and equipment may vary, depending in part on how contractors choose to implement their work to be most cost-effective, within the parameters set forth in the bid and contract documents. Construction impacts associated with the No Build Alternative and the Build Alternative are evaluated in **Section 3.17** (Construction).

Source: CDM Smith/AECOM JV 2026.
Note: Haul route is a potential scenario. The contractor would determine the method of removing material and hauling it away from the job site.

Figure 2.17 Northern Haul Routes

Source: CDM Smith/AECOM JV 2026.
Note: Haul route is a potential scenario. The contractor would determine the method of removing material and hauling it away from the job site.

Figure 2.18 Southern Haul Route

2.3.6 Operations

Operation of the Build Alternative would be managed by Metro staff and personnel. The Build Alternative would operate a train line using light rail technology. Operational activities of the Build Alternative include train car operations, train car maintenance (including cleaning and storage), track maintenance, and general administration. In addition, the Build Alternative would include emergency lighting, communications and wayfinding systems, a command-and-control system, a public information system, and security systems to monitor activity at station platforms along the alignment and at the MSF. Operation of the MSF would include daily service and cleaning, inspection and repairs, and storage of light rail vehicles. Activities may occur at the MSF throughout the day and night depending upon train schedules, workload, and maintenance requirements. Primary maintenance functions would include service/inspections, heavy repairs, component changeouts, and unscheduled maintenance. Adjacent to the maintenance tracks would be the support shops, parts storeroom, and a supervisor's office.

Table 2.12 summarizes the operating hours and frequency for the Build Alternative, which would be comparable to the weekday, Saturday and Sunday, and holiday schedules for the Metro E Line. The operational headways (the time between vehicles past a given point) are consistent with Metro design requirements for future rail services.

Table 2.12 Operating Hours and Frequency for the Build Alternative

Time	Weekday Frequency	Weekend/Holiday Frequency
4:00 am - 5:00 am	12 minutes	20 minutes
5:00 am - 6:00 am	6 minutes	20 minutes
6:00 am - 7:00 am	6 minutes	20 minutes
7:00 am - 8:00 am	6 minutes	20 minutes
8:00 am - 9:00 am	6 minutes	20 minutes
9:00 am - 10:00 am	10 minutes	10 minutes
10:00 am - 11:00 am	10 minutes	10 minutes
11:00 am - 12:00 pm	10 minutes	10 minutes
12:00 am - 1:00 pm	10 minutes	10 minutes
1:00 pm - 2:00 pm	10 minutes	10 minutes
2:00 pm - 3:00 pm	10 minutes	10 minutes
3:00 pm - 4:00 pm	6 minutes	10 minutes
4:00 pm - 5:00 pm	6 minutes	10 minutes
5:00 pm - 6:00 pm	6 minutes	10 minutes
6:00 pm - 7:00 pm	6 minutes	10 minutes
7:00 pm - 8:00 pm	15 minutes	10 minutes
8:00 pm - 9:00 pm	20 minutes	10 minutes
9:00 pm - 10:00 pm	20 minutes	20 minutes
10:00 pm - 11:00 pm	20 minutes	20 minutes
11:00 pm - 12:00 am	20 minutes	20 minutes
12:00 pm - 1:00 am	20 minutes	20 minutes

Source: Metro; CDM Smith/AECOM JV 2026.
Key: am = ante meridiem; pm = post meridiem

Ridership forecasts for the Build Alternative anticipate approximately 7,550 total weekday station boardings by 2050 compared to 3,010 boardings at the existing Atlantic/Pomona Station under the No Build Alternative. Based on the operating headway requirements and ridership forecasts, Metro anticipates the need for an additional three trains for the Metro E Line to operate the Build Alternative. Each train would have three cars and there would be one spare train for a total of 12 new train cars. **Table 2.13** summarizes ridership projections for the Build Alternative by 2050. Further information on ridership projections is available in **Section 3.15** and **Appendix O** (Transportation Impact Report).

Table 2.13 2050 Ridership Forecast of the Build Alternative

Proposed Station	Average Weekday Station Boardings
Greenwood	2,290 passengers
Commerce/Citadel	1,350 passengers
Atlantic/Whittier	1,260 passengers
Atlantic/Pomona	2,650 passengers
Total Station Boardings	**7,550 passengers**

Source: Metro; CDM Smith/AECOM JV 2026.

2.3.7 Right-of-Way and Property Acquisition

Property acquisitions would be required for the Build Alternative for construction staging areas, tracks, tunneling, aerial structures, vents/switches/egress, stations, train control house, radio communication facilities, traction power substations sites, grade crossing/separations, parking facilities, and the MSF. This includes full acquisitions in the form of permanent aerial easements to accommodate the aerial structures and columns for the aerial segment of the alignment and full property acquisitions for construction staging, the Atlantic/Pomona station and cut and cover tunnels, parking facilities, and the MSF. MSF Site 1 would also require full acquisitions for the yard lead tracks. Partial acquisitions for permanent underground easements would be required to accommodate tunneling for underground alignments and underground traction power substations sites. In addition, partial and full acquisitions would be required for station entrances, grade crossing/separations, and other ancillary facilities. Property acquisition would be limited to properties currently zoned for commercial or industrial uses, and no churches, schools, parks, or other sensitive land uses are expected to be permanently acquired.

Relocation assistance and benefits would be provided to displaced businesses in compliance with federal and state regulations and Metro's policies. Additional information is provided in **Section 3.12** and **Appendix M** (Real Estate and Acquisitions Impact Report).

2.3.8 Preliminary Cost Estimate and Funding

Table 2.14 shows the preliminary cost estimate and funding for the Build Alternative. Additional information on the Build Alternative's economic impact is provided in **Section 3.6** and **Appendix I** (Economic Impacts Report).

2.3.8.1 Project Cost

As presented in December 2022, when the Build Alternative was approved as the Locally Preferred Alternative by the Board (Metro 2024b), the project team worked closely with Program Control's Cost Estimating staff in November 2022 and completed an Independent Cost Estimate update. With consideration of appropriate contingencies and escalation, the forecasted cost estimates are $7.902 billion for the Build Alternative based on the advanced conceptual engineering design plan (15 percent design). This estimate will be refined upon completion of 30 percent Preliminary Engineering in fall 2026 and following FTA review during the Project Development phase.

2.3.8.2 Funding Plan

The Measure M Ordinance (Los Angeles County Traffic Improvement Plan Ordinance #16-01 passed by voters on November 8, 2016) identifies $3 billion (in 2015 dollars) in Measure M and other local, state, and federal funding for the Eastside Transit Corridor Phase 2 Extension to the City of Whittier. Because the Measure M Ordinance funding is less than the current cost estimates, the full extension will be developed in segments, starting with the Build Alternative. The funding plan for the Build Alternative (as the Locally Preferred Alternative) was presented to the Board in December 2022 and is comprised of committed Measure M and Measure R sales tax revenues, other local sales tax sources (Proposition A and Proposition C), secured state funds, and additional state and federal funding to be secured.

The Build Alternative is expected to fully utilize the available Measure M Cycle 1 capacity and the portion of Measure R funding assigned to this alignment per Metro Board Motion 8.1 (Metro 2024b). Total secured funding in year-of-expenditure dollars is approximately $3,959.3 million, as shown in **Table 2.14**. This includes State Transportation Improvement Program formula grant funds, for which Metro requested $135 million in December 2025. On March 19, 2026, the California Transportation Commission approved an allocation of $133.8 million for the Build Alternative. The remaining funding to be secured totals approximately $3,943 million. Metro will continue pursuing state programs (e.g., Transit and Intercity Rail Capital Program, Regional Improvement Program, Senate Bill 1 programs) and federal programs (e.g., Capital Improvement Grants/New Starts, Congestion Mitigation and Air Quality Program, National Infrastructure Project Assistance Grants Program). Local funding tradeoffs may also be required depending on state and federal outcomes.

Table 2.14 Funding Sources

Funding Sources	Build Alternative Costs in year of expenditure dollars ($), in millions
Sources - Secured	
Local (Sales Tax – Measure R, Measure M, Proposition A, Proposition C, 3% Contribution)	$3,790.5
State (Transit and Intercity Rail Capital Program, State Transportation Improvement Program)	$168.8
Total Secured	***$3,959.3***
Sources – Yet to be Secured	
State (e.g., Senate Bill 1, Transit & Intercity Rail Capital Program)	$1,505.1
Federal (e.g., New Starts)	$2,437.9
Total Yet-to-be-secured	***$3,943.0***
Total	***$7,902.3***

Source: Metro 2026.
Key: % = percent; $ = dollars

2.3.9 Permits and Approvals

Table 2.15 shows the various permits and/or approvals required for the Build Alternative.

Table 2.15 Agency Approvals and Permits for the Build Alternative

Agency	Approvals and Permits
FTA	Environmental decision document, Section 4(f) determination
Metro	Environmental decision document for the state environmental process
California Office of Historic Preservation, State Historic Preservation Officer	Section 106 Review
California Public Utilities Commission	Grade Separations, Crossings, State Safety Oversight
Department of Toxic Substances Control	Hazardous materials clean up
State Water Resources Control Board	Industrial General Permit, Construction General Permit, and Storm Water Pollution Prevention Plan
Los Angeles Regional Water Quality Control Board	Los Angeles County Municipal Separate Storm Sewer System National Pollutant Discharge Elimination System Package, Waste Discharge Requirements Specified for Discharges to Groundwater in Santa Clara and Los Angeles River Basins (Order Number 93-010) Waste Discharge Requirements for Discharge of Non-Hazardous Contaminated Soils and Other Wastes in Los Angeles River and Santa Clara River Basins (Order Number 91-93)
South Coast Air Quality Management District	Consultation to identify best practices for construction emissions, Clean Air Act Title V permit
Burlington Northern Santa Fe Railroad	Encroachment permits
Union Pacific Railroad	Encroachment permits
Los Angeles County Department of Public Works	Permits and/or discretionary actions required
County of Los Angeles and Cities of Commerce and Montebello	Permits and/or discretionary actions required
Utility providers (various)	Easements, relocation permits

Source: Metro; CDM Smith/AECOM JV 2026.