

Appendix F Utilities Service/Systems and Energy Conservation Impacts Report

GOLD LINE EASTSIDE TRANSIT CORRIDOR PHASE 2



Metro

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

June 2022



Appendix F

Utilities Service/Systems and Energy Conservation Impacts Report

June 2022

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

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Acronyms

2020 RTP/SCS	Connect SoCal 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy
AB	Assembly Bill
ACC II	Advanced Clean Cars II
ACE	Advanced Conceptual Engineering
BART	Bay Area Rapid Transit
BMPs	Best Management Practices
BNSF	Burlington Northern Santa Fe
CAA	Clean Air Act
CAAP	Climate Action and Adaptation Plan
CAFE	Corporate Average Fuel Economy
CalEEMod	California Emissions Estimator Model
CalRecycle	California Department of Resources Recycling and Recovery
CARB	California Air Resources Board
CCR	California Code of Regulations
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CO ₂	carbon dioxide
CO ₂ e	carbon dioxide equivalents
CPUC	California Public Utilities Commission
CSMD	Consolidated Sewer Maintenance District
CWA	Clean Water Act
DHS	Department of Health Services



DSA	detailed study area
DWSAP	Drinking Water Source Assessment and Protection
ECMP	Metro’s Energy Conservation and Management Plan
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EMFAC	Emission Factor Model for On-road Motor Vehicles
EO	Executive Order
FCC	Federal Communications Commission
FLM	first and last mile
FR	Federal Register
GSA	general study area
GHG	greenhouse gases
GWh	gigawatt-hours
I	Interstate
IOS	Initial Operating Segment
IRPs	Integrated Resource Plans
kWh	kilowatt-hours
LACDPW	Los Angeles County Department of Public Works
LARWQCB	Los Angeles Regional Water Quality Control Board
LEV III GHG	Low-Emission Vehicle III Regulation for greenhouse Gases
LRT	light rail transit
L RTP	Long Range Transportation Plan
LRV	light rail vehicles
MAP-21	Moving Ahead for Progress in the 21st Century Act
MBS	Moving Beyond Sustainability



MBTA	Massachusetts Bay Transportation Authority
Metro	Los Angeles County Metropolitan Transportation Authority
MMBTU	metric million British thermal unit
MSF	maintenance and storage facility
Muni	San Francisco Municipal Railway
MW	megawatts
MWD	Metropolitan Water District
NHTSA	National Highway Traffic Safety Administration
NPDES	National Pollutant Discharge Elimination System
OCS	overhead catenary system
Project	Eastside Transit Corridor Phase 2 Project
PV	photovoltaic
RCRA	Resource Conservation and Recovery Act
RWQCB	Regional Water Quality Control Board
ROW	right-of-way
RPS	renewables energy portfolio
RTP	Regional Transportation Plan
SAFE Vehicles Rules	Safer Affordable Fuel-Efficient Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks
SB	Senate Bill
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison
SCS	Sustainable Communities Strategies
SDWA	Safe Drinking Water Act
SIPs	State Implementation Plans



SMD	Sewer Maintenance Division
SoCalGas	Southern California Gas Company
SSMP	Sewer System Management Plan
SWIS	Solid Waste Information System
SWRCB	State Water Resources Control Board
TBM	tunnel boring machine
TPSS	traction power substations
USC	United States Code
USEIA	United States Energy Information Administration
USEPA	United States Environmental Protection Agency
UWMP	Urban Water Management Plan
VMT	vehicle miles traveled
WSDM	Water Surplus and Drought Management Plan
ZEV	zero-emission vehicle



1.0 INTRODUCTION

This impacts report discusses the Eastside Transit Corridor Phase 2 Project (Project) setting in relation to utility service/systems and energy conservation. It describes existing conditions, current applicable regulatory setting, and potential impacts from operation and construction of the Build Alternatives and the No Project Alternative. This study was conducted in compliance with the California Environmental Quality Act (CEQA) and the State CEQA Guidelines, California Code of Regulations (CCR) 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 (Gold) Line approximately 3.2 to 9.0 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, where applicable, 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 study area for utilities service/systems and energy conservations is the GSA.

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.



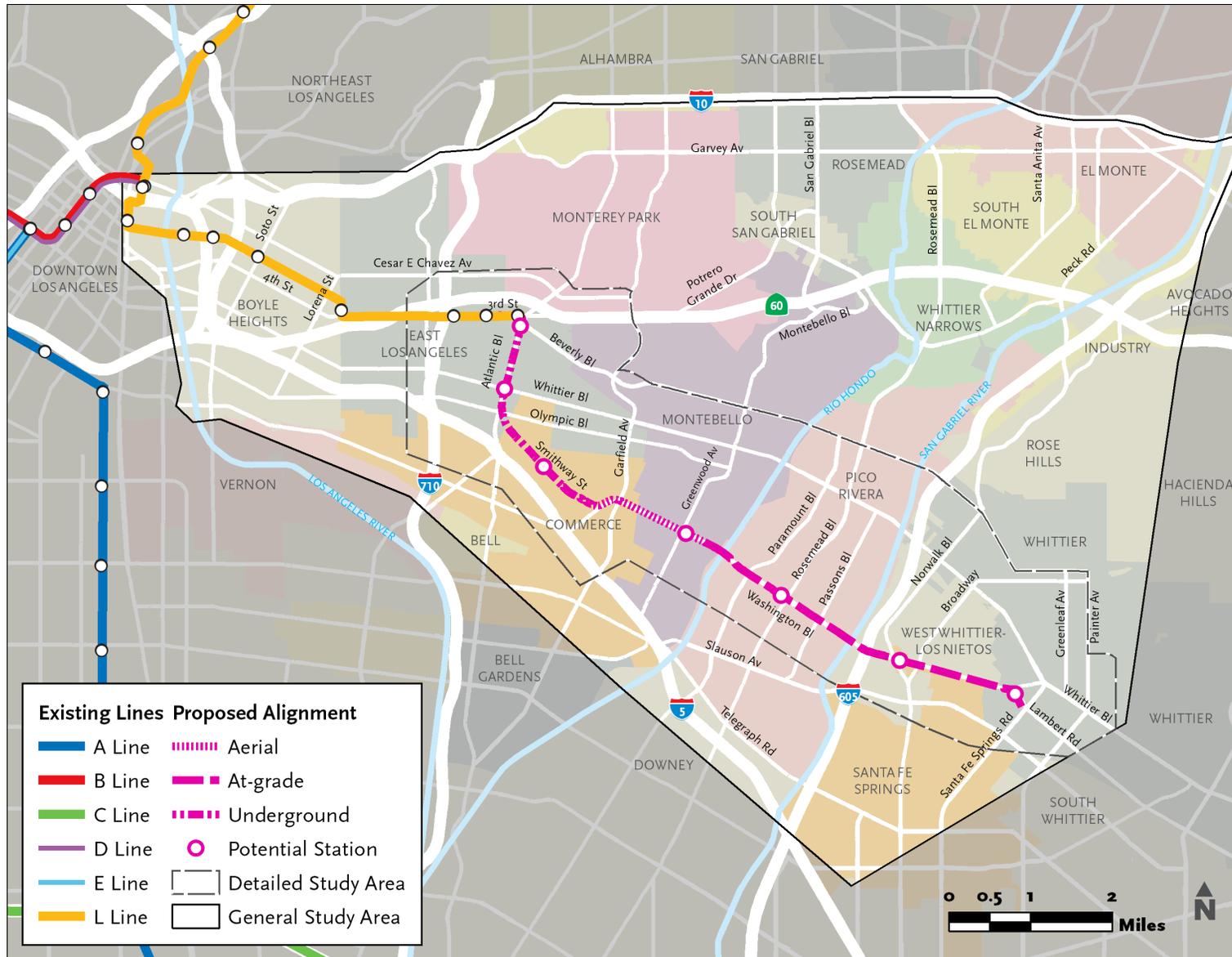
2.0 PROPOSED PROJECT AND ALTERNATIVES

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



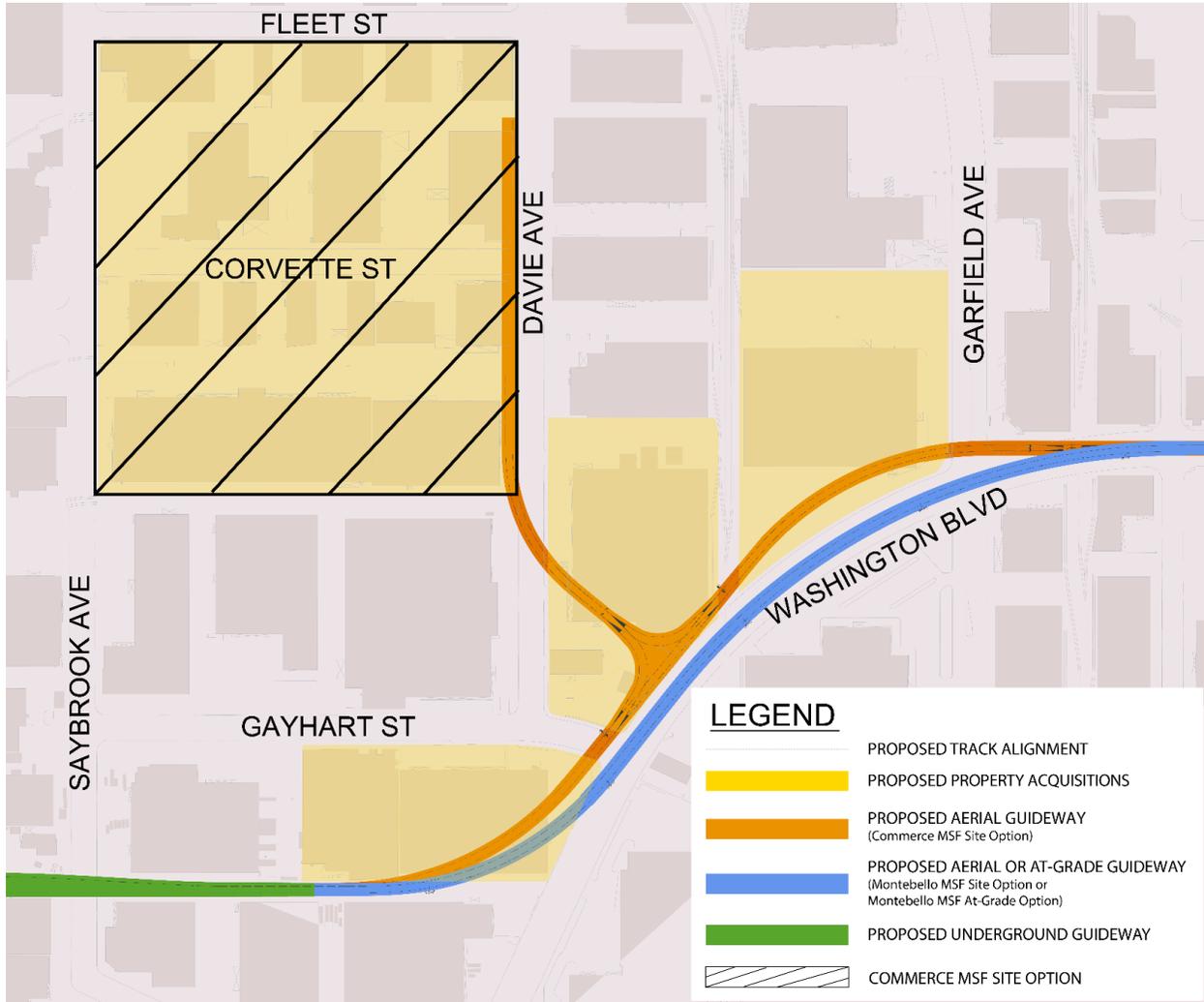
and Washington Boulevard and would run parallel to Washington Boulevard from Gayhart Street to Yates Avenue. The lead tracks to the Commerce MSF site option would be located northeast of the intersection of Gayhart Street and Washington Boulevard and extend in an aerial configuration and then would transition 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 Utilities

3.1.1 Federal

3.1.1.1 Electricity

3.1.1.1.1 Federal Power Act of 1935

The Federal Power Act of 1935 gave the Federal Power Commission (succeeded by the Federal Energy Regulatory Commission in 1977) the power to regulate the sale and transport of electric power.

3.1.1.2 Solid Waste

3.1.1.2.1 Federal Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) (42 United States Code Section 6901 et seq.) was enacted in 1976 to oversee proper management of solid and hazardous wastes, from their generation to ultimate disposal or destruction. Implementation of the RCRA has largely been delegated to federally approved state waste management programs and, under Subtitle D, further promulgated to local governments for management of planning, regulation, and implementation of nonhazardous solid waste disposal. The USEPA retains oversight of state actions under 40 Code of Federal Regulations (CFR) Parts 239–259. Where facilities are found to be inadequate, 40 CFR Section 256.42 requires that necessary facilities and practices be developed by the responsible state and local agencies or by the private sector. In California, that responsibility was created under the California Integrated Waste Management Act of 1989 and AB 939.

3.1.1.3 Telecommunications

3.1.1.3.1 Communications Act of 1934

The Communications Act of 1934 replaced the Federal Radio Commission with the Federal Communications Commission (FCC). It also transferred regulation of interstate telephone services from the Interstate Commerce Commission to the FCC.

The FCC regulates interstate and international communications by radio, television, wire, satellite and cable in all 50 states, the District of Columbia and United States territories. An independent United States government agency overseen by Congress, the FCC is the United States' primary authority for communications law, regulation and technological innovation. The FCC's rules and regulations are in Title 47 of the CFR.



3.1.1.4 Water

3.1.1.4.1 Clean Water Act of 1977

The Clean Water Act (CWA) of 1977 establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters, by outlawing the discharge of any pollutant from a point source into navigable waters unless a permit is obtained.

Under the CWA's National Pollutant Discharge Elimination System (NPDES) program, USEPA regulates discharges of pollutants from municipal and industrial wastewater treatment plants, sewer collection systems, and stormwater discharges from industrial facilities and municipalities.

USEPA enforces requirements to ensure that industries pre-treat pollutants in their wastes in order to protect local sanitary sewers and wastewater treatment plants. Industrial discharges of metals, oil and grease, and other pollutants can interfere with the operation of local sanitary sewers and wastewater treatment plants, leading to the discharge of untreated or inadequately treated pollutants into local waterways.

NPDES permits establish discharge limits and conditions for discharges from municipal wastewater treatment facilities to waters of the United States, including municipal processes used to treat domestic wastewater, and provide a framework for establishing water quality and technology-based NPDES permit limits, and minimum, technology-based standards for discharges from municipal wastewater treatment facilities (i.e., Secondary Treatment Standards, NPDES Permit Writers' Manual, 2010).

3.1.1.4.2 Safe Drinking Water Act of 1996

The Safe Drinking Water Act (SDWA) of 1996 SDWA is the principal federal law in the United States intended to ensure safe drinking water for the public. Pursuant to the act, the USEPA is required to set standards for drinking water quality and oversee all states, localities, and water suppliers that implement the standards. The SDWA applies to every public water system in the United States.

The SDWA requires the USEPA to establish National Primary Drinking Water Regulations for contaminants that may cause adverse public health effects. The regulations include both mandatory requirements (Maximum Contaminant Levels and Treatment Techniques) and unenforceable health goals (Maximum Contaminant Level Goals) for each included contaminant.

3.1.2 State

3.1.2.1 Solid Waste

3.1.2.1.1 Diversion Rule (Assembly Bill 341)

Under commercial recycling law (Chapter 476, Statutes of 2011), AB 341 directed California Department of Resources Recycling and Recovery (CalRecycle) to develop and adopt regulations for



mandatory commercial recycling. The final regulation was approved by the Office of Administrative Law May 7, 2012. AB 341 declared a state policy goal that not less than 75 percent of solid waste generated be source reduced, recycled, or composted by the year 2020 and annually thereafter.

3.1.2.1.2 Integrated Waste Management Act (Assembly Bill 939)

The Integrated Waste Management Act, AB 939, was passed in 1989 because of the increase in waste stream and the decrease in landfill capacities in California. The act requires the implementation of solid waste management programs, including requiring each city or county to divert solid waste from landfill disposal through source reduction, recycling, and composting, and achieve a 50 percent diversion. The law also requires every county and city in the state to prepare a Source Reduction and Recycling Element (SRRE) which identifies programs that the county or city will implement to achieve the required solid waste disposal reduction goal and submit an annual report to CalRecycle to provide an update on progress in achieving this goal.

AB 939 would apply to all businesses and public entities that generate four cubic yards or more of solid waste per week. AB 939 would also further apply to private waste haulers, construction contractors, recyclers that enter into a contract for a construction or demolition project. Therefore, they would be required to have a recycling program. The reuse and recycling of certain portions of construction and demolition debris would be essential to further the efforts to reduce solid waste and comply with AB 939 mandates.

3.1.2.1.3 Construction and Demolition Waste Materials Diversion Requirements (Senate Bill 1374)

SB 1374 was signed into law in 2002 to assist jurisdictions with diverting construction and demolition waste material. The bill requires that jurisdictions provide a summary of progress made in diverting construction and debris waste in the annual AB 939 report to CalRecycle.

3.1.2.1.4 Organic Waste Reduction (Senate Bill 1383)

SB 1383, signed into law in 2016, establishes targets to achieve a 50 percent reduction in the level of the statewide disposal of organic waste from the 2014 level by 2020 and a 75 percent reduction by 2025. The bill grants CalRecycle the regulatory authority required to achieve the organic waste disposal reduction targets and establishes an additional target that not less than 20 percent of currently disposed edible food is recovered for human consumption by 2025.

3.1.2.1.5 Solid Waste Reuse and Recycling Act of 1991 (Assembly Bill 1327)

The California Solid Waste Reuse and Recycling Access Act of 1991 (AB 1327) requires each jurisdiction to adopt an ordinance by September 1, 1994, requiring any "development project" for which an application for a building permit is submitted to provide an adequate storage area for collection and removal of recyclable materials. This act was enacted to assist local jurisdictions with accomplishing the goals of AB 939. In addition, the areas to be utilized must be adequate in capacity, number, and distribution to serve the project. Moreover, the collection areas are to be located as close to existing exterior refuse collection areas as possible.



3.1.2.2 Stormwater

3.1.2.2.1 State Water Resources Control Board

The Construction General Permit, Order No. 2009-0009-DWQ, as amended by 2010-0014-DWQ and 2012-0006-DWQ, requires dischargers whose project disturbs one or more acres but are part of a larger common plan of development that in total disturbs one or more acres, to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity.

3.1.2.3 Wastewater

3.1.2.3.1 Porter-Cologne Water Quality Control Act of 1969, Amended 2019

The state regulates wastewater discharges to surface waters through the NPDES program. The NPDES Permit Program controls water pollution by regulating point sources that discharge pollutants, including storm drain and sewer effluent, into waters of the United States. The NPDES Program is a Federal program which has been delegated to the State of California for implementation through the State Water Resources Control Board (SWRCB) and the nine Regional Water Quality Control Boards (RWQCB), which are collectively known as the Water Boards. The Project is located in the Los Angeles RWQCB region.

3.1.2.4 Water

3.1.2.4.1 Executive Order B-29-15

EO B-29-15, passed in 2014, mandates the SWRCB to impose restrictions to achieve a statewide 25 percent reduction in potable urban water usage through February 28, 2016. Water reductions are measured as compared with 2013 levels. Areas with high per capita water usage should achieve proportionally greater reductions than those areas with lower per capita water usage. The EO additionally directs the California Department of Water Resources to work with local agencies to collectively replace 50 million square feet of lawns and ornamental turf with drought tolerant landscapes.

3.1.2.4.2 Metropolitan Water District Act of 1928

The Metropolitan Water District (MWD) of Southern California was established by the California Legislature in 1928 through the Metropolitan Water District Act. While the primary purpose of the act was to construct and operate the 242-mile Colorado River Aqueduct, the act also authorizes MWD to:

- Levy property taxes within its service area
- Establish water rates
- Impose charges for water standby and service availability



- Incur general obligation bonded indebtedness and issue revenue bonds, notes, and short-term revenue certificates
- Execute contracts
- Exercise the power of eminent domain for the purpose of acquiring property

3.1.2.4.3 California Water Code Sections 10910-10915

When a city or county is the CEQA lead agency for a project meeting certain criteria (e.g., a proposed development of more than 500 dwelling units or an equivalent or greater amount of water demand), California Water Code Sections 10910 through 10915 require that the relevant water service provider – usually a water agency or district – determine whether the water demands of the proposed project were accounted for in the most recent urban water management plan (UWMP). If the project’s water demand was not accounted for in the UWMP, the water service provider must prepare a Water Supply Assessment (WSA) demonstrating there are sufficient supplies to meet the anticipated needs of the project. If the provider determines that potable water supplies are, or will be, insufficient, the project applicant must submit plans for acquiring additional potable water supplies. Additionally, the city or county serving as Lead Agency must include the WSA and other pertinent information in the EIR or other CEQA document prepared in support of the project (e.g., Mitigated Negative Declaration). With respect to this Project, the CEQA lead agency is Metro and not a county or city and, therefore, Water Code Sections 10190 through 10915 do not apply. Further, the Project does not meet the criteria identified for requiring preparation of a Water Supply Assessment.

3.1.2.4.4 California Water Code Sections 10610-10656

Every urban water supplier that either provides over 3,000 acre-feet of water annually, or serves more than 3,000 urban connections is required to submit an urban water management plan (UWMP) every five years to the California Department of Water Resources. UWMPs support long-term planning to ensure that adequate supplies are available to meeting existing and future water needs. The UWMPs assess water sources over a 20-year planning period, describe management measures and water shortage contingency plans, and report progress towards meeting a water demand reduction goals.

3.1.2.4.5 State Water Resources Control Board, Division of Drinking Water, Source Water Assessment Program

The 1996 SDWA Amendments require each state to develop and implement a Source Water Assessment Program. Section 11672.60 of the California Health and Safety Code requires the Department of Health Services (DHS), (the precursor to California Department of Public Health) to develop and implement a program to protect sources of drinking water, specifying that the program must include both a source water assessment program and a wellhead protection program. In response to both legal mandates (Wellhead Protection Program 1986, Source Water Assessment Program 1996), DHS developed the Drinking Water Source Assessment and Protection (DWSAP) Program.

California's DWSAP Program addresses both groundwater and surface water sources. The groundwater portion of the DWSAP Program serves as the state’s wellhead protection program. In



developing the surface water components of the DWSAP Program, DHS integrated the existing requirements for watershed sanitary surveys.

3.1.2.5 Other Utilities

3.1.2.5.1 California Public Utilities Commission

The California Public Utilities Commission (CPUC) regulates privately owned electric, natural gas, telecommunications, water, railroad, rail transit, and passenger transportation companies. The CPUC is tasked with ensuring that consumers have safe, reliable utility service at reasonable rates, and protecting against fraud. Specifically related to utilities, the CPUC has authority over, and is responsible under the following General Orders:

- General Order 28 (1912): Preservation of records of public utilities and common carriers
- General Order 52 (1918): Power and communication lines for the prevention or mitigation of inductive interference
- General Order 58-A (2016): Standards for gas service
- General Order 69-C (1985): Easements on property of public easements
- General Order 95 (2018): Overhead electric line construction
- General Order 103-A (2009): Water service including minimum standards for design and construction
- General Order 112-F (2016): Design, construction, testing, maintenance and operation of utility gas gathering, transmission and distribution piping systems
- General Order 131-D (1995): Planning and construction of facilities for the generation of electricity and certain electric transmission facilities
- General Order 133-D (2017): Rules Governing Telecommunications Services
- General Order 159-A (1996): Construction of cellular radiotelephone facilities in California
- General Order 166 (2017): Inspection cycles for electric distribution facilities
- General Order 174 (2012): Rules for Electric Utility Substations

3.1.2.5.2 California Code of Regulations

The code is maintained by the California Office of Administrative Law and includes authoritative sections regarding public utilities in Title 20 (Public Utilities and Energy), Division 1 (Public Utilities Commission). Additionally, the California Health and Safety Code and the California Water Code contain information regarding sanitary and water utilities. The Public Utilities Code, Division 1 (Regulation of Public Utilities) gives specific regulation on public utilities, including the CPUC.



3.1.2.5.3 California Government Code Section 4216

Section 4216 of the California Government Code (Protection of Underground Infrastructure) requires that an excavator must contact a regional notification center (e.g., Underground Service Alert) at least 2 days before excavation of any subsurface installations. An Underground Service Alert will notify the utilities that may have buried lines within 1,000 feet of the excavation. Representatives of the utilities are required to mark the specific locations of their facilities within the work area prior to the start of excavation. The construction contractor is required to probe and expose the underground facilities by hand prior to using power equipment.

3.1.2.5.4 California Plumbing Code

The California Plumbing Code is codified in Title 24, California Code of Regulations, Part 5. The Plumbing Code contains regulations including, but not limited to, plumbing materials, fixtures, water heaters, water supply and distribution, ventilation, and drainage. More specifically, Part 5, Chapter 4 contains provisions requiring the installation of low-flow fixtures and toilets (SB 407 [2009] Civil Code Sections 1101.1 et seq.).

3.1.3 Regional

3.1.3.1 Los Angeles County Metropolitan Transportation Authority

Metro’s adopted policies related to utilities, water, and waste include the following:

- **Construction and Demolition Debris Recycling and Reuse Policy (2007)** – As required by this policy, Metro must give preference to recyclable and recycled products in the selection of construction materials to the maximum extent feasible during design and construction of Metro or Metro-funded capital projects. Selected materials used in the construction of all structures related to transportation projects should not adversely affect the performance, safety or the environment of the transportation system for which the material is used.
- **Water Use and Conservation Policy (2009)** – It is the policy of Metro to conserve the use of potable water resources at its facilities in the most cost-effective and efficient manner. The use of water for construction, operations, and maintenance purposes must be consistent with local, state, or federal water conservation measures. In instances where it is necessary to protect public safety, human health, and the environment, Metro may deviate from water conservation measures. The following provisions are relevant to the Project:
 - The use of potable water at Metro construction sites is permitted under best management practice for dust suppression purposes required to comply with applicable environmental regulations.
 - Divisions and departments may use potable water to wash Metro vehicles only at bus or rail washing systems designed to capture and re-circulate water.



Applicable procedures relating to water use and conservation required by Metro include:

- Procedure 2.1 – Using Potable Water for Pressure Washing Activities
 - 2.1.1 Prioritize facility locations that must be regularly cleaned using pressure washing equipment.
 - 2.1.2 If pressure washing is deemed essential, appropriate water conservation and efficiency measures must be applied.
 - Conduct pressure washing activities using cost-effective water efficient equipment.
 - Capture and dispose any generated wastewater to an appropriate facility.
- Procedure 2.2 – Using Potable Water for Construction
 - 2.2.1 Develop a plan for dust suppression purposes to comply with applicable environmental statutes, regulations, and guidelines.
 - 2.2.2 Use of potable water as a dust suppression agent should always be secondary and should only be used if all other dust suppression technologies are not feasible or cost-effective.
- Procedure 2.3 – New Construction Planning, Design and Construction; Existing Buildings Operations
 - 2.3.1 Use water conservation and efficiency guidelines outlined in applicable Leadership in Energy and Environmental Design (LEED) reference books for all planning, procurement, design, construction, operation, and maintenance of Metro’s linear and non-linear facilities.
 - 2.3.2 Prepare manuals of operation, as applicable, to ensure that water efficiency and conservation technologies are adopted and maintained.

3.1.3.1.1 Moving Beyond Sustainability Strategic Plan

The *Moving Beyond Sustainability* (MBS) strategic plan, released in 2020, outlines a comprehensive sustainability strategy that incorporates aspects of water quality and conservation, as well as solid waste stream reductions. Specific targets listed in the plan include:

- Reduce potable water use by 22 percent from the 2030 Business as Usual scenario
- Increase runoff infiltration and capture capacity for stormwater by 15 percent from 2020 baseline levels
- Reduce annual operational solid waste disposal 24 percent from 2030 Business as Usual scenario
- Achieve 50 percent landfill diversion rate for operational waste
- Achieve 85 percent construction landfill diversion rate



According to Metro's *MBS* plan, half of Metro's water use goes toward irrigation along rail and bus alignments (55.3 percent) and over another quarter of consumption goes toward operational divisions (26.6 percent).

3.1.3.1.2 Sustainable Rail Plan

Metro's 2013 *Sustainable Rail Plan* has the objective of reducing energy consumption, as discussed further in **Section 3.2.3.2.1**. The plan examines strategies to reduce energy consumption from rail operations, which account for the majority of Metro's electricity use, and analyzes the costs and potential energy savings for many of these strategies.

3.1.3.1.3 Water Action Plan

Metro's 2010 *Water Action Plan* is intended to determine the potential for water conservation opportunities and cost-saving measures consistent with Metro's environmental policies and its future implementation of an Environmental Management System. This will inform other Metro projects as part of the overall sustainability program for water use to be strategically aligned with other resource elements (e.g., fuel use, GHG emissions, etc.).

3.1.3.2 Metropolitan Water District of Southern California

The MWD of Southern California provides water to 19 million Californians (MWD 2021a). MWD aims to ensure water reliability through climate change, droughts, earthquakes and other challenges. To do this, they emphasize the importance of planning and have developed several plans such as an Integrated Resource Plans (*IRP*), *UWMP*, the *Water Surplus and Drought Management Plan (WSDM)*, and the *Long-Term Conservation Plan*. The *IRP*, which is updated every five years, outlines the importance of managing the diverse supplies from which California receives water resources and maintaining water reliability. The *UWMP* provides a summary of the anticipated water demands through 2045 and demonstrates MWD's ability to meet these demands. The *WSDM* provides a framework for managing MWD's water resources during both drought and surplus periods. The Long-Term Conservation Plan emphasizes the reduction of water resource usage through conducting outreach and education, advocating for better building and plumbing codes, shifting consumer values, and encouraging water-efficient devices.

3.1.3.3 Southern California Association of Governments

The 2008 SCAG *Regional Comprehensive Plan's* Water Chapter recommends the implementation of Constrained Policy WA-34, in which the state and regional agencies should design and operate regional transportation facilities so that stormwater runoff does not contaminate surrounding watershed ecosystems.

The Energy Chapter lists as a recommendation Constrained Policy EN-11, in which developers and local governments should submit projected electricity and natural gas demand calculations to the local electricity or natural gas provider, for any project anticipated to require substantial utility consumption. Any infrastructure improvements necessary for project construction should be completed according to the specifications of the energy provider.



The Solid Waste Chapter identifies that construction and demolition debris account for 21.7 percent of the solid waste stream statewide. As such, Constrained Policy SW-14 recommends integrating green building measures into project design, including:

- Reuse and minimization of construction and demolition debris and diversion of construction and demolition waste from landfills to recycling facilities
- The inclusion of a waste management plan that promotes maximum construction and demolition diversion
- Source reduction through (1) use of building materials that are more durable and easier to repair and maintain, (2) design to generate less scrap material through dimensional planning, (3) increased recycled content, (4) use of reclaimed building materials, and (5) use of structural materials in a dual role as finish material (e.g., stained concrete flooring, unfinished ceilings, etc.)

3.1.3.4 Los Angeles County

3.1.3.4.1 Los Angeles County General Plan

The Local Water Resources Section of the Los Angeles County *General Plan's Conservation and Natural Resources Element* focuses primarily on ensuring adequate protection and management of local water resources, with the following stated objectives having relevance to the Project:

- Policy C/NR 5.7: Actively support the design of new and retrofit of existing infrastructure to accommodate watershed protection goals, such as roadway, railway, bridge, and other—particularly—tributary street and greenway interface points with channelized waterways
- Policy C/NR 6.1: Support the LID philosophy, which incorporates distributed, post-construction parcel-level stormwater infiltration as part of new development.
- Policy C/NR 6.5: Prevent stormwater infiltration where inappropriate and unsafe, such as in areas with high seasonal groundwater, on hazardous slopes, within 100 feet of drinking water wells, and in contaminated soils

Multiple sections of the *Public Services and Facilities Element* relate to utilities and service systems as defined in Appendix G of the State CEQA Guidelines.

The Drinking Water Section states objectives related to water resources through the following policies:

- Policy PS/F 2.1: Support water conservation measures
- Policy PS/F 3.1: Increase the supply of water through the development of new sources, such as recycled water, gray water, and rainwater harvesting
- Policy PS/F 3.2: Support the increased production, distribution and use of recycled water, gray water, and rainwater harvesting to provide for groundwater recharge, seawater intrusion barrier injection, irrigation, industrial processes and other beneficial uses



The Sanitary Sewers Section of this Element of the General Plan includes as a goal:

- Policy PS/F 4.2: Support capital improvement plans to improve aging and deficient wastewater systems, particularly in areas where the General Plan encourages development, such as TODs
- Policy PS/F 4.3: Ensure the proper design of sewage treatment and disposal facilities, especially in landslide, hillside, and other hazard areas
- Policy PS/F 4.4: Evaluate the potential for treating stormwater runoff in wastewater management systems or through other similar systems and methods

The Solid Waste Section outlines policies of reducing waste generation, enhancing diversion, encouraging use of recyclable materials, with the following relevant policies:

- Policy PS/F 5.7: Encourage the recycling of construction and demolition debris generated by public and private projects
- Policy PS/F 6.4: Protect and enhance utility facilities to maintain the safety, reliability, integrity and security of utility services
- Policy PS/F 6.5: Encourage the use of renewable energy sources in utility and telecommunications networks
- Policy PS/F 6.6: Encourage the construction of utilities underground, where feasible
- Policy PS/F 6.7: Discourage above-ground electrical distribution and transmission lines in hazard areas
- Policy PS/F 6.8: Encourage projects that incorporate onsite renewable energy systems

3.1.3.4.2 Los Angeles County Green Building Code, Title 31

The purpose of the Los Angeles County Green Building Code is to improve public health, safety, and general welfare by enhancing the design and construction of buildings through the use of building concepts having a reduced negative impact, or positive environmental impact, and encouraging sustainable construction practices in the following categories relevant to this analysis:

- Planning and design
- Energy efficiency
- Water efficiency and conservation
- Material conservation and resource efficiency

Provisions include mandating: (1) at a minimum for energy efficiency, design and construction of new buildings must comply the provisions of the California Energy Code; (2) cool roof requirements for reduction of heat island effect; and (3) recycling and/or salvaging a minimum of 65 percent of non-hazardous construction and demolition debris.



3.1.4 Local

3.1.4.1 City of Commerce

The *City of Commerce 2020 General Plan* includes a *Safety Element* that contains the following policies relating directly to utility service provision (City of Commerce 2008):

- Safety Policy 1.3. The city of Commerce will ensure that the public and private water distribution and supply facilities have adequate capacity to meet both the domestic supply needs of the community and the required fire flow
- Safety Policy 3.1. The city of Commerce will continue to cooperate with the efforts of other agencies and special districts involved in monitoring the city's water and sewer systems.
- Safety Policy 3.2. The city of Commerce will contribute toward the maintenance of a wastewater treatment system sufficient to protect the health and safety of all residents and businesses

3.1.4.2 City of Montebello

The Conservation Element of the *Montebello 1973 General Plan* specifies a policy to promote wastewater treatment and utilization for purposes such as irrigation, tooling, and groundwater recharge where feasible (City of Montebello 1975). Regarding water systems, the *Safety Element* includes a policy to require water systems capable of meeting fire flow requirements, designed to deliver flows under emergency conditions when damages or failures occur in the system.

3.1.4.3 City of Pico Rivera

The Community Facilities Element of the *Pico Rivera General Plan* addresses the community's existing and future facility and service needs, including general government, law enforcement, fire protection, water, wastewater, and energy (City of Pico Rivera 2014). Its Environmental Resources Element addresses the long-term management of Pico Rivera's environmental resources including air quality, GHG emissions, water resources, biological resources, mineral resources, and cultural resources. Both contain policies relevant to this section.

3.1.4.4 City of Santa Fe Springs

The *Re-Imagine Santa Fe Springs 2040 General Plan* (City Santa Fe Springs 2021) contains the following policies relating to utility services:

- Conservation and Open Space 4.4 - Runoff Pollution Prevention: Require that new developments incorporate features into site drainage plans that reduce impermeable surface area, increase surface water infiltration, and minimize surface water runoff during storm



events. Such features may include additional landscape areas, parking lots with bio-infiltration systems, permeable paving designs, and stormwater detention basins.

- Geological and Seismic Hazards 1.7 - Infrastructure Resilience: Establish city plans and work with utility providers to ensure programs and systems are in place for continued functionality of water, sewer, electric power, natural gas, and communications infrastructure during and after a major earthquake.
- Geological and Seismic Hazards 2.1 - Storm Drainage System: Consult with Los Angeles County Public Works to ensure that existing and future regional storm drain facilities within and adjacent to Santa Fe Springs are designed, operated, and maintained to accommodate projected drainage needs associated with major storm events and climate change effects.
- Geological and Seismic Hazards 4.3 - Underground Sources: Identify and map underground pipelines that convey various combustible materials and use that information when assessing the suitability of a proposed land use or public improvement.
- Land Use 11.9 - Underground Utility Poles/Wires: Establish strategies and programs to gradually place utilities underground throughout the city, with special emphasis on corridors.

3.1.4.5 City of Whittier

The *Envision Whittier General Plan* Public Safety, Noise, and Health Element provides the following goal to protect the city’s underground infrastructure during seismic events (City of Whittier 2021):

- Public Safety Noise Health Goal 4.5: Strive to ensure that all utility and infrastructure systems have continued functionality during and after a major earthquake.

3.2 Energy

3.2.1 Federal

3.2.1.1 Energy Policy and Conservation Act of 1975 and Alternative Motor Fuels Act of 1988

The Energy Policy and Conservation Act of 1975 promotes energy conservation when feasible, including mandating vehicle economy standards. The Alternative Motor Fuels Act of 1988 amends a portion of the Energy Policy and Conservation Act to encourage the use of alternative fuels, including electricity. The act directs the Secretary of Energy to take action to ensure that the maximum practical number of federal passenger vehicles and light-duty trucks be powered by alcohol, natural gas, or be dual fueled vehicles.



3.2.1.2 Moving Ahead for Progress in the 21st Century Act

Moving Ahead for Progress in the 21st Century Act (MAP-21), the federal surface transportation funding authorization, was signed into law on July 6, 2012. The first multi-year transportation authorization enacted since 2005, MAP-21 establishes new regulations and implementation guidance related to planning, environmental review, and funding for transit projects, including consideration for projects and strategies that “protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns...” MAP-21 incorporates energy conservation as a core consideration in surface transportation development and included, in surface transportation development funding, the funding of a public transportation research program with a focus on energy efficiency, system capacities, and other surface transportation factors.

3.2.1.3 Energy Policy Acts of 1992 and 2005

First enacted in 1992, the Energy Policy Act addressed all aspects of energy supply and demand in the United States, including the use of alternative fuels and renewable energy, and energy efficiency. The act established regulatory and voluntary measures to encourage the use of alternative fuels. The act was followed up in 2005 with amended fuel economy testing procedures and other regulations and requirements to establish tax incentives, grant programs, and demonstration and testing initiatives intended to promote the adoption of alternative fueled vehicles.

3.2.1.4 Energy Independence and Security Act of 2007

The Energy Independence and Security Act of 2007 consists of various provisions to enhance energy efficiency and the availability and adoption of renewable energy and alternative fuel. These provisions include the introduction or expansion of:

- Corporate Average Fuel Economy (CAFÉ) standards which regulate how far passenger vehicles and light-duty trucks must travel on a gallon of fuel
- Renewable Fuels Standard program which regulates fuel blending requirements for renewable and conventional fuels to reduce reliance on imported oil
- Energy Efficiency Equipment Standards program which regulates minimum energy efficiencies for residential and commercial lighting and appliance equipment
- Repeal of certain oil and gas tax incentives

3.2.1.5 Safer Affordable Fuel-Efficient Vehicles Rule Part One: One National Program

In August 2018, the United States Environmental Protection Agency (USEPA) and National Highway Traffic Safety Administration (NHTSA) proposed the “Safer Affordable Fuel-Efficient Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks” (SAFE Vehicles Rules). The SAFE Vehicles Rule amends existing Corporate Average Fuel Economy (CAFE) and tailpipe carbon dioxide (CO₂) emissions standards for light-duty vehicles and establishes new standards covering model years 2021–



2026. The USEPA also proposed to withdraw the waiver previously provided to California under Section 209 of the Federal Clean Air Act (CAA) for the state's greenhouse gases (GHG) and Zero Emission Vehicle (ZEV) programs.

The NHTSA proposed regulatory text implementing its statutory authority to set nationally applicable fuel economy standards that made explicit that those State programs would also be preempted under NHTSA's authorities. On September 27, 2019, the USEPA and NHTSA published its Final Rule to revoke California's waiver and establish the federal preemption in the Federal Register (FR) (84 FR 51310). California and a coalition of other states has sued both the USEPA and the NHTSA, challenging their decisions that would block states from setting tougher automobile fuel efficiencies and emissions standards. On April 30, 2020, the SAFE standards for model year 2021–2026 light-duty vehicles were made final (USEPA/NHTSA 2020).

On February 8, 2021, litigation was held in abeyance pending review under Presidential Executive Order (EO) 13990, Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis (USCoADCC 2021). This order mandates the review of actions or policies taken between January 20, 2017 and January 20, 2021 for consistency with current national climate objectives, and tasks agencies to suspend, revise, rescind, or amend these actions or policies as appropriate (USEOP 2021). In accordance with this order, on August 10, 2021, new CAFÉ standards were proposed for 2024-2026 model year light-duty vehicles, and on December 21, 2021, the NHTSA repealed the SAFE I Rule preemption on state fuel efficiency and GHG standards.

3.2.2 State

3.2.2.1 California Energy Commission

The California Energy Commission (CEC) is responsible for, among other things, forecasting future energy needs for the state. Senate Bill (SB) 1389 (Chapter 568, Statutes of 2002) requires the CEC to prepare a biennial integrated energy policy report that includes assessments and forecasts of energy supply, production, transportation, delivery and distribution, demand and price, as well as assessing major energy trends and issues facing the state's electricity, natural gas, and transportation fuel sectors. The assessments and forecasts are used to develop energy policies that conserve resources, protect the environment, ensure energy reliability, enhance the state's economy, and protect public health and safety. The 2019 Integrated Energy Policy Report is the most recent report (CEC 2020a).

3.2.2.2 Alternative and Renewable Fuel and Vehicle Technology Program

Assembly Bill (AB) 118 establishes the Alternative and Renewable Fuel and Vehicle Technology Program under administration of the CEC. The program establishes measures including grant awards, revolving loans, and loan guarantees to develop and deploy new fuel and vehicle technologies to help achieve California's target petroleum reductions, air quality, and climate change goals. The program was amended in 2008 and 2013 to allow the CEC to develop and deploy alternative and renewable fuels, alternative and renewable fueled vehicles, and other advanced transportation technologies to meet the state goals.



3.2.2.3 Assembly Bill 1007, Alternative Fuels Plan

AB 1007 (Pavley, Chapter 371, Statutes of 2005) requires the CEC to prepare an alternative fuels plan to increase the use of alternative fuels in California. The *State Alternative Fuels Plan*, approved by the CEC on November 2, 2007, aims to clean the state’s air, diversify fuel sources, and protect the state from oil spikes that affect prices, the economy, and jobs. The *State Alternative Fuels Plan* focuses on transportation fuels and alternative fuels but recognizes other components of the transportation system, including advanced vehicle technology and efficiency improvements in conventional vehicles. Additionally, the plan indicates that significant efforts would be needed to reduce vehicle miles travelled by all Californians through more effective land use and transportation planning and greater mass movement of people and goods.

3.2.2.4 Assembly Bill 1493, California Advanced Clean Cars Program

California AB 1493 (“Pavley” regulation) requires the California Air Resources Board (CARB) to develop and adopt GHG emission standards for automobiles. AB 1493 became law in 2002, and CARB enacted subsequent regulations in September 2004. In 2012, CARB, in coordination with the USEPA and NHTSA, developed a set of regulations that are collectively known as the Advanced Clean Cars Program. The singular state and federal timeframe for fuel and economy standards aligned the Pavley standards with federal CAFE standards for passenger cars and light-duty trucks. The Low-Emission Vehicle III Regulation for GHG (LEV III GHG) builds upon AB 1493, which established GHG emission standards for 2009 through 2016 model year passenger vehicles, by requiring further reductions in passenger vehicle GHG emissions for 2017 and subsequent model years. The LEV III GHG regulation is projected to reduce GHG emissions by 40 percent in 2025 when compared to 2012 model year vehicles. The ZEV regulation also requires auto manufacturers to offer for sale specific numbers of full battery-electric, hydrogen fuel cell, and plug-in hybrid-electric vehicles. Approximately 8 percent of California new vehicle sales in 2025 are predicted to be ZEVs and plug-in hybrids (CARB 2019a).

On August 24, 2018, the NHTSA and USEPA proposed freezing the current federal fuel efficiency and GHG emission standards for model year 2021 through 2026 vehicles at 2020 levels (SAFE Vehicles Rules), thereby violating a provision in the LEV III GHG regulation that states cars meeting federal standards for model years 2017 through 2025 are “deemed to comply” with California’s emission standards. CARB subsequently voted on and approved a measure on September 28, 2018 that affirms that only cars meeting the current federal standards for model years 2017 through 2025 comply with the state’s standards (CARB 2018a).

3.2.2.5 California Advanced Clean Cars II Program

On September 16, 2020, CARB held the first public workshop to solicit input on the development of the Advanced Clean Cars II (ACC II) regulations. These regulations will seek to reduce criteria and GHG emissions from new light- and medium-duty vehicles beyond the 2025 model year and increase the number of ZEV for sale. The proposed Advanced Clean Cars II regulations establish the next set of LEV and ZEV requirements. The regulations are scheduled to go to the CARB Board in summer of 2022.



3.2.2.6 Executive Order B-16-12

EO B-16-12, signed into law by Governor Edmund G. Brown in March 2012, sets aggressive targets to meet certain goals in 2015, 2020, and 2025 and supports the rapid commercialization of clean vehicles. EO B-16-12 also advances two long-term environmental and energy goals for the transportation section: (1) decrease transportation section GHG emissions to 80 percent below 1990 levels by 2050 and (2) reduce at least 1.5 billion gallons of petroleum fuels by 2025 through the use of clean and efficient vehicles (Office of Governor Edmund G. Brown Jr. 2013).

3.2.2.7 Senate Bills 350 and 100

Signed into law in October 2015, SB 350 increases the state's renewable electricity procurement goal from 33 percent by 2020 to 50 percent by 2030. In addition, the state is required to double statewide energy efficiency savings in electricity and natural gas end uses by 2030. To ensure these goals are achieved, large utilities will be required to generate and submit Integrated Resource Plans (IRPs). IRPs will detail how each utility will meet their customers' resource needs and ramp up the deployment of clean energy resources, including solar, wind, biomass, and geothermal.

SB 100 increases the renewable electricity procurement goal set by SB 350, from 50 percent to 60 percent by 2030. Additionally, SB 100 requires renewable energy and zero-carbon electricity system to supply 100 percent of electric retail sales by 2045.

3.2.2.8 California Code of Regulations Energy Efficiency Standards

CCR, Title 24, Part 6, Chapter 2-53 applies to all newly constructed residential and nonresidential buildings in the State of California and regulates minimum energy efficiencies for cooler, heating, ventilation, water heating, and lighting. CCR, Title 24, Part 11 (also referred to as CALGreen) identifies mandatory building measures and voluntary measures that may be incorporated into the design of buildings. Relative to energy usage, CALGreen contains requirements for cool roofs, exterior lighting, bicycle parking, and electric vehicle charging. In addition, CALGreen requires mandatory inspections of energy systems (e.g., heat furnace, air conditioner, and mechanical equipment) for non-residential buildings larger than 10,000 square feet to ensure that all are working at their maximum capacity and according to their design efficiencies. Updates to Title 24 will take effect on January 1, 2023 that include more robust electric vehicle charging, energy efficiency, and expanding solar photovoltaic (PV) system and battery storage standards requirements. Buildings whose permit applications are applied for on or after January 1, 2023, must comply with the 2022 Energy Code.

3.2.3 Regional

3.2.3.1 Southern California Association of Governments

SCAG is required by state and federal mandates to prepare an RTP every three years that also includes a Sustainable Communities Strategies (SCS), the most recent of which is the 2020-2045 RTP/SCS, entitled Connect SoCal, fully adopted on September 3, 2020. The RTP provides a long-range regional



vision for regional transportation goals and policies, as well as predicted transportation challenges and the region’s future transportation strategy. The SCS also combines transportation and land use elements to help meet state climate and air quality goals, as well as advancing community goals. Plan implementation is expected to contribute to reductions in regional energy and water consumption and lower transportation costs for households across the region (SCAG 2020).

The RTP/SCS establishes the following goals that relate to the Project and energy efficiency and conservation:

- Preserve and ensure a sustainable regional transportation system
- Maximize the productivity of our transportation system
- Actively encourage and create incentives for energy efficiency, where possible
- Encourage and use and growth patterns that facilitate transit and active transportation

3.2.3.2 Air Quality Management Districts

The South Coast Air Quality Management District (SCAQMD) has the primary responsibility for developing the plans and regulations that will improve air quality in the South Coast Air Basin. The SCAQMD is responsible for contributing to the development of State Implementation Plans (SIPs) in compliance with the Federal Clean Air Act (CAA) and California Clean Air Act regulations to reduce unhealthy levels of air pollutants. The SCAQMD contributes to the SIPs by indicating how air quality standards will be met through the development of air quality management plans. Among other strategies, these plans promote reductions in VMT through the development of transportation alternatives.

3.2.3.2.1 Metro

Since the mid-2000s, Metro has adopted plans, policies, and strategies that address energy efficiency, including both general goals focused on sustainability, as well as specific actions designed to save energy. The sections that follow provide a brief summary of several of Metro’s most applicable energy efficiency policies, plans, and strategies.

Energy and Environmental Policies

Metro’s adopted policies that support energy efficiency include the following:

- **Energy and Sustainability Policy** (2007) – Established to aid Metro in controlling energy consumption and encouraging energy efficiency, conservation, and sustainability. Long term objectives include:
 - Reducing the use of fossil fuels through the use of ambient and renewable energy sources
 - Using fuels and electricity as efficiently as possible
- **Environmental Policy** (2009) – A comprehensive policy that provides guidance on such aspects as mitigating potential environmental impacts generated by development activities and reducing consumption of natural resources. Specific commitments related to energy



include promoting renewable energy sources to address energy and environmental challenges.

- **Renewable Energy Policy** (2011) – Calls for renewable energy solutions while minimizing non-renewable energy use and also calls for a review of technical feasibility for renewable power projects on Metro property and infrastructure.
- **Green Construction Policy** (2011) – Adopted to reduce emissions from construction equipment and includes a commitment by Metro that all on-road and off-road vehicles used in construction of a project will be greener and less polluting, and that best practices will be implemented to meet or exceed air quality emission standards. Measures related to energy use include limiting idling, maintaining equipment to manufactures' specifications, and using electric power in lieu of diesel power where available.
- **Complete Streets Policy** (2014) – Establishes design and planning guidelines to promote walking, bicycling, transit use, and public health, and to promote an integrated, sustainable transportation system that serves all users within the community.

Energy Conservation and Management Plan

Metro's *Energy Conservation and Management Plan* (ECMP) (2011) is intended to complement the *Energy and Sustainability Policy* by guiding energy use in a sustainable, cost-effective, and efficient manner. The ECMP addresses existing and projected energy needs, identifies opportunities to reduce energy consumption and achieve cost savings, and sets forth implementation strategies, including for vehicle propulsion energy.

Sustainable Rail Plan

Metro's *Sustainable Rail Plan* (2013) examines strategies to reduce energy consumption from rail operations and analyzes their costs and potential energy savings. The study supports implementation of the ECMP.

Climate Action and Adaptation Plan

Metro developed the first *Climate Action and Adaptation Plan* (CAAP) in 2012 to provide a framework for reducing GHG emissions and building climate change resilience. A new CAAP was adopted in 2019 that builds upon the 2012 CAAP and considers evolving approaches to addressing climate change. Many strategies identified in the CAAP for reducing GHG emissions also contribute to improving energy efficiency and reducing non-renewable energy consumption, including but not limited to, increased renewable energy procurement, increased PV installations, replacing lighting and appliances at Metro facilities with more energy-efficient controls and equipment, and an assessment of opportunities for Wayside Energy Storage Substation implementation to store energy from decelerating railcars.

First/Last Mile Strategic Plan

Metro's *First/Last Mile Strategic Plan* (2016) establishes an approach for identifying barriers and planning and implementing improvements to overcome those barriers for the first and last mile (FLM) portions of an individual's transit. The plan includes an adaptable and systemic implementation



framework with data and information-driven support for improvements. Common FLM improvements include infrastructure for walking, rolling, and biking such as sidewalks, crosswalks, bike lanes, and bike parking; facilities for making transit-mode connections such as bus/rail interfaces; and supporting signage and way-finding aids for transit infrastructure.

3.2.3.3 Los Angeles County

The Mineral and Energy Resources Section in the Conservation and Natural Resources Element of the *Los Angeles County 2035 General Plan* addresses the use and management of valuable energy and mineral resources in Los Angeles County. The county identifies that there is a high transportation and non-transportation energy demand and that projected growth in the region will continue to strain the mineral supply. Energy consumption patterns demonstrate that residents in Los Angeles County consume proportionally more energy for transportation than the rest of California and that the low-density, automobile-dependent communities place high demand on such resources (Los Angeles County 2015).

The Conservation and Natural Resources Element sets forth goals and policy direction to promote efficient and sustainable use of renewable and non-renewable energy resources.

Policy C/NR 12.2 to encourage the effective management of energy resources, such as ensuring adequate reserves to meet peak demands, relates specifically to the construction of the Build Alternatives since there would be a potential to decrease petroleum use and increase electricity-powered rail lines. Additionally, because of the increasing use of renewables to meet electricity demand, Policy C/NR 12.1 to encourage the production and use of renewable energy resources, also relates to the operation of the Build Alternatives.

The Mobility Element of the general plan includes policy guidance and strategies to reach the county's long-term transportation goals, including the promotion of rail, bus, carpool, bicycle, and pedestrian modes of transportation as alternatives to the single-occupant automobile. Specifically, Goal M4 promotes an efficient multimodal transportation system that serves the needs of all residents and Goal M5 promotes land use planning and transportation management that facilitates the use of transit. Such policies support reductions in transportation energy demand.

3.2.4 Local

The following sections describe local policies contained in general plans related to energy resources and energy conservation. Not all of the local jurisdictions that could be affected by the Project have specific general plan policies related to energy resources; however, as identified below, other policies contained in those general plans, such as those related to improving air quality, improving traffic flow, supporting public transit, and reducing VMT also support energy conservation and efficiency.

3.2.4.1 City of Commerce

The Resource Management Element of the *City of Commerce 2020 General Plan* promotes the conservation of natural resources to provide a sustainable community (City of Commerce 2008). The general plan identifies that the city, similar to the surrounding region, is largely dependent on energy



resources that are both finite and nonrenewable. Applicable policies adopted by the city to promote awareness and conservation of nonrenewable resources include:

- Resource Management Policy 1.1 – The city of Commerce will do its part in the conservation and protection of air, water, energy, and land in the Southern California region
- Resource Management Policy 3.1 – The city of Commerce will assist local utility companies with their public education energy conservation programs
- Resource Management Policy 3.4 – The city of Commerce will promote reduced energy consumption by existing land uses within Commerce

3.2.4.2 City of Montebello

The Conservation Element of the *Montebello 1973 General Plan* states that the city shall use the environmental impact report process to focus on energy conservation measures (City of Montebello 1975).

3.2.4.3 City of Pico Rivera

The Environmental Resources Element of the *Pico Rivera General Plan* addresses policies related to energy resources and conservation (city of Pico Rivera 2014). Applicable policies include:

- Policy 8.3-7: Encourage all new development to implement additional energy efficient measures beyond what is required by State law to exceed minimum energy efficiency requirements

The Community Facilities Element addresses energy resources through policies directed at municipal utilities, including policy 6.6-1, which supports maintaining coordination with Southern California Edison (SCE) and the Southern California Gas Company to ensure that adequate electricity and natural gas services and facilities are available to service the city.

3.2.4.4 City of Santa Fe Springs

Policies addressing climate change and energy conservation are integrated into the *Re-Imagine Santa Fe Springs 2040 General Plan* (City of Santa Fe Springs 2021). The city aims to lead in innovative strategies to reduce overall energy use, increase use of clean power sources, and reduce energy-related GHG emissions. Santa Fe Springs continues the practice of adopting CALGreen Code, and the California Building Energy Efficiency Standards, as they are triennially updated, which includes mandatory measures to support the goals of the State’s GHG reduction program, including increased building electrification. As truck fleets move toward electrification, Santa Fe Springs’s local infrastructure will need to support quick vehicle recharging. Policies supporting energy conservation from Santa Fe Springs General Plan include the following:

- Conservation and Open 8.5 - Zero Net Energy: Pursue Zero-Net Energy standards for new public facilities, ensuring new buildings produce as much clean renewable energy as they consume over the course of a year.



3.2.4.5 City of Whittier

The *Envision Whittier General Plan* (City of Whittier 2021) addresses energy in the Climate Adaptation section of the Public Safety, Noise, and Health Element in support of the general goal to reduce energy consumption. Applicable goals and policies to the Project include:

- Resource Management Goal 6.1: Support energy efficiency through the Municipal Code and implementation of CALGreen standards.
- Public Safety, Noise, and Health Policy 8.2: Require the passive solar design of projects to address the possible effects of extreme heat events, such as requiring shade trees and shade shelter areas, shaded playgrounds, bus shelters, and placement of structures that account for proper sun exposure to reduce the heat within structures.
- Public Safety, Noise, and Health Policy 8.3: Encourage use of pavement materials designed to reflect solar energy, speed up evaporation, and otherwise stay cooler than traditional pavements.
- Public Safety, Noise, and Health Policy 8.5: Encourage redundant power sources such as generators or renewable energy sources to help assure power is available for increased power needs in heat events to minimize blackouts.



4.0 METHODOLOGY

4.1 Utilities

The utilities analysis addresses construction and operational impacts of the Build Alternatives on the existing network of utilities and whether there would be any associated physical impacts that have not already been addressed as part of the Project. Utilities and service systems considered as part of the analysis included above and underground electrical lines; storm drains; gas lines; water supply lines; and the type, size, and location of the infrastructure potentially impacted by the Project.

The analysis of potential impacts to utilities and services systems evaluates the potential changes in demands on utilities that the Project would generate, then evaluates the potential consequences of the changes in demand based on existing facilities and whether facilities that would provide services to the Project would have sufficient resources and/or capacity to accommodate project-related increase in utility demand. The analysis considers increases in utility demand associated with the Build Alternatives and existing natural resources, existing utility capacity, and consistency with existing regulations and plans for utilities. Impacts were determined based on the thresholds of significance for CEQA analysis described in **Section 5.0**.

4.2 Energy

Potential impacts to energy resources were assessed based on the amount of energy consumed during construction of the Build Alternatives, as well as the operational energy consumption associated with stations, LRVs, parking facilities, and MSFs, and projected changes in regional VMT for highway/major road vehicle traffic. The analysis also includes an evaluation of the alternatives relative to energy conservation through the wise and efficient use of energy as identified in Appendix F of the State CEQA Guidelines. The purpose of Appendix F is to ensure that energy implications are considered in project decisions. Specific emphasis is given to reducing inefficient, wasteful, and unnecessary consumption of energy.

Analysis of potential impacts to energy resources includes consideration of the following elements:

- Construction-related energy consumption for each of the alternatives
- Energy operating costs required to operate each the alternatives (including the energy required to operate rail lines that are part of the proposed alternatives)
- Changes to energy consumption from mobile sources in the area as a result of regional changes in the VMT of cars, trucks, and other highway vehicles operating in the regional area
- Energy consumption related to the operation of stations, parking facilities, and MSFs
- Net project operating energy impacts including both energy resource savings and costs as a result of the Project investment in rail infrastructure



- Project impacts on local and regional energy supplies and on requirements for additional capacity
- The degree to which the Project complies with existing energy standards

Additionally, CEQA Guidelines Appendix F states that the means of achieving the goal of energy conservation include the following:

- Decreasing overall per capita energy consumption
- Decreasing reliance on fossil fuels such as coal, natural gas and oil
- Increasing reliance on renewable energy sources
- These conservation factors are considered in the impact discussion of Impact ENG-1

4.2.1 Construction Energy Analysis

Energy consumption during construction was determined by analyzing the energy requirements of construction equipment, worker commute vehicles, material hauling and delivery vehicles, and construction processes. The energy demands of construction associated with the at-grade, aerial, and underground components of the Build Alternatives were each analyzed using the following methodology.

The estimate of construction-related energy use was calculated by applying United States Energy Information Administration (USEIA)-derived CO₂ emissions per energy unit factors to total carbon dioxide equivalent (CO₂e) emissions estimated using the California Emissions Estimator Model (CalEEMod) for the Eastside Transit Corridor Phase 2 Climate Change Impacts Report and the Eastside Transit Corridor Phase 2 Air Quality Impacts Reports prepared for the Project. Construction energy demand was quantified in units of gallons for fuels and kilowatt-hours (kWh) for electricity. USEIA unit conversion factors were also used to convert energy consumption to metric million British thermal units (MMBTU) for comparison to other Project energy usage.

Only direct energy consumption was evaluated for Project construction. Indirect energy consumption would occur as part of Project construction associated with grid-based energy demand of construction equipment and lighting. Use of grid-based electricity during construction would reduce the need for diesel fueled portable generators included in construction energy use estimates; thus, this small amount of indirect energy consumption would decrease Project reliance on fossil fuels and would be consistent with the goals of Appendix F and was not quantified.

4.2.2 Operational Energy Analysis

The methodology for determining operation-related impacts is the same for each Build Alternative.



4.2.2.1 Vehicle Miles Traveled and Fuel Consumption Energy Analysis

Project-related operational emissions of CO₂ associated highway VMT were calculated as part of the Eastside Transit Corridor Phase 2 Climate Change Impacts Report and the Eastside Transit Corridor Phase 2 Air Quality Impacts Report using the motor vehicle emissions model, Emission Factor Model for On-road Motor Vehicles (EMFAC) 2017 and predicted regional highway traffic VMT. By applying USEIA-derived CO₂ emissions per energy unit factors to CO₂ emissions from gasoline-fueled and diesel-fueled sources respectively, highway VMT energy consumption was quantified in units of gallons of gasoline and diesel fuel. USEIA unit conversion factors were also used to convert energy consumption to MMBTU for comparison to other Project energy usage.

4.2.2.2 Light Rail Transit, Station, and MSF Operations

The energy that would be used by stations, MSFs, and parking facilities was determined following the same methodology used in the separate Eastside Transit Corridor Phase 2 Climate Change Impacts Report. Electricity needed to operate the LRVs was estimated from the route distance, headway between trains, and the average energy intensity for the train operation. The Federal Transit Administration's National Transit Database (2019) was used to estimate the average energy intensity for Metro's LRT service. Annual energy demand was estimated by applying the 8.4 kWh per mile energy intensity factor for Metro LRT operations to the projected LRV operations along the length of the alignment for each alternative. Vehicles were assumed to operate on weekdays every 5 minutes between the hours of 4:00 am and 12:00 pm, every 10 minutes between the hours of 12:00 pm and 8:00 pm, and every 15 minutes between the hours of 8:00 pm and 2:00 am, and operate on weekends every 20 minutes between the hours of 4:00 am and 7:00 am and between the hours of 7:30 pm and 2:00 am, every 15 minutes between the hours of 7:00 am and 9:00 pm and the hours of 6:30 pm and 7:30 pm, every 10 minutes between the hours of 9:00 am and 6:30 pm.

Chester and Horvath (2008) published various fundamental environmental factors for rail. These factors, combined with electricity usage factors from San Francisco Municipal Railway (Muni) (San Francisco), Massachusetts Bay Transportation Authority (MBTA) Green Line (Boston), and Bay Area Rapid Transit (BART) (San Francisco) were used to estimate from train control operations.

Energy demand associated with operation of the parking facilities, stations, and MSFs were calculated based on total building area using CalEEMod default energy consumption factors. Because local and regional bus routes would not be altered as part of the Project, energy consumption from buses were not included in the analysis. Annual energy demand for the LRT stations were estimated using CalEEMod default energy demand parameters for the most appropriate surrogate land use present in the model (i.e., enclosed parking structure with elevator for underground stations; unenclosed parking structure with elevator for aerial stations; and unenclosed parking structure for at-grade stations) based on the size, in square feet, of the station and the type of structure. All stations were estimated based on a footprint of approximately 14,000 square feet. Underground stations were estimated to consume 75,000 kWh; aerial stations were estimated to consume 26,800 kWh; and at-grade stations were estimated to consume 24,200 kWh. Annual energy demand from parking facilities were estimated using the CalEEMod default energy demand parameter for the parking lot land use, which is 140 kWh per year per parking space. Annual energy demand for an MSF was estimated using CalEEMod default energy demand parameters for the most appropriate surrogate land use present in the model (i.e., unrefrigerated warehouse with rail for the MSF facility structure and parking lot for the



remainder of the MSF site). An MSF facility structure with a footprint of 177,000 square feet based on preliminary site designs was assumed for both MSF site options.



5.0 THRESHOLDS OF SIGNIFICANCE

In accordance with Appendix G of the State CEQA Guidelines, a Build Alternative would have a significant impact related to utilities and energy if it would:

Impact UTL-1: Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.

Impact UTL-2: Not have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years.

Impact UTL-3: Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

Impact UTL-4: Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.

Impact UTL-5: Fail to comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

Impact ENG-1: Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.

Impact ENG-2: Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.



6.0 EXISTING SETTING

6.1 Utilities

Section 6.1 provides information related to water supply, sanitary sewer and water treatment facilities, storm drains, solid waste facilities, and telecommunications with the GSA, information on electricity and natural gas is provided in **Section 6.2**.

6.1.1 Water Supply

Within Los Angeles County, water supply is comprised of a complex system made up of state agencies and local water districts operating aqueducts, reservoirs, and groundwater basins. Due to the County's dependence on imported water supply sources and its vulnerability to drought, the county is consistently working to develop a diverse range of water resources (Los Angeles County 2015).

Imported sources of water supply include the Colorado River, the Bay-Delta in Northern California via the State Water Project, and the Owens Valley via the Los Angeles Aqueduct. The MWD of Southern California is the principal water distributor of imported water in southern California, providing water to 26 public water agencies across southern California, including agencies located with the GSA (MWD 2021b). Member agencies purchase all or a portion of their water from MWD. The Central Basin Municipal Water District is member agency that receives supplies from the MWD and subsequently supplies that water to local supply agencies in the DSA.

In addition to imported supplies from the MWD and the Central Basin Municipal Water District, local water supply sources include groundwater and surface water from mountain runoff and recycled water. Local water supplies in the DSA are provided by various local water agencies as described below.

6.1.1.1 Local

6.1.1.1.1 California Water Service

The California Water Service (Cal Water) East Los Angeles District serves the cities of Commerce, Montebello, and unincorporated East Los Angeles. In 2020, actual water demand in the district totaled 14,265 AF, equaling the volume of water supplied. Supply projections by Cal Water show groundwater volume remaining constant and a decline in imported water purchases, for a small overall decline through 2045. Additionally, demand for potable and raw water is projected to decline through efficiency gains. Due to expected demand exceeding Cal Water's allowed pumping allocation of 11,774 AFY, importing additional supply will likely be necessary for the foreseeable future (Cal Water 2021).

6.1.1.1.2 South Montebello Irrigation District

The South Montebello Irrigation District's supply is entirely groundwater sourced from four active wells. In 2010, total water supplied by the district was 2,069 AF (LA Water Hub 2017). With fewer than 3,000 connections and a supply of less than 3,000 AFY, the district is not required to produce an UWMP.



6.1.1.2 Pico Rivera Water Authority

The Pico Rivera Water Authority provides groundwater sourced from the Central Basin to approximately three-quarters of the area within the city of Pico Rivera, with the remaining water supply coming from Pico Water District (see below). In 2015, the volume supplied was 5,679 AF, which slightly exceeded its annual pumping allocation. The Pico Rivera Water Authority projects both demand and supply to remain flat through 2035 (City of Pico Rivera 2016). Due to pumping limits, the authority expects to supplement its allocated groundwater production with modest amounts from additional sources.

6.1.1.3 Pico Water District

As a county water district, the Pico Water District serves an area of approximately 1,470 acres, or about 26 percent of the city of Pico Rivera. The entirety of the district's potable water supply comes from groundwater in the Central Basin, and it presently has no ability to purchase imported water for distribution. The Pico Water District reported an actual volume of water supplied in 2020 of 2,794 AF. Actual demand for the same year totaled 2,875 AF. Projected demand and supply are expected to grow through 2045, with both volumes being approximately 3,051 AFY. This would not exceed the district's current adjudicated pumping right to 3,624 AFY from the Central Basin (Pico Water District 2021).

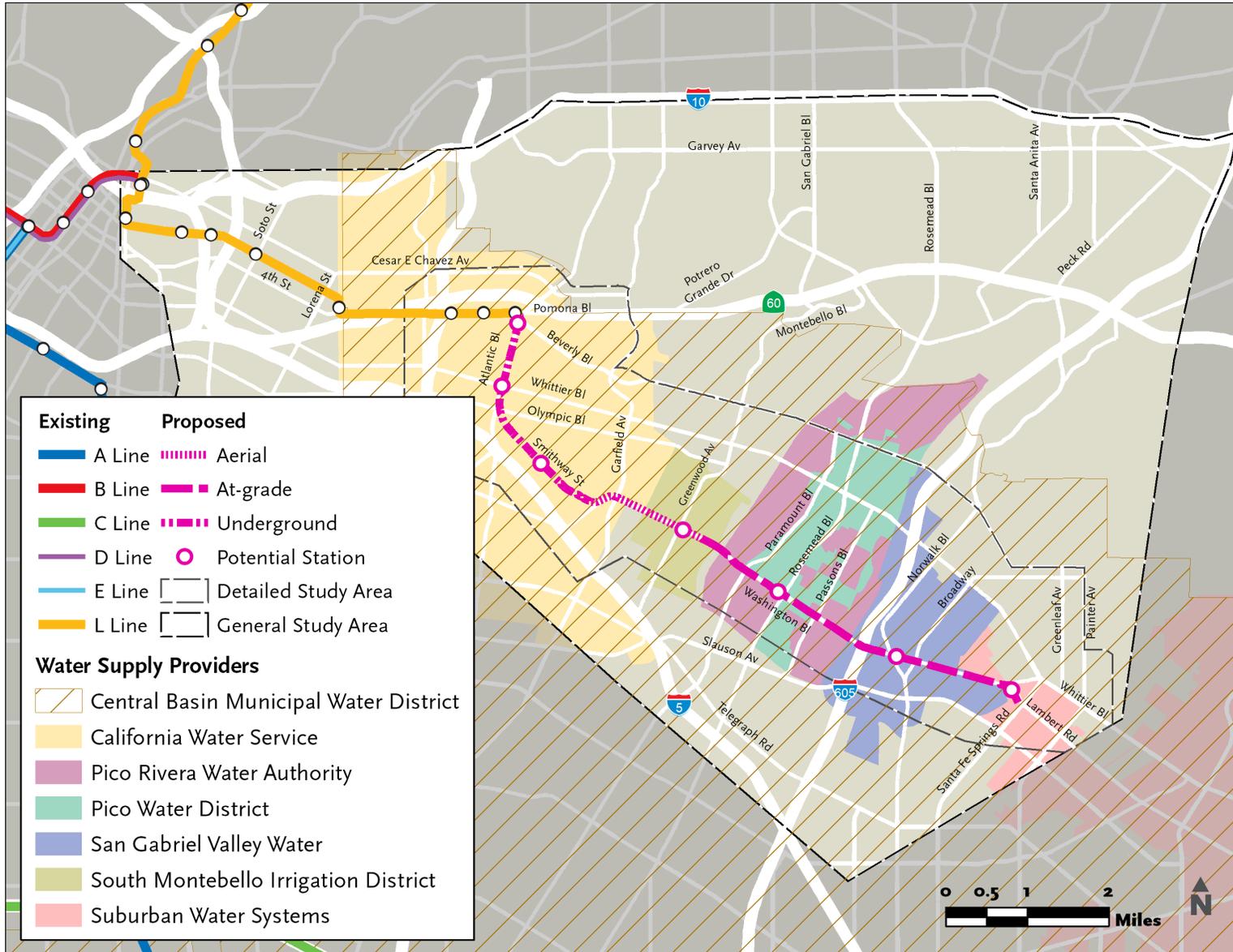
6.1.1.4 San Gabriel Valley Water Company

San Gabriel Valley Water Company service area is approximately 45 square miles, and within the DSA, primarily includes portions of West Whittier-Los Nietos in unincorporated Los Angeles and portions of Santa Fe Springs. The San Gabriel Valley Water Company's main source of water supply is groundwater pumped from its 35 wells in the Main San Gabriel Basin and the Central Basin. While it is able to do so, the company has not purchased any imported water supplies from MWD since 2007, reserving that capacity for emergency supply. In 2020, San Gabriel reported actual water supply of 33,632 AF and a demand of 32,130 AF for raw and potable water. This demand figure is projected to grow to 38,700 AF in 2045. The company anticipates groundwater supply available for distribution will grow correspondingly (San Gabriel Valley Water Company 2021).

6.1.1.5 Suburban Water Systems

Suburban Water Systems is a subsidiary of SouthWest Water and has two service areas. The Whittier/La Mirada District serves Whittier within the DSA. Approximately 80 percent of water supplied by Suburban Water Systems comes from its 18 wells located in the San Gabriel Basin and the Central Basin. This groundwater is primarily supplemented with surface water imported from the MWD, as well as smaller providers such as Covina Irrigating Company and California Domestic Water Company. Across its entire service area in 2020, Suburban Water Systems had a total distribution and supply capacity of approximately 46,100 AFY, with an actual volume supplied in the Whittier/La Mirada District of 20,451 AF. Actual demand for raw and potable water in the district for 2020 was 20,451 AF, with no significant growth in water demand projected through 2045 (Suburban Water Systems 2021).

The service areas of the regional and local water supply agencies are shown in **Figure 6.1**.



Source: Los Angeles County Department of Public Works and University of California Los Angeles (UCLA), 2017.

Figure 6.1. Water Service Providers



6.1.2 Sanitary Sewer

The Sanitation Districts of Los Angeles County (LACSD), which is comprised of 24 independent districts, provide wastewater treatment services to approximately 5.6 million residents in 78 cities and unincorporated areas in Los Angeles County. The DSA is served by District 2 and District 18, which are a part of the Joint Outfall System, a shared regional interconnected sewerage system shared by 17 of the LACSD districts. LACSD operates ten water reclamation plants (WRPs) and one ocean discharge facility (Joint Water Pollution Control Plant), which treat approximately 400 million gallons per day (LACSD 2021).

Within the Sanitation Districts' service area, there are approximately 9,500 miles of sewers that are owned and operated by the cities and county that are tributary to the Sanitation Districts' wastewater collection system. The Sanitation Districts own, operate, and maintain approximately 1,400 miles of sewers—ranging from 8 to 144 inches in diameter—that convey approximately 510 million gallons per day of wastewater to 11 wastewater treatment plants. Included in the Sanitation Districts' wastewater collection system are 48 active pumping plants located throughout the County.

Local sewers within the DSA, except for Montebello and Whittier, are operated by the LACDPW Consolidated Sewer Maintenance District (CSMD). CSMD's collection system consists of over 4,600 miles of gravity sewer lines and a total of 159 pump stations. Most flows from these local sewers discharge into the County Sanitation Districts of Los Angeles County facilities for treatment and disposal.

Local sewers within Montebello are owned and operated by Montebello Public Works. Local sewers within Whittier are owned and operated by the Whittier Public Works Department and include approximately 190 miles of piping. Flows are carried out of the city to county facilities for treatment.

6.1.3 Storm Drains

Urban run-off in the GSA is diverted to the appropriate storm drains and into catch basins. The collected stormwater flows through a network of pipes and open channels and is then typically released directly into the Pacific Ocean. Los Angeles County Flood Control District stormwater infrastructure, including drains, channels, catch basins, and debris basins, is present throughout the DSA. Additionally, within city boundaries, local storm drain facilities are owned and operated by each city's public works departments.

6.1.4 Solid Waste

LACSD serves the solid waste management needs of a large portion of Los Angeles County, including the DSA, with several solid waste landfills, recycling centers, materials recovery/transfer facilities, and waste to energy facilities. The County also has 19 composting/chipping and grinding facilities in operation and three anaerobic digestion facilities. The County annually monitors landfill capacity and disposal rates to ensure that there is sufficient 15-year disposal capacity for the 88 cities within the county and unincorporated communities (LACDPW 2020). The County anticipates adequate solid waste disposal capacity to be available over the next 15-year planning period (2019 to 2034) with implementation of actions such as increasing waste and diversion efforts, encouraging development



of alternative technologies, export of waste to out-of-facilities, and utilizing the Waste-by-Rail system to the Mesquite Regional Landfill in Imperial County (LACDPW 2020).

The Los Angeles County Public Health Department manages enforcement and permitting for facilities that receive and dispose of solid waste. **Table 6-1** lists the largest active and regulatory permitted solid waste facilities that are serving Los Angeles County with the permitted capacity and anticipated closure date.

Table 6-1. Solid Waste Disposal Landfills

Landfill Site Name	Location	Max. Permit Capacity	Remaining Capacity	Remaining Capacity Date	Closure Date
		Cubic Yards			
Antelope Valley Public	Palmdale	30,200,000	17,911,225	10/31/2017	4/1/2044
Azusa Land Reclamation Co.	Azusa	58,900,00	9,900,000	4/7/2011	4/1/2030
Chiquita Canyon Sanitary	Castaic	110,366,00	60,408,000	8/24/2018	1/1/2047
Clean Harbors Buttonwillow	Buttonwillow	13,250,000	NA	NA	1/1/2040
Lancaster Landfill and Recycling Center	Lancaster	27,700,000	14,514,648	8/25/2012	3/1/2044
Savage Canyon	Whittier	19,337,450	9,510,833	12/31/2011	12/31/2055
Sunshine Canyon	Sylmar	140,900,000	77,900,000	5/31/2018	10/31/2037

Source: CalRecycle 2021.

6.1.5 Telecommunications

Telecommunication services including phone, internet, and television cable are provided by private companies throughout the GSA. Cable service providers include Dish Network, DirectTV, and Spectrum. Phone service providers include AT&T, Charter Communications, and Verizon. Internet service providers include Spectrum, AT&T, and Frontier. Transmission of internet service is available through dial-up or various broadband technologies such as fiber-optic, cable, fixed wireless, or satellite. According to the CPUC's Interactive Broadband Mapper, the GSA is well serviced by a variety of internet service providers and internet transmission infrastructure and has extensive mobile phone coverage (CPUC 2021).

6.2 Energy

Existing conditions of the state's energy and electricity supply and demand were developed from the two most recent CEC Integrated Energy Policy Reports (2017 and 2019) (CEC 2018a and CEC 2020a) and the CEC's Energy Almanac (CEC 2021).

6.2.1 Electricity Sector Study Area

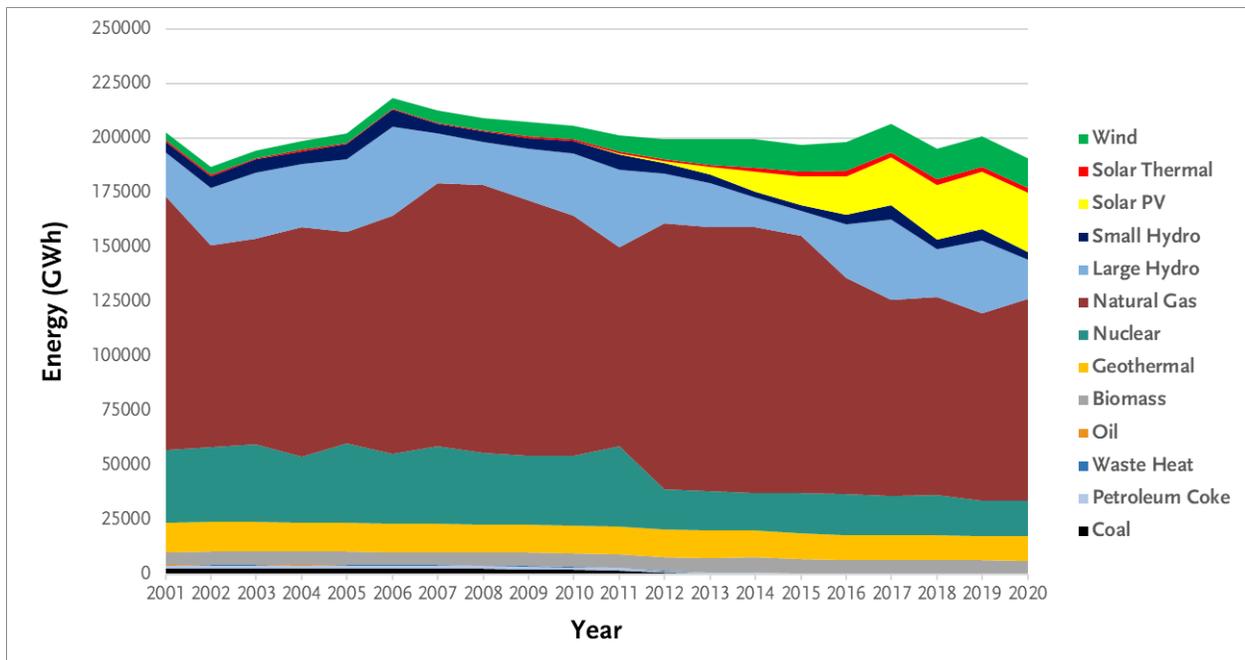
In 2020, total system electric generation for California was 272,576 gigawatt-hours (GWh), which is reduction of two percent, or 5,356 GWh, from 2019 levels (CEC 2021). This reduction is consistent with



the downward or flat trend in energy demand that has been occurring over recent years as a result of energy efficiency programs and installation of behind-the-meter solar PV systems¹ that directly displace utility-supplied generation.

The CEC’s 2019 *Integrated Energy Policy Report* identifies that the state’s electricity sector is rapidly changing in response to climate policy and market changes. This includes a transition away from fossil natural gas as a primary fuel source for electric generation, which is being replaced by resources including renewables, transmission upgrades, energy storage, energy efficiency, and demand response to meet air quality, climate, and other environmental goals. Over the last decade, renewable capacity in the state increased from 9,313 megawatts (MW) in 2009 to 23,313 MW in 2018 moving towards achieving the state’s renewable procurement requirements, including the requirement that 33 percent of retail electricity sales must be served with renewable resources by 2020, and 60 percent by 2030 as identified in SB 100. In 2020, the state of California achieved an estimated 33 percent of total system electricity generation from renewable resources (CEC 2021).

Figure 6.2 (In-State Electric Generation by Fuel Type) depicts the change in the state’s electricity system generation supply mix from 2001 to 2020, including a doubling of renewable supplies (CEC 2020a).



Source: CEC, 2020a.

Figure 6.2. In-State Electric Generation by Fuel Type

Note: California uses both in-state and out-of-state sources of electricity generation. In 2020, in-state electricity generation accounted for 190,222 GWh or approximately 70 percent of total network power generation, which is an approximately 5 percent decline as compared to 2019, due in part, to reduced generation from hydroelectric power plants resulting from dry conditions.

¹ Behind-the-meter PV systems provide a single building or facility with direct power, without passing through an electric meter.

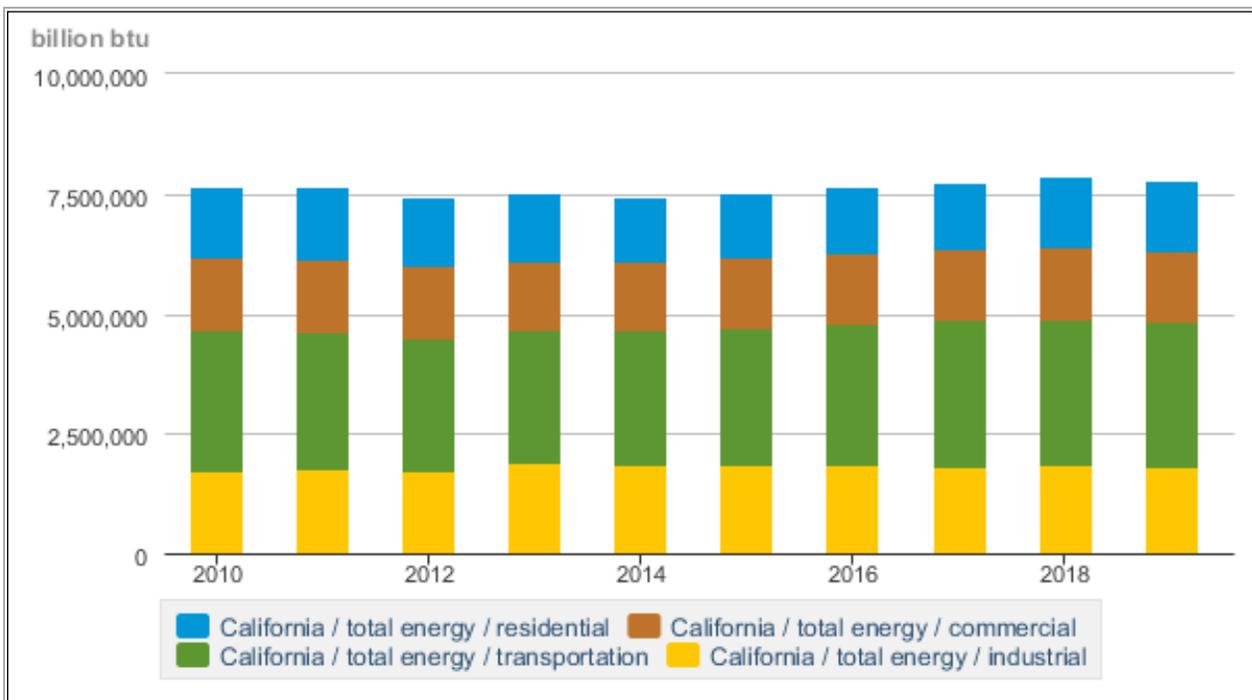


6.2.2 Transportation Sector

As shown in **Figure 6.3** the transportation sector in California consumes a relatively large amount of the energy in the state (approximately 50 percent). Further, the transportation sector (including vehicles, oil extraction, and oil refining) is the largest source of the state’s GHG emissions, accounting for approximately 41 percent (CEC 2020a).

Gasoline remains the dominant fuel within the transportation sector, followed by diesel and aviation fuels. California is one of the largest consumers of gasoline in the world. However, California has implemented a range of regulations and incentives to advance its clean transportation goals, and as shown in

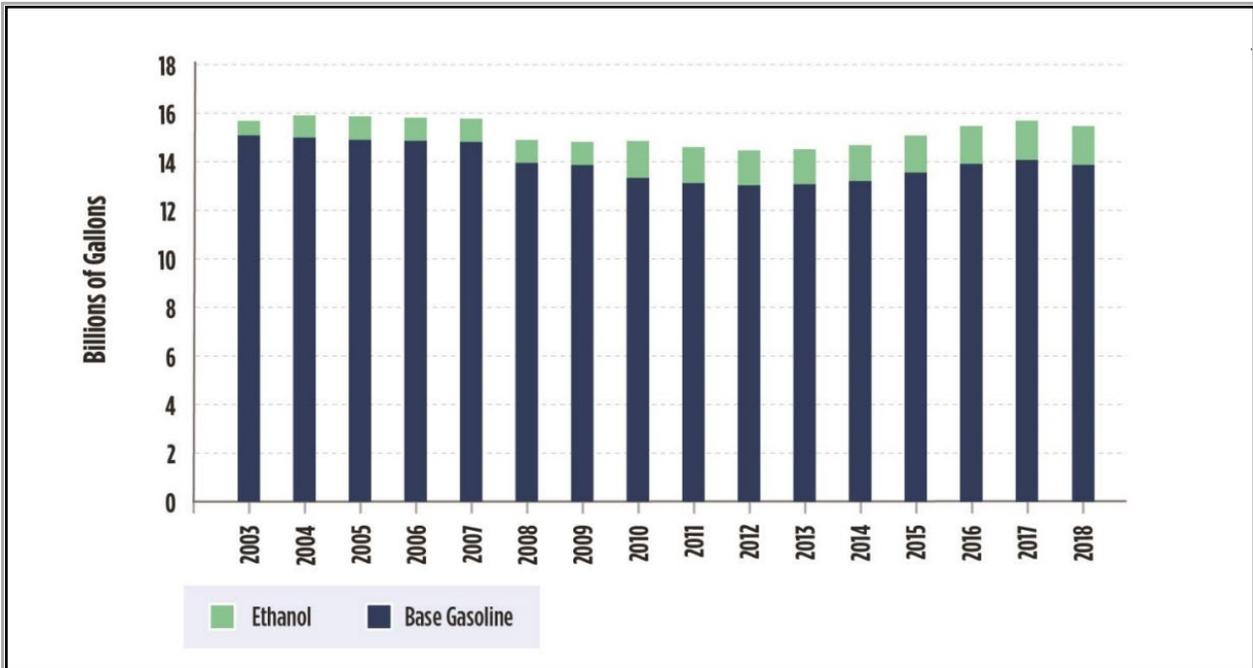
Figure 6.4 and **Figure 6.5**, the use of alternative fuels, including ethanol, biodiesel, and renewable diesel have increased in recent years (CEC 2020a). Further, as shown in **Figure 6.6**, there is an increasing use of electricity as a transportation fuel. The distribution among different fuels will change over time, depending on the changes in vehicle sales trends. While petroleum-based fuels are anticipated to continue to represent the largest shares of transportation energy demand through 2030, improvements in fuel efficiency and increased electrification are expected to result in a future decline in gasoline demand over the coming decades (CEC 2020a).



Source: USEIA, 2021a.

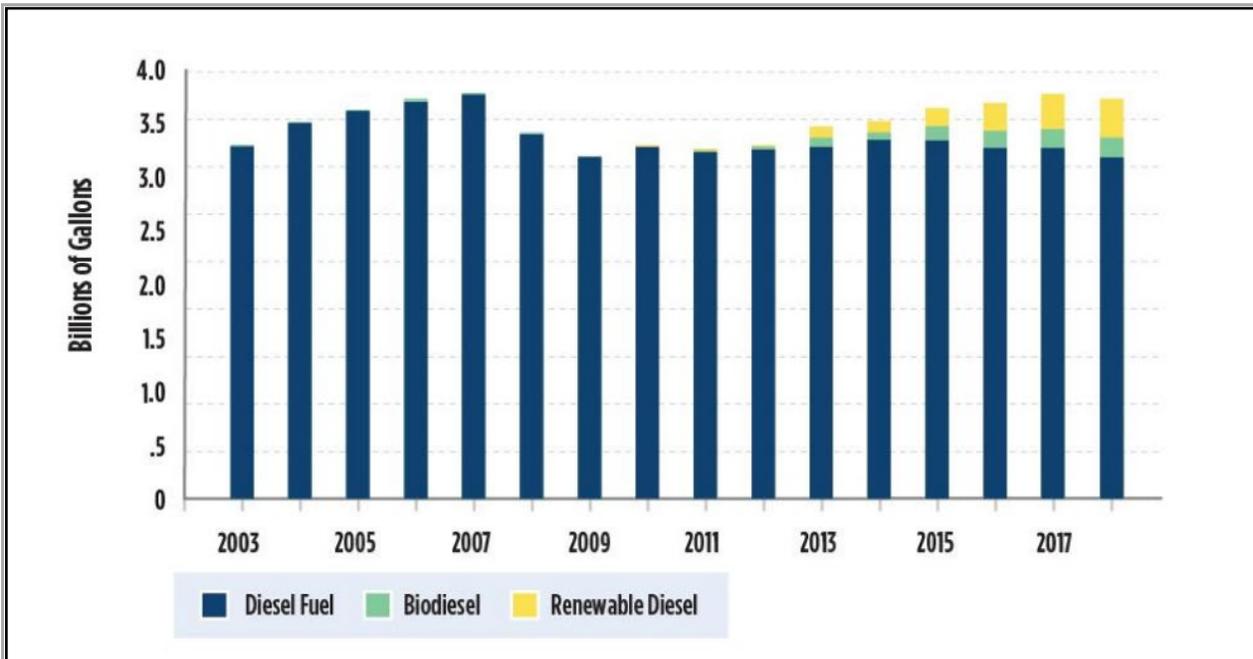
Figure 6.3. California Energy Use by Sector (2010-2019)

Note: BUT = British Thermal Units



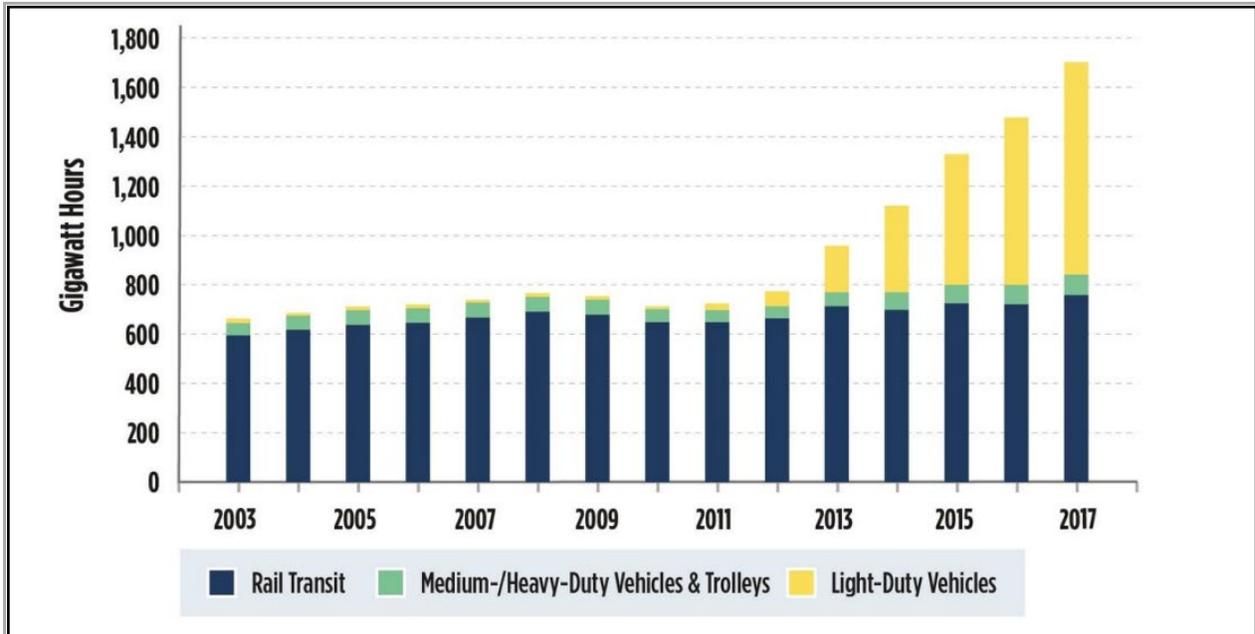
Source: CEC, 2020a.

Figure 6.4. California Gasoline and Ethanol Consumption (2003-2018)



Source: CEC, 2020a.

Figure 6.5. California Diesel Fuel, Biodiesel, and Renewable Diesel Consumption (2003-2018)



Source: CEC, 2020a.

Figure 6.6. California Transportation Electricity Consumption (2003-2017)

The CEC’s 2017 *Integrated Energy Policy Report* (CEC 2018b) and *California Energy Demand 2018-2030 Revised Forecast* (CEC 2018b) presents gasoline and diesel demand forecasts for both a low petroleum price case (high-demand) scenario and a high petroleum price case (low-demand) scenario. The high-demand scenario projects peak gasoline demand to be 12.3 billion gallons in 2030 (25 percent below 2014 levels). The low-demand scenario projects a peak demand of 12.7 billion gallons in 2030 (a decrease of 19 percent below 2014 levels). Greater numbers of zero-emission vehicles and increasing fuel economy of light-duty gasoline vehicles are largely responsible for the decrease in gasoline demand (CEC 2018b). Diesel demand is expected to increase moderately, following the growth of California’s economy. Under all demand scenarios total diesel demand is projected at 4.6 billion gallons in 2030.

Transportation in Los Angeles County continues to be dominated by single-occupancy automobiles. According to Metro’s LRTP, historically, transportation polices and investments in Los Angeles County have prioritized single-occupant vehicles over other options (Metro 2020). High percentages of single-occupancy vehicles result in higher VMT throughout the region. Subsequently, high VMT translates into high energy use and increased air quality pollutants.

As shown in **Table 6-2**, existing conditions data for regional traffic energy consumption was modeled for the existing conditions year of 2019.² The annual automobile energy consumption data for the region was developed as part of the Project transportation model. Highway traffic in the region was estimated to consume approximately 6.28 billion gallons of gasoline and 239 million gallons of diesel fuel under the Existing Conditions, equating to approximately 787,613 billion BTUs. No LRT operates within the GSA under the existing conditions.

² As described in Section 3.14, Transportation and Traffic, the base year data in Metro’s regional travel demand forecasting model (the Corridor Based Model 2018 [CBM18]) is from 2017 and represents the data that was most recently available when the model was created in 2018. This data has been used to represent 2019, the existing conditions year in this study.



Table 6-2. Annual Regional Transportation Energy Use, Existing Conditions

Vehicle Class	Gasoline Demand (thousand gallons)	Diesel Demand (thousand gallons)	Electrical Demand (kWh)	Natural Gas Demand (billion BTU)	Total Operational Energy Demand (billion BTU)
Regional Highway Traffic ¹	6,274,509	238,829	n/a	n/a	787,613

Source: CDM Smith/AECOM JV, 2021.

Note:

¹ Regional highway traffic accounts for all vehicular traffic in the region which would be affected by the Project.

Key:

BTU = British thermal unit per mile kWh = kilowatt-hour

Typically, in a CEQA analysis, project-related impacts are compared to existing (without project) conditions. However, pursuant to CEQA Guidelines Section 15125(a)(2), 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. Use of an existing conditions baseline would be misleading for the Project because it ignores the regional background growth in population, traffic, and transportation infrastructure that would occur between the existing conditions baseline year of 2019 and Project build-out (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). Use of existing conditions would further inappropriately attribute regional energy reductions associated with future engine efficiency standards, which do not exist under existing conditions, to the project.

Therefore, for the quantification of energy emissions, Project energy demand will be defined as the difference between a Build Alternative (2042) and the existing conditions in 2019 adjusted for regional growth (i.e., the projected future conditions baseline) that would occur by 2042 (2042 without Project Conditions). Fuel consumption factors for highway vehicles (the preeminent energy use affected by this Project) decrease as engine technology improves and vehicle manufacturers meet more stringent state and federal engine efficiency standards. Since all alternatives would reduce VMT associated with highway traffic as compared to 2042 without Project Conditions, using 2042 highway traffic emission rates would result in less fuel reduced associated with VMT reductions as compared to reductions which might be achieved under existing conditions. Therefore, evaluation of Project impacts during the 2042 design year would conservatively evaluate the energy impacts of operations.

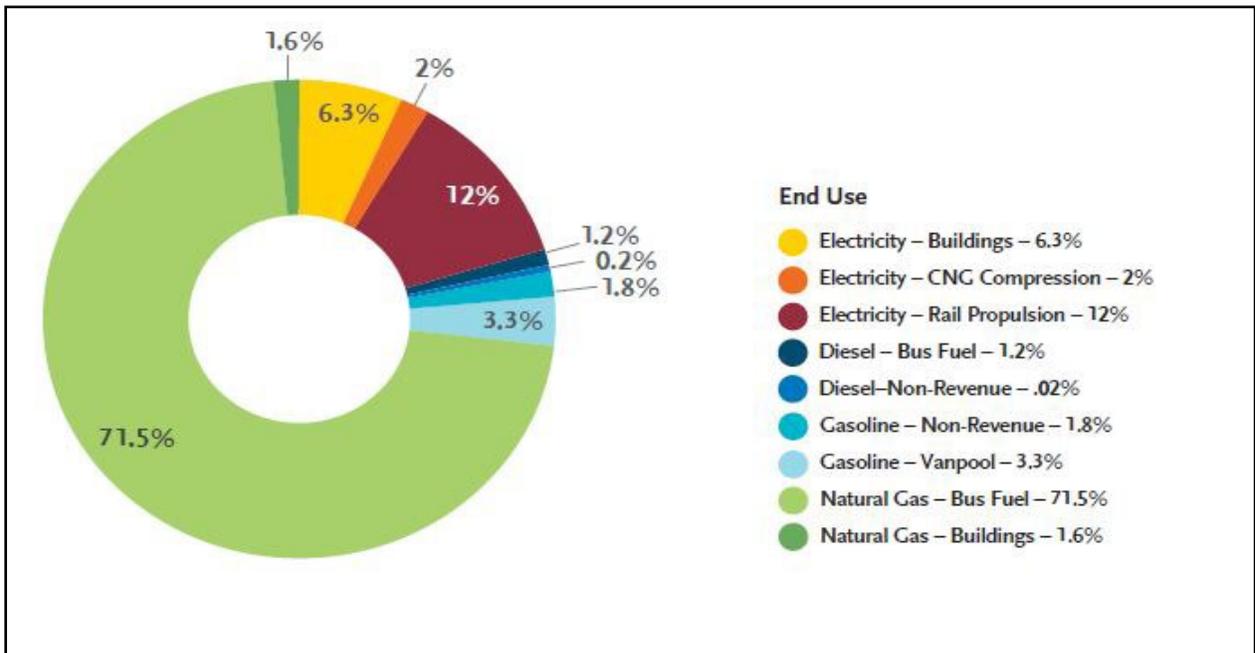
6.2.3 Metro Energy Use and Fuel Consumption

Metro's 2019 *Energy and Resource Report* indicates that Metro has experienced a decline in passenger trips (bus, rail, and vanpool) from 2013 to 2018, in line with the national trend. An important factor in the decline of transit ridership includes increased personal vehicle ownership and increased driving in recent years (Metro 2019).



2011 was the last year Metro operated diesel buses. Currently, Metro operates the largest compressed natural gas bus fleets in the nation. In July 2017, the Metro Board of Directors voted to transition the entire Metro bus fleet to zero-emissions by 2030 (Metro 2018).

Metro’s implementation of energy conservation measures and building design and fuel efficiency measures has resulted in reduced energy consumption since 2013. In 2018, Metro has reduced overall energy use by 7.9 percent compared to 2017 through reduced vehicle fuel use by buses and support vehicles (Metro 2019). In 2017, 30 percent of Metro’s electricity came from renewable sources, with 2,856,934 kWh generated from Metro’s own PV systems (Metro 2018). In 2018, 31 percent of Metro’s electricity came from renewable energy sources (Metro 2019). **Figure 6.7** shows a breakdown of Metro’s energy by end use in 2017. Metro’s electricity use is split between powering the rail and bus system (92 percent) and transit facilities (8 percent) (Metro 2018).



Source: Metro, 2018.

Figure 6.7. 2017 Metro Energy by End Use

6.2.4 Electric Power

SCE is an electric utility company and subsidiary of Edison International. SCE provides energy to approximately 15 million people in California and is one of the largest electric utilities in the United States (SCE 2019). The CEC reports on electricity consumption by planning area annually. The total electricity usage in the SCE planning area in 2018 was 104,406.6 million kWh (CEC 2019b). For planning purposes, this number can be compared to the CEC’s most recent estimate of energy production in the planning area. For 2018, their report, *California Energy Demand 2018-2030 Staff Revised Forecast*, projects the net energy consumed as 110,000 million kWh (CEC 2018). As outlined in the 2020 Sustainability Report, the SCE aims to deliver 100 percent carbon-free power to retail-sales customers by 2045 (SCE 2020). Sources for carbon-free energy include solar, geothermal, wind, hydro, biomass and biowaste, and nuclear energy.



Figure 6.8 illustrates SCE's electric transmission grid in the GSA. Transmission lines can carry alternating current or direct current with voltages typically ranging from 110 kV to 765 kV. Transmission lines can be overhead and underground; underground transmission lines are more often found in urban areas. Sub-transmission lines generally carry voltages ranging from 33 kV to 100kV. These sub-transmission lines transmit power from higher voltage lines or other bulk power sources to local distribution network substations. An overhead power line can be single or double circuit. A single-circuit transmission line carries conductors for only one circuit.

6.2.5 Natural Gas

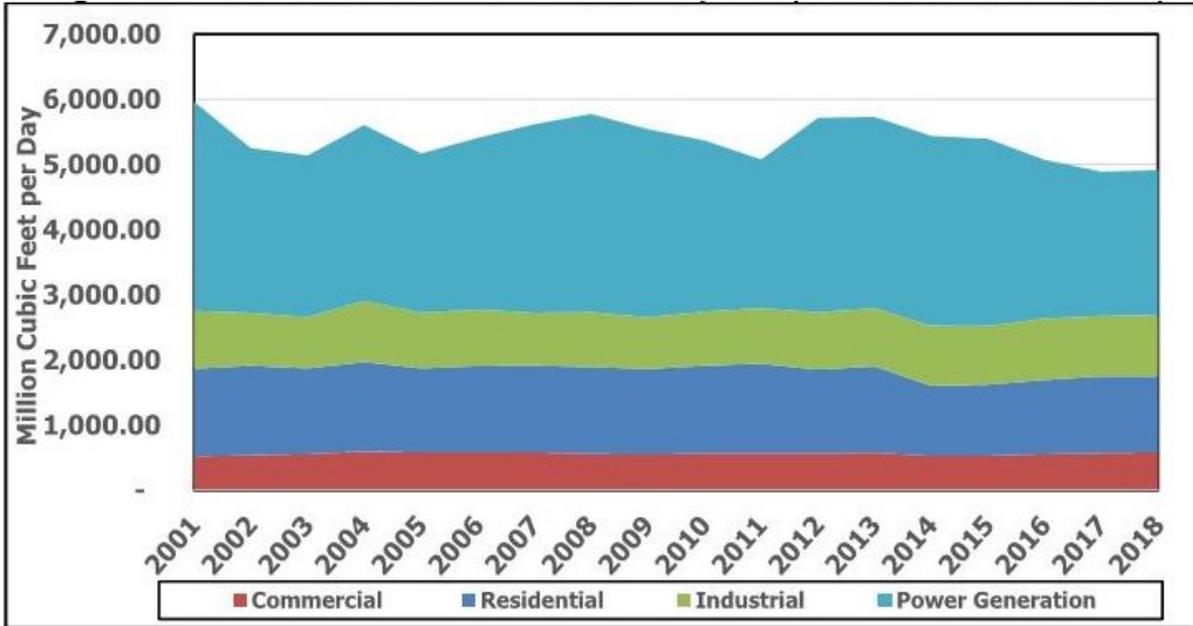
The Southern California Gas Company (SoCalGas) is a natural gas provider and subsidiary of Sempra Energy. SoCalGas's mission is to build the cleanest, safest, and most innovative energy company in America. SoCalGas aims to achieve net zero GHG emissions by 2045 (SoCalGas 2021). SoCal Gas pipelines may be located anywhere, including under streets and sidewalks and on private property. Low pressure and other smaller distribution lines are connected to gas meters at homes and businesses. The California DigAlert database provided information regarding the presence of underground pipeline infrastructure.

Natural gas supplies more than 10.5 million homes, approximately 445,000 businesses, and about 37,000 factories and industrial consumers, and more than 640 electric generating units throughout California (CEC 2018a). California is one of the largest natural gas consumers in the United States. Approximately 85 to 90 percent of the natural gas used in California comes from out of state sources as in-state production declines. **Figure 6.9** illustrates California's natural gas consumption for the major sectors between 2001 and 2018. As shown, the power generation sector consumes the largest share, accounting for 45 percent in 2018. In 2018, residential and commercial sectors accounted for approximately 36 percent of the state's natural gas demand, while the industrial sector accounted for approximately 19 percent. **Figure 6.10** shows the historic statewide natural gas consumption and the forecasted high, mid, and low consumption for natural gas consumption through 2030 (CEC 2020a). As shown, the latest demand forecast anticipated a lower demand as compared to the 2017 forecast.



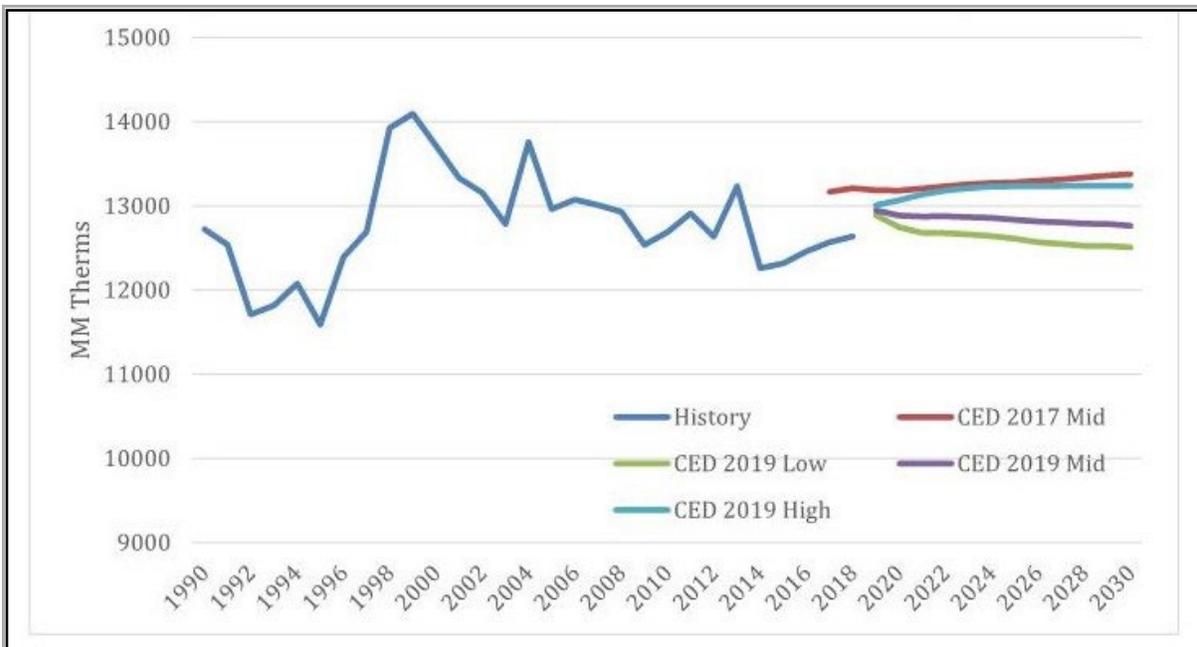
Source: CEC, 2021.

Figure 6.8. Southern California Edison Electric Transmission Lines



Source: CEC, 2020a.

Figure 6.9. California Natural Gas Consumption - All Sectors (2000-2018)



Source: CEC, 2020a.

Key:
CED = California Energy Demand

Figure 6.10. Statewide Natural Gas Historic and Forecasted Consumption



7.0 IMPACTS

7.1 Impact UTL-1: Relocation or Construction

Impact UTL-1: Would a Build Alternative require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

7.1.1 Alternative 1 Washington Boulevard

7.1.1.1 Operational Impacts

Water Facilities

Water service providers in the DSA are identified in **Section 6.1.1** and shown in **Figure 6.1**. The proposed LRT guideway and stations under Alternative 1 would have a water demand for landscaping irrigation and to supply fire sprinkler systems when and if needed. It is anticipated that the Project elements would result in a slight increase in water use; however, the amount consumed would be significantly less than the projected future capacity and would not have any substantial effect on the water supply. Therefore, operation of Alternative 1 would not require the expansion of an existing facility or construction of a new facility and would result in a less than significant impact on water supply facilities.

Wastewater Treatment Facilities

The proposed LRT stations under Alternative 1 would not have public restrooms and, as a result, would not generate wastewater. Elevators would have emergency ejector pits and underground stations and control rooms at at-grade stations would be equipped with sump pumps/clarifiers that would drain to the sewer in the event of a flood. Any discharges associated with these connections would be subject to a wastewater discharge permit and would be intermittent and irregular. Such irregular discharges, should they be necessary, would not exceed treatment capacity. Therefore, operation of Alternative 1 would not require the expansion of an existing facility or construction of a new facility and would result in a less than significant impact on wastewater treatment facilities.

Stormwater Facilities

The Project is located in an urbanized area that is largely impervious and has existing storm drain infrastructure. The proposed LRT guideway and stations under Alternative 1 would result in a minimal increase in impervious surfaces, but not to an extent that would lead to increased runoff. The Project elements (e.g., station canopy) would include drainage facilities with adequate slopes to facilitate adequate drainage flow and help avoid localized ponding or flooding during storm events. Therefore,



operation of Alternative 1 would not require the expansion of an existing facility or construction of a new facility and would result in a less than significant impact on stormwater drainage facilities.

Electric Power

The proposed LRT guideway and stations under Alternative 1 would consume electricity from traction power and lighting, respectively. The amount consumed would be significantly less than the projected future capacity. For detailed information about energy use, refer to Section 7.6. Therefore, operation of Alternative 1 would not require any notable expansion of an existing facility or construction of a new facility and would result in a less than significant impact on electric power facilities.

Natural Gas

The proposed LRT guideway and stations under Alternative 1 would not consume natural gas. Therefore, operation of Alternative 1 would not require the expansion of an existing facility or construction of a new facility and would result in no impact on natural gas facilities.

Telecommunication

Minor telecommunication connections for equipment like emergency phones may be installed at stations and in certain locations along the guideway. However, the proposed LRT guideway and stations under Alternative 1 would not include telecommunication features that would require expansion of existing telecommunications facilities that could result in an environmental impact. Therefore, operation of Alternative 1 would not require the expansion of an existing facility or construction of a new facility and would result in no impact on telecommunication facilities.

Design Options

Atlantic/Pomona Station Option

Operation of Alternative 1 with the Atlantic/Pomona Station Option would have the same effects on utilities service and systems as the base Alternative 1. Operation of Alternative 1 with the Atlantic/Pomona Station Option would not require the expansion of an existing water, wastewater treatment, stormwater, electrical power, or natural gas facility or construction of a new water, wastewater treatment, stormwater, electrical power, or natural gas facility and would result in a less than significant impact on water, wastewater treatment, stormwater, and electrical power facilities and no impact on natural gas and telecommunication facilities.

Montebello At-Grade Option

Operation of Alternative 1 with the Montebello At-Grade Option would have the same effects on utilities service and systems as the base Alternative 1. Therefore, operation of Alternative 1 with the Montebello At-Grade Option would not require the expansion of an existing water, wastewater treatment, stormwater, electrical power, or natural gas facility or construction of a new water, wastewater treatment, stormwater, electrical power, or natural gas facility and would result in less than significant impact on water, wastewater treatment, stormwater, and electrical power facilities and no impact on natural gas and telecommunication facilities.



7.1.1.2 Construction Impacts

Construction of Alternative 1 would require relocating, temporarily rerouting, protecting in place, or otherwise avoiding some utility supply lines or other facilities. The construction impacts of utility work (e.g., temporary disruption of service) would be localized, occurring generally at or near street intersections and have been evaluated as part of the Project in context with other physical effects on the environment in this EIR. During the Final Design phase, the Project team would coordinate with utility companies to request information, identify conflict locations between construction activities and existing facilities, and determine if relocation would be required or if utility lines could be protected in place. Most utilities traversing the alignment would be protected in place with sleeve casing or other methods consistent with the Metro Rail Design Criteria. Preliminary relocation concepts would be developed and presented to each utility owner with affected facilities.

Water Facilities

Alternative 1 is located in highly urbanized areas of Los Angeles County that are well served by existing potable water infrastructure, including existing supply mains, trunk lines and services lines. Construction of Alternative 1 would require minimal water, mostly for dust control, which would not necessitate the relocation or expansion of potable water infrastructure. Water usage during construction would be temporary and intermittent. Water appurtenances (e.g., fire hydrants and water meters) would be relocated and/or adjusted to accommodate project elements, such as the underground configuration and LRT stations. These facilities would be relocated in close proximity to existing facilities. Relocations would require minimal ground disturbance, which has been evaluated as part of the Project in context with other physical effects on the environment in this EIR. Construction of Alternative 1 would not require or result in any notable relocation or construction of new water facilities which could cause significant environmental effects beyond those already addressed as part of the Project. Therefore, construction of Alternative 1 would result in a less than significant impact on water supply facilities.

Wastewater Facilities

Alternative 1 is located in an urbanized area with existing sewer infrastructure. Alternative 1 would generate wastewater during construction through the use of temporary worker restrooms. This would occur intermittently and would not exceed sewer capacity. Alternative 1 would not generate notable wastewater or necessitate the relocation or expansion of wastewater facilities. Sewer service feeds that are connected to the utility mainline could be relocated if conflicting with Project elements, such as the underground guideway, station foundations, and other subsurface infrastructure related to the Project. The potential need for relocation has been evaluated as part of the Project in context with other physical effects on the environment in this EIR. Construction of Alternative 1 would not require or result in any notable relocation or construction of new or expanded wastewater facilities which could cause significant environmental effects beyond those already addressed as part of the Project. Therefore, construction of Alternative 1 would result in a less than significant impact on wastewater facilities.

Stormwater Facilities

Alternative 1 is located in a developed area with existing stormwater infrastructure that is largely covered with impervious surfaces such as asphalt, concrete, buildings, and other land uses which



concentrate storm runoff. Alternative 1 would be constructed mostly along public ROW with and/or adjacent to storm drains and other drainage features (e.g., curbs and gutters, catch basins, and pipes). Construction activities, such as earthwork, would include relocations and modifications to the existing storm drains and maintenance holes, which would temporarily be taken out of service while the modifications are completed. During the construction period, there would be more exposed earth and grading activity, resulting in a slight increase in pervious surfaces compared to existing conditions. Incorporation of construction BMPs (e.g., installation of temporary stormwater conveyance systems), however, would reduce runoff generated at the construction sites and maintain appropriate stormwater drainage patterns, which would serve to redirect stormwater flows around open construction areas, thus avoiding flooding during construction. Construction BMPs related to stormwater runoff are discussed in more detail in the Eastside Transit Corridor Phase 2 Hydrology and Water Quality Impacts Report. Construction of Alternative 1 would not require or result in any notable relocation or construction of new or expanded stormwater facilities which could cause significant environmental effects beyond those already addressed as part of the Project. Therefore, construction of Alternative 1 would result in a less than significant impact on stormwater drainage facilities.

Electric Power

Construction of Alternative 1 would consume electricity for construction trailers and electrically powered construction equipment (most construction equipment is not electrically powered). During construction, it is anticipated that minimal amounts of electrical power would be required. Electricity demand from construction of Alternative 1 would not require any notable relocation or construction of new or expanded power generation facilities which could result in significant environmental effects. Therefore, construction of Alternative 1 would result in a less than significant impact on electric power facilities.

Natural Gas

Construction of Alternative 1 would consume minimal, if any, natural gas used for construction equipment. Natural gas consumption during construction would be temporary and intermittent. Construction activities would mostly take place within existing public ROW and no natural gas facilities have been identified in the construction zone that would require relocation. Construction of Alternative 1 would not require or result in any notable relocation or construction of new or expanded natural gas facilities which could cause significant environmental effects. Therefore, construction of Alternative 1 and would have a less than significant impact on natural gas facilities.

Telecommunication

Alternative 1 is located in highly urbanized areas of Los Angeles County that are well served by existing phone, cable television, and internet service. Construction of Alternative 1 may require the relocation of telecommunication facilities (e.g., cell towers and 5G-enabled small cell antennas) to accommodate Project elements, such as the LRT guideway and stations. If relocated, the telecommunication facilities would be relocated in close proximity to their previous location. Construction of Alternative 1 would not require or result in any notable expansion of possible relocated telecommunication facilities or construction of new facilities that could cause significant environmental effects. Therefore, construction of Alternative 1 would have a less than significant impact on telecommunication facilities.



Design Options

Atlantic/Pomona Station Option

Construction of Alternative 1 with the Atlantic/Pomona Station Option would have the same effects on utilities service and systems as the base Alternative 1. Construction of Alternative 1 with the Atlantic/Pomona Station Option would not require the expansion of an existing facility or construction of a new facility beyond those already addressed as part of the Project and would result in a less than significant impact on water, wastewater, stormwater, electricity, natural gas, and telecommunication facilities.

Montebello At-Grade Option

Construction of Alternative 1 with the Montebello At-Grade Option would have the same effects on utilities service and systems as the base Alternative 1. Therefore, construction of Alternative 1 with the Montebello At-Grade Option would not require the expansion of an existing facility or construction of a new facility beyond those already addressed as part of the Project and would result in a less than significant impact on water, wastewater, stormwater, electricity, natural gas, and telecommunication facilities.

7.1.2 Alternative 2 Atlantic to Commerce/Citadel IOS

7.1.2.1 Operational Impacts

Water Facilities

The proposed LRT guideway and stations under Alternative 2 would have a water demand for landscaping irrigation and to supply fire sprinkler systems when/if needed. It is anticipated that the Project elements would result in a slight increase in water use; however, the amount consumed would be significantly less than the projected future capacity and would not have any substantial effect on the water supply. Therefore, operation of Alternative 2 would not require the expansion of an existing facility or construction of a new facility and would result in a less than significant impact on water supply facilities.

Wastewater Treatment Facilities

The proposed LRT stations under Alternative 2 would not have public restrooms and, as a result, would not generate wastewater. Elevators would have emergency ejector pits and underground stations and control rooms at at-grade stations would be equipped with sump pumps/clarifiers that could drain to the sewer in the event of a flood. Any discharges associated with these connections would be subject to a wastewater discharge permit and would be intermittent and irregular. Such irregular discharges, should they be necessary, would not exceed capacity. Therefore, operation of Alternative 2 would not require the expansion of an existing facility or construction of a new facility and would result in a less than significant impact on wastewater treatment facilities.



Stormwater Facilities

The Project is located in an urbanized area that is largely impervious and that has existing storm drain infrastructure. The proposed LRT guideway and stations under Alternative 2 would result in a minimal increase in impervious surfaces, but not to an extent that would lead to increased runoff. The Project elements (e.g., station portal) would include drainage facilities with adequate slopes to facilitate adequate drainage flow and help avoid localized ponding or flooding during storm events. Therefore, operation of Alternative 2 would not require the expansion of an existing facility or construction of a new facility and would result in a less than significant impact on stormwater drainage facilities.

Electric Power

The proposed LRT guideway and stations under Alternative 2 would consume electricity from traction power and lighting, respectively. The amount consumed would be significantly less than the projected future capacity. For detailed information about energy use, refer to Section 7.6. Therefore, operation of Alternative 2 would not require any notable expansion of an existing facility or construction of a new facility and would result in a less than significant impact on electric power facilities.

Natural Gas

The proposed LRT guideway and stations under Alternative 2 would not consume natural gas. Therefore, operation of Alternative 2 would not require the expansion of an existing facility or construction of a new facility and would result in no impact on natural gas facilities.

Telecommunication

Minor telecommunication connections for equipment like emergency phones may be installed at stations and in certain locations along the guideway. However, the proposed LRT guideway and stations under Alternative 2 would not include telecommunication features that would require expansion of existing telecommunications facilities that could result in an environmental impact. Therefore, operation of Alternative 2 would not require the expansion of an existing facility or construction of a new facility and would result in no impact on telecommunication facilities.

Design Option

Atlantic/Pomona Station Option

Operation of Alternative 3 with the Atlantic/Pomona Station Option would have the same effects on utilities service and systems as the base Alternative 2. Operation of Alternative 2 with the Atlantic/Pomona Station Option would not require the expansion of an existing water, wastewater treatment, stormwater, electrical power, or natural gas facility or construction of a new water, wastewater treatment, stormwater, electrical power, or natural gas facility and would result in less than significant impact on water, wastewater treatment, stormwater, and electrical power facilities and no impact on natural gas and telecommunication facilities.



7.1.2.2 Construction Impacts

Construction of Alternative 2 would require relocating, temporarily rerouting, or otherwise avoiding some utility supply lines or other facilities. The construction impacts of utility work (e.g., temporary disruption of service) would be localized, occurring generally at or near street intersections and have been evaluated as part of the Project in context with other physical effects on the environment in this EIR. During the Final Design phase, the Project team would coordinate with utility companies to request information, identify conflict locations between construction activities and existing facilities, and determine if relocation would be required or if equipment could be protected in-place. Most utilities traversing the alignment would be protected in place with sleeve casing or other methods consistent with the Metro Rail Design Criteria. Preliminary relocation concepts would be developed and presented to each utility owner with affected facilities.

Water Facilities

Alternative 2 is located in highly urbanized areas of Los Angeles County that are well served by existing potable water infrastructure, including existing supply mains, trunk lines and services lines provide service throughout the GSA. Construction of Alternative 2 would require minimal water, mostly for dust control, which would not necessitate the relocation or expansion of potable water infrastructure. Water usage during construction would be temporary and intermittent. Water appurtenances (e.g., fire hydrants and water meters) would be relocated and/or adjusted to accommodate project elements, such as the underground configuration and LRT stations. These facilities would be relocated in close proximity to existing facilities. Relocations would require minimal ground disturbance, which has been evaluated as part of the Project in context with other physical effects on the environment in this EIR. Construction of Alternative 2 would not require or result in the relocation or construction of new water facilities which could cause significant environmental effects beyond those already addressed as part of the Project. Therefore, construction of Alternative 2 would result in a less than significant impact on water supply facilities.

Wastewater Facilities

Alternative 2 is located in an urbanized area with existing sewer infrastructure. Construction activities would generate wastewater through the use of temporary worker restrooms. This would occur intermittently and would not exceed sewer capacity. Alternative 2 would not generate notable wastewater or necessitate the relocation or expansion of wastewater facilities. Sewer service feeds that are connected to the sewer mainline could be relocated if conflicting with Project elements, such as the underground guideway, station foundations, and other subsurface infrastructure related to the Project. The potential need for relocation has been evaluated as part of the Project in context with other physical effects on the environment in this EIR. Construction of Alternative 2 would not require or result in the relocation or construction of new or expanded wastewater facilities which could cause significant environmental effects beyond those already addressed as part of the Project. Therefore, construction of Alternative 2 would result in a less than significant impact on wastewater facilities.

Stormwater Facilities

Alternative 2 is located in a developed area with existing stormwater infrastructure that is largely covered with impervious surfaces such as asphalt, concrete, buildings, and other land uses which concentrate storm runoff. Alternative 2 would be constructed mostly along public ROW with and/or



adjacent to storm drains and other drainage features (e.g., curbs and gutters, catch basins, and pipes). Construction activities, such as earthwork, would include relocations and modifications to the existing storm drains and maintenance holes, which would temporarily be taken out of service while the modifications are completed. These modifications would not include culvert widening or conversion of open channels to closed conduits. During the construction period, there would be more exposed earth and grading activity, resulting in a slight increase in pervious surfaces compared to existing conditions. Incorporation of construction BMPs (e.g., installation of temporary stormwater conveyance systems), however, would reduce runoff generated at the construction sites and maintain appropriate stormwater drainage patterns, which would serve to redirect stormwater flows around open construction areas, thus avoiding flooding during construction. Construction BMPs related to stormwater runoff are discussed in more detail in the Eastside Transit Corridor Phase 2 Hydrology and Water Quality Impacts Report. Construction of Alternative 2 would not require or result in the relocation or construction of new or expanded stormwater facilities which could cause significant environmental effects beyond those already addressed as part of the Project. Therefore, construction of Alternative 2 would result in a less than significant impact on stormwater drainage facilities.

Electric Power

Construction of Alternative 2 would consume electricity for construction trailers and small electrically powered construction equipment (most construction equipment is not electrically powered). During construction, it is anticipated that minimal amounts of electrical power would be required. Electricity demand from construction of Alternative 2 would not require any notable relocation or construction of new or expanded power generation facilities which could result in significant environmental effects. Therefore, construction of Alternative 2 would result in a less than significant impact on electric power facilities.

Natural Gas

Construction of Alternative 2 would consume minimal natural gas used for construction equipment. Natural gas consumption during construction would be temporary and intermittent. Construction activities would mostly take place within existing public ROW and no natural gas facilities have been identified in the construction zone that would require relocation. Construction of Alternative 2 would not require or result in any notable relocation or construction of new or expanded natural gas facilities which could cause significant environmental effects. Therefore, construction of Alternative 2 would have a less than significant impact on natural gas facilities.

Telecommunication

Alternative 2 is located in highly urbanized areas of Los Angeles County that are well served by existing phone, cable television, and internet service. Construction of Alternative 2 may require the relocation of telecommunication facilities (e.g., cell towers and 5G-enabled small cell antennas) to accommodate Project elements, such as the LRT guideway and stations. If relocated, the telecommunication facilities would be relocated in close proximity to their previous location. Construction of Alternative 2 would not require or result in any notable expansion of possible relocated telecommunication facilities or construction of new facilities that could cause significant environmental effects. Therefore, construction of Alternative 2 would have a less than significant impact on telecommunication facilities.



Design Option

Atlantic/Pomona Station Option

Construction of Alternative 2 with the Atlantic/Pomona Station Option would have the same effects on utilities service and systems as the base Alternative 2. Construction of Alternative 2 with the Atlantic/Pomona Station Option would not require the expansion of an existing water, wastewater treatment, stormwater, electrical power, or natural gas facility or construction of a new water, wastewater treatment, stormwater, electrical power, or natural gas facility and would result in less than significant impact on water, wastewater treatment, stormwater, and electrical power facilities and no impact on natural gas and telecommunication facilities.

7.1.3 Alternative 3 Atlantic to Greenwood IOS

7.1.3.1 Operational Impacts

Water Facilities

The proposed LRT guideway and stations under Alternative 3 would have a water demand for landscaping irrigation and to supply fire sprinkler systems when/if needed. It is anticipated that the Project elements would result in a slight increase in water use; however, the amount consumed would be significantly less than the projected future capacity and would not have any substantial effect on the water supply. Therefore, operation of Alternative 3 would not require the expansion of an existing facility or construction of a new facility and would result in a less than significant impact on water supply facilities.

Wastewater Treatment Facilities

The proposed LRT stations under Alternative 3 would not have public restrooms and, as a result, would not generate wastewater. Elevators would have emergency ejector pits and underground stations and control rooms at at-grade stations would be equipped with sump pumps/clarifiers that would drain to the sewer in the event of a flood. Any discharges associated with these connections would be subject to a wastewater discharge permit and would be intermittent and irregular. Such irregular discharges, should they be necessary, would not exceed capacity. Therefore, operation of Alternative 3 would not require the expansion of an existing facility or construction of a new facility and would result in a less than significant impact on wastewater treatment facilities.

Stormwater Facilities

The Project is located in an urbanized area that is largely impervious and that has existing storm drain infrastructure. The proposed LRT guideway and stations under Alternative 3 would result in a minimal increase in impervious surfaces, but not to an extent that would lead to increased runoff. The Project elements (e.g., station entrance canopy) would include drainage facilities with adequate slopes to facilitate adequate drainage flow and help avoid localized ponding or flooding during storm events. Therefore, operation of Alternative 3 would not require the expansion of an existing facility or construction of a new facility and would result in a less than significant impact on stormwater drainage facilities.



Electric Power

The proposed LRT guideway and stations under Alternative 3 would consume electricity from traction power and lighting, respectively. The amount consumed would be significantly less than the projected future capacity. For detailed information about energy use, refer to **Section 7.6**. Therefore, Alternative 3 would not require any notable expansion of an existing facility or construction of a new facility and would result in a less than significant impact on electric power facilities during operation.

Natural Gas

The proposed LRT guideway and stations under Alternative 3 would not consume natural gas. Therefore, operation of Alternative 3 would not require the expansion of an existing facility or construction of a new facility and would result in no impact on natural gas facilities.

Telecommunication

Minor telecommunication connections for equipment like emergency phones may be installed at stations and in certain locations along the guideway. However, the proposed LRT guideway and stations under Alternative 3 would not include telecommunication features that would require expansion of existing telecommunications facilities that could result in an environmental impact. Therefore, operation of Alternative 3 would not require the expansion of an existing facility or construction of a new facility and would result in no impact on telecommunication facilities.

Design Options

Atlantic/Pomona Station Option

Operation of Alternative 3 with the Atlantic/Pomona Station Option would have the same effects on utilities service and systems as the base Alternative 3. Therefore, operation of Alternative 3 with the Atlantic/Pomona Station Option would not require the expansion of an existing water, wastewater treatment, stormwater, electrical power, or natural gas facility or construction of a new water, wastewater treatment, stormwater, electrical power, or natural gas facility and would result in less than significant impact on water, wastewater treatment, stormwater, and electrical power facilities and no impact on natural gas and telecommunication facilities.

Montebello At-Grade Option

Operation of Alternative 3 with the Montebello At-Grade Option would have the same effects on utilities service and systems as the base Alternative 3. Therefore, operation of Alternative 3 with the Montebello At-Grade Option would not require the expansion of an existing water, wastewater treatment, stormwater, electrical power, or natural gas facility or construction of a new water, wastewater treatment, stormwater, electrical power, or natural gas facility and would result in a less than significant impact on water, wastewater treatment, stormwater, and electric facilities and no impact on natural gas and telecommunication facilities.



7.1.3.2 Construction Impacts

Construction of Alternative 3 would require relocating, temporarily rerouting, or otherwise avoiding some utility supply lines or other facilities. The construction impacts of utility work (e.g., temporary disruption of service) would be localized, occurring generally at or near street intersections and have been evaluated as part of the Project in context with other physical effects on the environment in this EIR. During the Final Design phase, the Project team would coordinate with utility companies to request information, identify conflict locations between construction activities and existing facilities, and determine if relocation would be required or if the equipment could be protected in-place. Most utilities traversing the alignment would be protected in place with sleeve casing or other methods consistent with the Metro Rail Design Criteria. Preliminary relocation concepts would be developed and presented to each utility owner with affected facilities.

Water Facilities

Alternative 3 is located in highly urbanized areas of Los Angeles County that are well served by existing potable water infrastructure, including existing supply mains, trunk lines and services lines. Construction of Alternative 3 would require minimal water, mostly for dust control, which would not necessitate the relocation or expansion of potable water infrastructure. Water usage during construction would be temporary and intermittent. Water appurtenances (e.g., fire hydrants and water meters) would be relocated and/or adjusted to accommodate project elements, such as the underground configuration and LRT stations. These facilities would be relocated in close proximity to existing facilities. Relocations would require minimal ground disturbance, which has been evaluated as part of the Project in context with other physical effects on the environment in this EIR. Construction of Alternative 3 would not require or result in the relocation or construction of new water facilities which could cause significant environmental effects beyond those already addressed as part of the Project. Therefore, construction of Alternative 3 would result in a less than significant impact on water supply facilities.

Wastewater Facilities

Alternative 3 is located in an urbanized area where existing sewer lines provide service throughout the GSA. Construction activities would generate wastewater through the use of temporary worker restrooms. This would occur intermittently and would not exceed sewer capacity. Alternative 3 would not generate significant wastewater or necessitate the relocation or expansion of wastewater facilities. Sewer service feeds that are connected to the sewer mainline could be relocated if conflicting with Project elements, such as the underground guideway, station foundations, and other subsurface infrastructure related to the Project. Construction of Alternative 3 would not require or result in the relocation or construction of new or expanded wastewater facilities which could cause significant environmental effects. Therefore, construction of Alternative 3 would result in a less than significant impact on wastewater facilities.

Stormwater Facilities

Alternative 3 is located in a developed area with existing stormwater infrastructure that is largely covered with impervious surfaces such as asphalt, concrete, buildings, and other land uses which concentrate storm runoff. Alternative 3 would be constructed mostly along public ROW with and/or adjacent to storm drains and other drainage features (e.g., curbs and gutters, catch basins, and



pipes). Construction activities, such as earthwork, would include relocations and modifications to the existing storm drains and maintenance holes, which would temporarily be taken out of service while the modifications are completed. These modifications would not include culvert widening or conversion of open channels to closed conduits. During the construction period, there would be more exposed earth and grading activity, resulting in a slight increase in pervious surfaces compared to existing conditions. Incorporation of construction BMPs (e.g., installation of temporary stormwater conveyance systems), however, would reduce runoff generated at the construction sites and maintain appropriate stormwater drainage patterns, which would serve to redirect stormwater flows around open construction areas, thus avoiding flooding during construction. Construction BMPs related to stormwater runoff are discussed in more detail in the Eastside Transit Corridor Phase 2 Hydrology and Water Quality Impacts Report. Construction of Alternative 3 would not require or result in the relocation or construction of new or expanded stormwater facilities which could cause significant environmental effects beyond those already addressed as part of the Project. Therefore, construction of Alternative 3 would result in a less than significant impact on stormwater drainage facilities.

Electric Power

Construction of Alternative 3 would consume electricity for construction trailers and small electrically powered construction equipment (most construction equipment is not electrically powered). During construction, it is anticipated that minimal amounts of electrical power would be required. Electricity demand from construction of Alternative 3 would not require any notable relocation or construction of new or expanded power generation facilities which could result in significant environmental effects. Therefore, construction of Alternative 3 would result in a less than significant impact on electric power facilities.

Natural Gas

Construction of Alternative 3 would consume minimal natural gas used for construction equipment. Natural gas consumption during construction would be temporary and intermittent. Construction activities would mostly take place within existing public ROW and no natural gas facilities have been identified in the construction zone that would require relocation. Construction of Alternative 3 would not require or result in any notable relocation or construction of new or expanded natural gas facilities which could cause significant environmental effects. Therefore, construction of Alternative 3 would have a less than significant impact on natural gas facilities.

Telecommunication

Alternative 3 is located in highly urbanized areas of Los Angeles County that are well served by existing phone, cable television, and internet service. Construction of Alternative 3 may require the relocation of telecommunication facilities (e.g., cell towers and 5G-enabled small cell antennas) to accommodate Project elements, such as the LRT guideway and stations. If relocated, the telecommunication facilities would be relocated in close proximity to their previous location. Construction of Alternative 3 would not require or result in any notable expansion of possible relocated telecommunication facilities or construction of new facilities that could cause significant environmental effects. Therefore, construction of Alternative 3 would have a less than significant impact on telecommunication facilities.



Design Options

Atlantic/Pomona Station Option

Construction of Alternative 3 with the Atlantic/Pomona Station Option would have the same effects on utilities service and systems as the base Alternative 3. Construction of Alternative 3 with the Atlantic/Pomona Station Option would not require the expansion of an existing facility or construction of a new facility beyond those already addressed as part of the Project and would result in a less than significant impact on water, wastewater, stormwater, electricity, natural gas, and telecommunication facilities.

Montebello At-Grade Option

Construction of Alternative 3 with the Montebello At-Grade Option would have the same effects on utilities service and systems as the base Alternative 3. Therefore, construction Alternative 3 with the Montebello At-Grade Option would not require the expansion of an existing facility or construction of a new facility beyond those already addressed as part of the Project and would result in a less than significant impact on water, wastewater, stormwater, electricity, natural gas, and telecommunication facilities during construction.

7.1.4 Maintenance and Storage Facilities

7.1.4.1 Operational Impacts

7.1.4.1.1 Commerce MSF

Water Facilities

During operations, the Commerce MSF site option would consume water for landscaping irrigation, vehicle washing, and typical employee breakroom/kitchen uses. It is anticipated that the Project elements would result in a slight increase in water use; however, the amount consumed would be significantly less than the projected future capacity and would not have any substantial effect on the water supply. Therefore, operation of the Commerce MSF site option would not require any notable expansion of an existing facility or construction of a new facility and would result in a less than significant impact on water supply facilities.

Wastewater Treatment Facilities

During operations, the Commerce MSF site option would include employee restrooms and, as a result, would generate wastewater. However, it is anticipated that the generation of wastewater would be minimal and significantly less than the projected future capacity. Therefore, operation of the Commerce MSF site option would not require any notable expansion of an existing facility or construction of a new facility and would result in a less than significant impact on wastewater treatment facilities.



Stormwater Facilities

During operations, the Commerce MSF site option would result in a minimal increase in impervious surfaces, but not to an extent that would lead to increased runoff. Project elements (e.g., office and storage facilities) would include drainage facilities with slopes to facilitate adequate drainage flow and help avoid localized ponding or flooding during storm events. Therefore, operation of the Commerce MSF site option would not require any notable expansion of an existing facility or construction of a new facility and would result in a less than significant impact on stormwater drainage facilities.

Electric Power

During operations, the Commerce MSF site option would consume electricity from traction power, lighting, and powering of maintenance equipment. The amount consumed would be significantly less than the projected future capacity. For detailed information about energy use, refer to **Section 7.6**. Therefore, operation of the Commerce MSF site option would not require any notable expansion of an existing facility or construction of a new facility and would result in a less than significant impact on electric power facilities. Further, opportunities for solar PV arrays on roof and parking lot surfaces would be available. This would potentially offset some electric power demand.

Natural Gas

During operations, the Commerce MSF site option could consume natural gas for routine maintenance activities and heating, if the required equipment is fueled by natural gas instead of electricity. The amount consumed would be significantly less than the projected future capacity. Therefore, operation of the Commerce MSF site option would not require any notable expansion of an existing facility or construction of a new facility and would result in no impact on natural gas facilities.

Telecommunication

During operations, the Commerce MSF site option would include telecommunications infrastructure (e.g., server rooms, network equipment, cabling systems, intercom systems, phones). However, operation of the Commerce MSF site option would not require any notable expansion of an existing facility or construction of a new facility (e.g., cell towers and 5G-enabled small cell antennas) and would result in a less than significant impact on telecommunication facilities.

7.1.4.1.2 Montebello MSF

Water Facilities

During operations, the Montebello MSF site option would consume water for landscaping irrigation, vehicle washing, and typical employee breakroom/kitchen uses. It is anticipated that the Project elements would result in a slight increase in water use; however, the amount consumed would be significantly less than the projected future capacity and would not have any substantial effect on the water supply. Therefore, operation of the Montebello MSF site option would not require any notable expansion of an existing facility or construction of a new facility and would result in a less than significant impact on water supply facilities.



Wastewater Treatment Facilities

During operations, the Montebello MSF site option would include employee restrooms and, as a result, would generate wastewater. However, it is anticipated that the generation of wastewater would be minimal and significantly less than the projected future capacity. Therefore, operation of the Montebello MSF site option would not require any notable expansion of an existing facility or construction of a new facility and would result in a less than significant impact on wastewater treatment facilities.

Stormwater Facilities

During operations, the Montebello MSF site option would result in a minimal increase in impervious surfaces, but not to an extent that would lead to increased runoff. Project elements (e.g., office and storage facilities) would include drainage facilities with slopes to facilitate adequate drainage flow and help avoid localized ponding or flooding during storm events. Therefore, operation of the Montebello MSF site option would not require any notable expansion of an existing facility or construction of a new facility and would result in a less than significant impact on stormwater drainage facilities.

Electric Power

During operations, the Montebello MSF site option would consume electricity from traction power, lighting, and powering of maintenance equipment. The amount consumed would be significantly less than the projected future capacity. Therefore, operation of the Montebello MSF site option would not require any notable expansion of an existing facility or construction of a new facility and would result in a less than significant impact on electric power facilities. Further, opportunities for solar PV arrays on roof and parking lot surfaces would be available. This would potentially offset some electric power demand.

Natural Gas

During operations, the Montebello MSF site option could consume natural gas for routine maintenance activities and heating, if the required equipment is fueled by natural gas instead of electricity. The amount consumed would be significantly less than the projected future capacity. Therefore, operation of the Montebello MSF site option would not require any notable expansion of an existing facility or construction of a new facility and would result in no impact on natural gas facilities during operation.

Telecommunication

During operations, the Montebello MSF site option would include telecommunications infrastructure (e.g., server rooms, network equipment, cabling systems, intercom systems, phones). However, operation of the Montebello MSF site option would not require any notable expansion of an existing facility or construction of a new facility (e.g., cell towers and 5G-enabled small cell antennas) and would result in a less than significant impact on telecommunication facilities.



Design Option

Montebello MSF Grade Option

Operation of the Montebello MSF At-Grade Option would have the same effects on utilities service and systems as the base Montebello MSF site option. Therefore, operation of the Montebello MSF At-Grade Option would not require any notable expansion of an existing facility or construction of a new facility and would result in less than significant impact on water, wastewater, stormwater, electricity and telecommunication facilities and no impact on natural gas facilities.

7.1.4.2 Construction Impacts

7.1.4.2.1 Commerce MSF

During construction, the Commerce MSF site option would require new utility connections (water, sewer, electrical service, cable conduit, telephone, etc.) to existing area utility service. For water facilities, construction would include the relocation and installation of new domestic water and fire water pipelines. Minimal water would be required during construction, mostly for dust control. For wastewater facilities, new sewer lines would also connect to the existing municipal sewer system. Construction activities would not generate any wastewater requiring new or expanded wastewater treatment. For stormwater facilities, new stormwater piping and drains would be constructed. Construction would not create or contribute runoff water that would exceed the capacity of the stormwater drainage system. Construction activities would maintain the existing drainage patterns. Construction of Alternative 1 would consume electricity for construction trailers and small electrically powered construction equipment (most construction equipment is not electrically powered). During construction, it is anticipated that minimal amounts of electrical power would be required. Construction would consume minimal, if any, natural gas used for construction equipment. Natural gas consumption during construction would be temporary and intermittent. Construction would also include the relocation and installation of electric lines and gas pipelines to accommodate the site layout. Installation and relocation of utilities to accommodate and serve the MSF have been evaluated as part of the Project in context with other physical effects on the environment in this EIR. Therefore, construction of the Commerce MSF site option would not require or result in any notable relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities beyond those already addressed as part of the Project. Construction of the Commerce MSF site option would result in a less than significant impact on these facilities.

7.1.4.2.2 Montebello MSF

During construction, the Montebello MSF site option would require new utility connections (water, sewer, electrical service, cable conduit, telephone, etc.) to existing area utility service. For water facilities, construction would include the relocation and installation of new domestic water and fire water pipelines. Minimal water would be required during construction, mostly for dust control. For wastewater facilities, new sewer lines would also connect to the existing municipal sewer system. Construction activities would not generate any wastewater requiring new or expanded wastewater treatment. For stormwater facilities, new stormwater piping and drains would be constructed. Construction would not create or contribute runoff water that would exceed the capacity of the stormwater drainage system. Construction activities would maintain the existing drainage patterns.



Construction of Alternative 1 would consume electricity for construction trailers and small electrically powered construction equipment (most construction equipment is not electrically powered). During construction, it is anticipated that minimal amounts of electrical power would be required. Construction would consume minimal, if any, natural gas used for construction equipment. Natural gas consumption during construction would be temporary and intermittent. Construction would also include the relocation and installation of electric lines and gas pipelines to accommodate the site layout. Installation and relocation of utilities to accommodate and serve the MSF have been evaluated as part of the Project in context with other physical effects on the environment in this EIR. Therefore, construction of the Montebello MSF site option would not require or result in any notable relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities beyond those already addressed as part of the Project. Construction of the Montebello MSF site option would result in a less than significant impact on these facilities.

Design Option

Montebello MSF At-Grade Option

Construction of the Montebello MSF At-Grade Option would have the same effects on utilities service and systems as the base Montebello MSF site option. Therefore, construction of the Montebello MSF At-Grade Option would not require any notable expansion of an existing facility or construction of a new facility beyond those already addressed as part of the Project and would result in less than significant impact on water, wastewater, stormwater, electricity and natural gas, and telecommunication facilities.

7.2 Impact UTL-2: Water Supplies

Impact UTL -2: Would a Build Alternative have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

7.2.1 Alternative 1 Washington Boulevard

7.2.1.1 Operational Impacts

Operation of Alternative 1 would result in a minimal increase in municipal water use. Operational activities or features that would require long-term, permanent sources of water use may include, but would not be limited to fire water systems and landscape irrigation. This water demand would be a slight increase and would not affect water supplies. Further, any water use would be in compliance with Metro's Water Use and Conservation Policy, which specifies that water efficiency and conservation methods would be adopted and maintained. Operation of Alternative 1 would not significantly deplete municipal water supplies during normal, dry, or multiple dry years. Therefore, operation of Alternative 1 would have a less than significant impact on water supplies.



Design Options

Atlantic/Pomona Station Option

Under Alternative 1 with the Atlantic/Pomona Station Option, operational activities or features that would require long-term, permanent sources of municipal water use may include, but would not be limited to fire water systems and landscape irrigation. This water demand would be a slight increase and would not affect water supplies. Additionally, any water use would comply with Metro's Water Use and Conservation Policy. Operational activities would not significantly deplete municipal water supplies during normal, dry, or multiple dry years. Therefore, operation of Alternative 1 with the Atlantic/Pomona Station Option would have a less than significant impact on water supplies.

Montebello At-Grade Option

Operation of Alternative 1 with the Montebello At-Grade Option would have the same effects on water supplies as the base Alternative 1. Operational activities or features that would require long-term, permanent sources of municipal water use may include, but would not be limited to fire water systems and landscape irrigation. This water demand would be a slight increase and would not affect water supplies. Additionally, any water use would be in compliance with Metro's Water Use and Conservation Policy. Operation of Alternative 1 with the Montebello At-Grade Option would not significantly deplete municipal water supplies during normal, dry, or multiple dry years. Therefore, operation of Alternative 1 with the Montebello At-Grade Option would have a less than significant impact on water supplies.

7.2.1.2 Construction Impacts

Under Alternative 1, construction activities would not result in the use of notable amounts of municipal water resources. Water would be used for dust suppression of exposed soils during excavation and grading. Water used for dust control would likely be provided by water trucks that are filled off-site and typically use recycled water. The water use during construction would be temporary and intermittent. The amount of water used would vary depending on the amount of exposed soil requiring dust suppression and the weather conditions when soil is exposed (e.g., increased frequency of wetting exposed soils would be required during hot and dry conditions as opposed to a lower frequency during cool and moist conditions). Therefore, the amount of water used during construction would be highly variable; however, overall short-term use would require minimal water supplies when compared to regional water use associated with land use developments. Further, any water use would be in compliance with Metro's Water Use and Conservation Policy, which limits use of potable water during construction when feasible. Construction-related water use would not necessitate new water deliveries to the region. Construction activities would not significantly deplete water supplies during normal, dry, or multiple dry years. Therefore, construction of Alternative 1 would have a less than significant impact on water supplies.

Design Options

Atlantic/Pomona Station Option

Construction of Alternative 1 with the Atlantic/Pomona Station Option would not result in the use of notable amounts of municipal water resources. A short-term use of minimal water supplies would be



required during construction activities (e.g., for dust control), which would not necessitate new water deliveries to the region. Construction activities would not significantly deplete water supplies during normal, dry, or multiple dry years. Therefore, construction of Alternative 1 with the Atlantic/Pomona Station Option would have a less than significant impact on water supplies.

Montebello At-Grade Option

Construction of Alternative 1 with the Montebello At-Grade Option would have the same effects on water supplies as the base Alternative 1. Construction activities would not result in the use of notable amounts of municipal water resources. A short-term use of minimal water supplies would be required during construction activities (e.g., for dust control), which would not necessitate new water deliveries to the region. Construction activities would not significantly deplete water supplies during normal, dry, or multiple dry years. Therefore, construction of Alternative 1 with the Montebello At-Grade Option would have a less than significant impact on water supplies.

7.2.2 Alternative 2 Atlantic to Commerce/Citadel IOS

7.2.2.1 Operational Impacts

Operation of Alternative 2 would result in a minimal increase in municipal water use. Operational activities or features that would require long-term, permanent sources of water use may include, but would not be limited to fire water systems and landscape irrigation. This water demand would be a slight increase and would not affect water supplies. Further, any water use would be in compliance with Metro's Water Use and Conservation Policy, which specifies that water efficiency and conservation methods would be adopted and maintained. Operation of Alternative 2 would not significantly deplete municipal water supplies during normal, dry, or multiple dry years. Therefore, operation of Alternative 2 would have a less than significant impact on water supplies.

Design Options

Atlantic/Pomona Station Option

Under Alternative 2 with the Atlantic/Pomona Station Option, operational activities or features that would require long-term, permanent sources of municipal water use may include, but would not be limited to fire water systems and landscape irrigation. This water demand would be a slight increase and would not affect water supplies. Additionally, any water use would comply with Metro's Water Use and Conservation Policy. Operational activities would not significantly deplete municipal water supplies during normal, dry, or multiple dry years. Therefore, operation of Alternative 2 with the Atlantic/Pomona Station Option would have a less than significant impact on water supplies.

7.2.2.2 Construction Impacts

Under Alternative 2, construction activities would not result in the use of notable amounts of municipal water resources. Water would be used for dust suppression of exposed soils during



excavation and grading. Water used for dust control would likely be provided by water trucks that are filled off-site and typically use recycled water. The water use during construction would be temporary and intermittent. The amount of water used would vary depending on the amount of exposed soil requiring dust suppression and the weather conditions when soil is exposed (e.g., increased frequency of wetting exposed soils would be required during hot and dry conditions as opposed to a lower frequency during cool and moist conditions). Therefore, the amount of water used during construction would be highly variable; however, overall short-term use would require minimal water supplies when compared to regional water use associated with land use developments. Further, any water use would be in compliance with Metro's Water Use and Conservation Policy, which limits use of potable water during construction when feasible. Construction-related water use would not necessitate new water deliveries to the region. Construction activities would not significantly deplete water supplies during normal, dry, or multiple dry years. Therefore, construction of Alternative 2 would have a less than significant impact on water supplies.

Design Options

Atlantic/Pomona Station Option

Construction of Alternative 1 with the Atlantic/Pomona Station Option would not result in the use of notable amounts of municipal water resources. A short-term use of minimal water supplies would be required during construction activities (e.g., for dust control), which would not necessitate new water deliveries to the region. Construction activities would not significantly deplete water supplies during normal, dry, or multiple dry years. Therefore, construction of Alternative 1 with the Atlantic/Pomona Station Option would have a less than significant impact on water supplies.

7.2.3 Alternative 3 Atlantic to Greenwood IOS

7.2.3.1 Operational Impacts

Operation of Alternative 3 would result in a minimal increase in municipal water use. Operational activities or features that would require long-term, permanent sources of water use may include, but would not be limited to fire water systems and landscape irrigation. This water demand would be a slight increase and would not affect water supplies. Further, any water use would be in compliance with Metro's Water Use and Conservation Policy, which specifies that water efficiency and conservation methods would be adopted and maintained. Operation of Alternative 3 would not significantly deplete municipal water supplies during normal, dry, or multiple dry years. Therefore, operation of Alternative 3 would have a less than significant impact on water supplies.

Design Options

Atlantic/Pomona Station Option

Under Alternative 3 with the Atlantic/Pomona Station Option, operational activities or features that would require long-term, permanent sources of municipal water use may include, but would not be limited to fire water systems and landscape irrigation. This water demand would be a slight increase and would not affect water supplies. Additionally, any water use would comply with Metro's Water Use and Conservation Policy. Operational activities would not significantly deplete municipal water



supplies during normal, dry, or multiple dry years. Therefore, operation of Alternative 3 with the Atlantic/Pomona Station Option would have a less than significant impact on water supplies.

Montebello At-Grade Option

Operation of Alternative 3 with the Montebello At-Grade Option would have the same effects on water supplies as the base Alternative 3. Operational activities or features that would require long-term, permanent sources of municipal water use may include, but would not be limited to fire water systems and landscape irrigation. This water demand would be a slight increase and would not affect water supplies. Additionally, any water use would be in compliance with Metro's Water Use and Conservation Policy. Operation of Alternative 3 with the Montebello At-Grade Option would not significantly deplete municipal water supplies during normal, dry, or multiple dry years. Therefore, operation of Alternative 3 with the Montebello At-Grade Option would have a less than significant impact on water supplies.

7.2.3.2 Construction Impacts

Under Alternative 3, construction activities would not result in the use of significant amounts of municipal water resources. Water would be used for dust suppression of exposed soils during excavation and grading. Water used for dust control would likely be provided by water trucks that are filled off-site and typically use recycled water. The water use during construction would be temporary and intermittent. The amount of water used would vary depending on the amount of exposed soil requiring dust suppression and the weather conditions when soil is exposed (e.g., increased frequency of wetting exposed soils would be required during hot and dry conditions as opposed to a lower frequency during cool and moist conditions). Therefore, the amount of water used during construction would be highly variable; however, overall short-term use would require minimal water supplies when compared to regional water use associated with land use developments. Further, any water use would be in compliance with Metro's Water Use and Conservation Policy, which limits use of potable water during construction when feasible. Construction-related water use would not necessitate new water deliveries to the region. Construction activities would not significantly deplete water supplies during normal, dry, or multiple dry years. Therefore, construction of Alternative 3 would have a less than significant impact on water supplies.

Design Options

Atlantic/Pomona Station Option

Construction of Alternative 3 with the Atlantic/Pomona Station Option would not result in the use of notable amounts of municipal water resources. A short-term use of minimal water supplies would be required during construction activities (e.g., for dust control), which would not necessitate new water deliveries to the region. Construction activities would not significantly deplete water supplies during normal, dry, or multiple dry years. Therefore, construction of Alternative 3 with the Atlantic/Pomona Station Option would have a less than significant impact on water supplies.

Montebello At-Grade Option

Construction of Alternative 3 with the Montebello At-Grade Option would have the same effects on water supplies as the base Alternative 3. Construction activities would not result in the use of notable



amounts of municipal water resources. A short-term use of minimal water supplies would be required during construction activities (e.g., for dust control), which would not necessitate new water deliveries to the region. Construction activities would not significantly deplete water supplies during normal, dry, or multiple dry years. Therefore, construction of Alternative 3 with the Montebello At-Grade Option would have a less than significant impact on water supplies.

7.2.4 Maintenance and Storage Facilities

7.2.4.1 Operational Impacts

7.2.4.1.1 Commerce MSF

Operation of the Commerce MSF site option would result in a minor increase in municipal water use. Operational activities or features that would require long-term, permanent sources of water use may include, but would not be limited to fire water systems, employee breakroom and restrooms, and vehicle washing and rinsing. The associated buildings would, at a minimum, comply with current state and city codes, including the California Plumbing Code and the California Green Building Code, which mandate installation of water conserving plumbing fixtures and fittings (e.g., water efficient toilets). Additionally, any water use would be in compliance with Metro's Water Use and Conservation Policy, which specifies that water efficiency and conservation methods would be adopted and maintained including for pressure washing activities. Operation of the Commerce MSF site option would not significantly deplete municipal water supplies during normal, dry, or multiple dry years. Therefore, operation of the Commerce MSF site option would have less than significant impacts on water supplies.

7.2.4.1.2 Montebello MSF

Operation of the Montebello MSF site option would result in a minor increase in municipal water use. Operational activities or features that would require long-term, permanent sources of water use may include, but would not be limited to fire water systems, employee breakroom and restrooms, and vehicle washing and rinsing. The associated buildings would, at a minimum, comply with current state and city codes, including the California Plumbing Code and the California Green Building Code, which mandate installation of water conserving plumbing fixtures and fittings (e.g., water efficient toilets). Additionally, any water use would be in compliance with Metro's Water Use and Conservation Policy, which specifies that water efficiency and conservation methods would be adopted and maintained including for pressure washing activities. Operation of the Montebello MSF site option would not significantly deplete municipal water supplies during normal, dry, or multiple dry years. Therefore, operation of the Montebello MSF site option would have less than significant impacts on water supplies.

Design Option

Montebello MSF At-Grade Option

Operation of the Montebello MSF At-Grade Option would have the same effects on water supplies as the base Montebello MSF site option. Therefore, operation the Montebello MSF At-Grade Option



would not significantly deplete municipal water supplies during normal, dry, or multiple dry years and would have less than significant impacts on water supplies.

7.2.4.2 Construction Impacts

7.2.4.2.1 Commerce MSF

Construction of the Commerce MSF site option would not result in the use of significant amounts of municipal water resources. During the construction phase, water would be used for dust suppression of exposed soils during excavation and grading), which would not necessitate new water deliveries to the region. Water used for dust suppression would likely be provided by water trucks that are filled off-site and typically use recycled water. The water use during construction would be temporary and intermittent. The amount of water used would vary depending on the amount of exposed soil requiring dust suppression and the weather conditions when soil is exposed (e.g., increased frequency of wetting exposed soils would be required during hot and dry conditions as opposed to a lower frequency during cool and moist conditions). Temporary construction activities would not significantly deplete water supplies during normal, dry, or multiple dry years. Therefore, construction of the Commerce MSF site option would have less than significant impacts on water supplies.

7.2.4.2.2 Montebello MSF

Construction of the Montebello MSF site option would not result in the use of significant amounts of municipal water resources. During the construction phase, water would be used for dust suppression of exposed soils during excavation and grading), which would not necessitate new water deliveries to the region. Water used for dust suppression would likely be provided by water trucks that are filled off-site and typically use recycled water. The water use during construction would be temporary and intermittent. The amount of water used would vary depending on the amount of exposed soil requiring dust suppression and the weather conditions when soil is exposed (e.g., increased frequency of wetting exposed soils would be required during hot and dry conditions as opposed to a lower frequency during cool and moist conditions). Temporary construction activities would not significantly deplete water supplies during normal, dry, or multiple dry years. Therefore, construction of the Montebello MSF site option would have less than significant impacts on water supplies.

Design Option

Montebello MSF At-Grade Option

Construction of the Montebello MSF At-Grade Option would have the same effects on water supplies as the base Montebello MSF site option. A short-term use of minimal municipal water supplies would be required during construction activities (e.g., for dust control), which would not necessitate new water deliveries to the region. Construction activities would not significantly deplete water supplies during normal, dry, or multiple dry years. Therefore, construction of the Montebello MSF At-Grade Option would have less than significant impacts on water supplies.



7.3 Impact UTL-3: Wastewater

Impact UTL-3: Would a Build Alternative result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project’s projected demand in addition to the provider’s existing commitments?

7.3.1 Alternative 1 Washington Boulevard

7.3.1.1 Operational Impacts

Alternative 1 does not include a new source of wastewater and would not directly generate population growth that would require wastewater services. Restrooms would not be provided at LRT stations. Elevators would have emergency ejector pits and underground stations and control rooms at at-grade stations would be equipped with sump pumps/clarifiers that would drain to the sewer in the event of a flood. Any discharges associated with these connections would be subject to a wastewater discharge permit and would be intermittent and irregular. Such irregular discharges, should they be necessary, would not exceed capacity. Therefore, operation of Alternative 1 would result in a less than significant impact on wastewater capacity.

Design Options

Atlantic/Pomona Station Option

Operation of Alternative 1 with the Atlantic/Pomona Station Option would not include a new source of wastewater. As with the base Alternative 1, elevators would have emergency ejector pits and underground stations and control rooms at at-grade stations would be equipped with sump pumps/clarifiers that would drain to the sewer in the event of a flood. Any discharges associated with these connections would be subject to a wastewater discharge permit and would be intermittent and irregular. Such irregular discharges, should they be necessary, would not exceed capacity. Therefore, operation of Alternative 1 with the Atlantic/Pomona Station Option would result in a less than significant impact on wastewater capacity.

Montebello At-Grade Option

Operation of Alternative 1 with the Montebello At-Grade Option would have the same effects on wastewater generation as the base Alternative 1. It would not include a new source of wastewater. As with the base Alternative 1, elevators would have emergency ejector pits and underground stations and control rooms at at-grade stations would be equipped with sump pumps/clarifiers that would drain to the sewer in the event of a flood. Any discharges associated with these connections would be subject to a wastewater discharge permit and would be intermittent and irregular. Such irregular discharges, should they be necessary, would not exceed capacity. Therefore, operation of Alternative 1 with the Montebello At-Grade Option would result in a less than significant impact on wastewater capacity. Therefore, operation of Alternative 1 with the Montebello At-Grade Option would result in a less than significant impact on wastewater capacity.



7.3.1.2 Construction Impacts

Alternative 1 would generate wastewater during construction through the use of temporary worker restrooms. This would occur intermittently and would not exceed sewer capacity. Wastewater generation would be negligible in relation to the size and capacity of the wastewater treatment system and would not overburden the system. Therefore, construction of Alternative 1 would result in a less than significant impact on wastewater capacity.

Design Options

Atlantic/Pomona Station Option

Construction of Alternative 1 with the Atlantic/Pomona Station Option would have the same effects on wastewater generation as the base Alternative 1. Construction of Alternative 1 with the Atlantic/Pomona Station Option would generate wastewater through the use of temporary worker restrooms. Wastewater generation would be negligible in relation to the size and capacity of the wastewater treatment system and would not overburden the system. Therefore, construction of Alternative 1 with the Atlantic/Pomona Station Option would result in a less than significant impact on wastewater capacity.

Montebello At-Grade Option

Construction of Alternative 1 with the Montebello At-Grade Option would have the same effects on wastewater generation as the base Alternative 1. Wastewater generation would be negligible in relation to the size and capacity of the wastewater treatment system and would not overburden the system. Therefore, construction of Alternative 1 with the Montebello At-Grade Option would result in a less than significant impact on wastewater capacity.

7.3.2 Alternative 2 Atlantic to Commerce/Citadel IOS

7.3.2.1 Operational Impacts

Alternative 2 does not include a new source of wastewater and would not directly generate population growth that would require wastewater services. Restrooms would not be provided at LRT stations. Elevators would have emergency ejector pits and underground stations and control rooms at at-grade stations would be equipped with sump pumps/clarifiers that would drain to the sewer in the event of a flood. Any discharges associated with these connections would be subject to a wastewater discharge permit and would be intermittent and irregular. Such irregular discharges, should they be necessary, would not exceed capacity. Therefore, operation of Alternative 2 would result in a less than significant impact on wastewater capacity.



Design Options

Atlantic/Pomona Station Option

Operation of Alternative 2 with the Atlantic/Pomona Station Option would not include a new source of wastewater and would have the same effects on wastewater as the base Alternative 2. Therefore, operation of Alternative 2 would result in a less than significant impact on wastewater capacity.

7.3.2.2 Construction Impacts

Alternative 2 would generate wastewater during construction through the use of temporary worker restrooms. This would occur intermittently and would not exceed sewer capacity. Wastewater generation would be negligible in relation to the size and capacity of the wastewater treatment system and would not overburden the system. Therefore, construction of Alternative 2 would result in a less than significant impact on wastewater capacity.

Design Options

Atlantic/Pomona Station Option

Construction of Alternative 2 with the Atlantic/Pomona Station Option would have the same effects on wastewater generation as the base Alternative 2. Construction of Alternative 1 with the Atlantic/Pomona Station Option would generate wastewater through the use of temporary worker restrooms. Wastewater generation would be negligible in relation to the size and capacity of the wastewater treatment system and would not overburden the system. Therefore, construction of Alternative 2 with the Atlantic/Pomona Station Option would result in a less than significant impact on wastewater capacity.

7.3.3 Alternative 3 Atlantic to Greenwood IOS

7.3.3.1 Operational Impacts

Alternative 3 does not include a new source of wastewater and would not directly generate population growth that would require wastewater services. Restrooms would not be provided at LRT stations. Elevators would have emergency ejector pits and underground stations and control rooms at at-grade stations would be equipped with sump pumps/clarifiers that would drain to the sewer in the event of a flood. Any discharges associated with these connections would be subject to a wastewater discharge permit and would be intermittent and irregular. Such irregular discharges, should they be necessary, would not exceed capacity. Therefore, operation of Alternative 3 would result in a less than significant impact on wastewater capacity.



Design Options

Atlantic/Pomona Station Option

Operation of Alternative 3 with the Atlantic/Pomona Station Option would have the same effects on wastewater generation as the base Alternative 3. It would not include a new source of wastewater. Therefore, operation of Alternative 3 with the Montebello At-Grade Option would result in a less than significant impact on wastewater capacity.

Montebello At-Grade Option

Operation of Alternative 3 with the Montebello At-Grade Option would have the same effects on wastewater generation as the base Alternative 3. It would not include a new source of wastewater. Therefore, operation of Alternative 3 with the Montebello At-Grade Option would result in a less than significant impact on wastewater capacity.

7.3.3.2 Construction Impacts

Alternative 3 would generate wastewater during construction through the use of temporary worker restrooms. This would occur intermittently and would not exceed sewer capacity. Wastewater generation would be negligible in relation to the size and capacity of the wastewater treatment system and would not overburden the system. Therefore, construction of Alternative 3 would result in a less than significant impact on wastewater capacity.

Design Options

Atlantic/Pomona Station Option

Construction of Alternative 3 with the Atlantic/Pomona Station Option would have the same effects on wastewater generation as the base Alternative 3. Construction of Alternative 3 with the Atlantic/Pomona Station Option would generate wastewater through the use of temporary worker restrooms. Wastewater generation would be negligible in relation to the size and capacity of the wastewater treatment system and would not overburden the system. Therefore, construction of Alternative 3 with the Atlantic/Pomona Station Option would result in a less than significant impact on wastewater capacity.

Montebello At-Grade Option

Construction of Alternative 3 with the Montebello At-Grade Option would have the same effects on wastewater generation as the base Alternative 3. Wastewater generation would be negligible in relation to the size and capacity of the wastewater treatment system and would not overburden the system. Therefore, construction of Alternative 3 with the Montebello At-Grade Option would result in a less than significant impact on wastewater capacity.



7.3.4 Maintenance and Storage Facilities

7.3.4.1 Operational Impacts

7.3.4.1.1 Commerce MSF

The Commerce MSF site option would result in an increase in potable water use and additional wastewater-generating facilities (e.g., sinks, toilets, vehicle washing). The quantity of wastewater generated by the Commerce MSF site option is anticipated to increase slightly or to be similar as currently generated by the existing industrial land uses. The Commerce MSF site option would include new efficient plumbing that would comply with water conservation requirements, such as CALGreen and the California Plumbing Code, which mandate installation of water conserving plumbing fixtures and fittings (e.g., low-flow water fixtures and high-efficiency toilets and urinals). This would reduce the amount of wastewater entering the sewer system. In addition, the Commerce MSF site option would be required to conform to all applicable wastewater standards set forth by the Los Angeles Regional Water Quality Control Board (LARWQCB) and would not require in the construction of new wastewater treatment facilities or expansion of existing facilities. Therefore, operation of the Commerce MSF site option would result in a less than significant impact on wastewater capacity.

7.3.4.1.2 Montebello MSF

The Montebello MSF site option would result in an increase in potable water use and additional wastewater-generating facilities (e.g., sinks, toilets, vehicle washing). The quantity of wastewater generated by the Montebello MSF site option is anticipated to increase slightly or to be similar as currently generated by the existing industrial land uses. The Montebello MSF site option would include new efficient plumbing that would comply with water conservation requirements, such as CALGreen and the California Plumbing Code, which mandate installation of water conserving plumbing fixtures and fittings (e.g., low-flow water fixtures and high-efficiency toilets and urinals). This would reduce the amount of wastewater entering the sewer system. In addition, the Montebello MSF site option would be required to conform to all applicable wastewater standards set forth by the LARWQCB and would not result in the construction of new wastewater treatment facilities or expansion of existing facilities. Therefore, operation of the Montebello MSF site option would result in a less than significant impact on wastewater capacity.

Design Option

Montebello MSF At-Grade Option

Operation of the Montebello MSF At-Grade Option would result in the same increase in potable water use and additional wastewater-generating facilities (e.g., sinks, toilets, vehicle washing) as the base Montebello site option. Therefore, operation of the Montebello MSF site option with the Montebello MSF At-Grade Option would result in the same impacts on wastewater capacity as the base Montebello MSF site option and operation would result in a less than significant impact on wastewater capacity.



7.3.4.2 Construction Impacts

7.3.4.2.1 Commerce MSF

The Commerce MSF site option would generate wastewater during construction through the use of temporary worker restrooms. Wastewater generation would be negligible in relation to the size and capacity of the wastewater treatment system and would not overburden the system. Therefore, construction of the Commerce MSF site option would result in a less than significant impact on wastewater capacity.

7.3.4.2.2 Montebello MSF

The Montebello MSF site option would generate wastewater during construction through the use of temporary worker restrooms. Wastewater generation would be negligible in relation to the size and capacity of the wastewater treatment system and would not overburden the system. Therefore, construction of the Montebello MSF site option would result in a less than significant impact on wastewater capacity.

Design Option

Montebello MSF At-Grade Option

Construction of the Montebello MSF At-Grade Option would generate wastewater through the use of temporary worker restrooms. Wastewater generation would be negligible in relation to the size and capacity of the wastewater treatment system and would not overburden the system. Therefore, construction of the Montebello MSF At-Grade Option would result in a less than significant impact on wastewater capacity.

7.4 Impact UTL-4: Solid Waste

Impact UTL -4: Would a Build Alternative generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

7.4.1 Alternative 1 Washington Boulevard

7.4.1.1 Operational Impacts

Alternative 1 does not include a direct operational source of solid waste. Indirectly, solid waste would be generated by transit users. Stations would include waste bins and recycle bins. The disposal of solid waste collected at each station would have no notable potential to affect landfill capacity or impair attainment of solid waste reduction goals. Operation of Alternative 1 would not result in a net increase in project-related solid waste generation in excess of state or local standards, outlined in **Section 3.1.2** and **Section 3.1.3**, respectively, or in excess of the capacity of the local infrastructure, or otherwise



impair the attainment of solid waste reduction goals. Therefore, operation of Alternative 1 would result in a less than significant impact related to solid waste generation.

Design Options

Atlantic/Pomona Station Option

Operation of Alternative 1 with the Atlantic/Pomona Station Option would have the same effects on solid waste generation as the base Alternative 1 and not include a direct source of solid waste. Indirect solid waste generated by transit users would be collected in waste and recycle bins and would have no notable potential to affect landfill capacity or impair attainment of solid waste reduction goals. Therefore, operation of Alternative 1 with the Atlantic/Pomona Station Option would result in a less than significant impact related to solid waste generation.

Montebello At-Grade Option

Operation of Alternative 1 with the Montebello At-Grade Option would have the same effects on solid waste generation as the base Alternative 1. Therefore, operation of Alternative 1 with the Montebello At-Grade Option would result in a less than significant impact related to solid waste generation.

7.4.1.2 Construction Impacts

The construction of Alternative 1 would involve the generation and removal of solid waste to accommodate the various demolition and construction activities. At the proposed LRT station areas, generated waste may include bulky, heavy materials such as concrete, wood, metals, glass, and building components. For construction of underground and surface elements, the removal of debris (e.g., soil, asphalt, concrete) is anticipated. This would result in an incremental and temporary increase in solid waste disposal at landfills and other waste disposal facilities. While it is anticipated that some excavated soil would be reused on-site, the remaining materials would be hauled off-site for disposal at any of the area landfills that accept and/or recycle construction/demolition materials.

As discussed in the Eastside Transit Corridor Phase 2 Hazardous Materials Impacts Report, the existing buildings to be demolished, to accommodate the construction of the LRT station areas, may contain asbestos and lead-based paint. The Department of Toxic Substances Control require the abatement of asbestos-containing materials and removal or stabilization of lead-based paint prior to demolition. Contaminated soils and hazardous building materials would be disposed of at a local landfill, such as Azusa Land Reclamation, Antelope Valley Public, Clean Harbors Buttonwillow, or Lancaster landfills, which are authorized to accept certain types of contaminated soils (e.g., petroleum hydrocarbon-impacted soils with hydrocarbon concentrations below specified limits) and asbestos-containing debris. These materials and wastes would be handled, transported, and disposed of in accordance with applicable laws and regulations by a certified hazardous materials handler.

There would be adequate capacity available in Los Angeles County to handle anticipated solid waste generation during the construction period and, thus, temporary solid waste generation associated with construction of Alternative 1 would not create a need for additional solid waste disposal facilities. In addition, the construction contractor would comply with AB 939, which requires a Solid Waste Diversion Program and diversion of at least 50 percent of the solid waste from landfills to recycling



facilities; therefore, the construction of Alternative 1 would not conflict with policies and objectives to reduce the amount of solid waste disposed in landfills.

Construction of Alternative 1 would not generate solid waste in excess of state or local standards, outlined in **Section 3.1.2** and **Section 3.1.3**, respectively, or in excess of the capacity of the local infrastructure, or otherwise impair the attainment of solid waste reduction goals. Furthermore, construction would comply with federal, state, and local management and reduction statutes and regulations related to solid waste. Therefore, construction of Alternative 1 would have a less than significant impact related to solid waste generation.

Design Options

Atlantic/Pomona Station Option

Construction of Alternative 1 with the Atlantic/Pomona Station Option would have the same effects on solid waste generation as the base Alternative 1. Construction of Alternative 1 with the Atlantic/Pomona Station Option would involve the generation and removal of solid waste to accommodate the various demolition and construction activities. There would be adequate capacity available in Los Angeles County to handle anticipated solid waste generation during the construction period and, thus, temporary solid waste generation associated with construction activities would not create a need for additional solid waste disposal facilities. Hazardous materials would be handled, transported, and disposed of in accordance with applicable laws and regulations by a certified hazardous materials handler. Therefore, construction of Alternative 1 with the Atlantic/Pomona Station Option would result in a less than significant impact related to solid waste generation.

Montebello At-Grade Option

Construction of Alternative 1 with the Montebello At-Grade Option would have the same effects on solid waste generation as the base Alternative 1. There would be adequate capacity available in Los Angeles County to handle anticipated solid waste generation during the construction period and, thus, temporary solid waste generation associated with construction activities would not create a need for additional solid waste disposal facilities. Therefore, construction of Alternative 1 with the Montebello At-Grade Option would result in a less than significant impact related to solid waste generation.

7.4.2 Alternative 2 Atlantic to Commerce/Citadel IOS

7.4.2.1 Operational Impacts

Alternative 2 does not include a direct operational source of solid waste. Indirectly, solid waste would be generated by transit users. Stations would include waste bins and recycle bins. The disposal of solid waste from each station would have no notable potential to affect landfill capacity or impair attainment of solid waste reduction goals. Therefore, operation of Alternative 2 would result in a less than significant impact related to solid waste generation.



Design Options

Atlantic/Pomona Station Option

Operation of Alternative 2 with the Atlantic/Pomona Station Option would not include a direct source of solid waste. Indirect solid waste generated by transit users would be collected in waste and recycle bins and would have no notable potential to affect landfill capacity or impair attainment of solid waste reduction goals. Therefore, operation of Alternative 2 with the Atlantic/Pomona Station Option would result in a less than significant impact related to solid waste generation.

7.4.2.2 Construction Impacts

The construction of Alternative 2 would involve the generation and removal of solid waste to accommodate the various demolition and construction activities. At the proposed LRT station areas, generated waste may include bulky, heavy materials such as concrete, wood, metals, glass, and building components. For construction of underground and surface elements, the removal of debris (e.g., soil, asphalt, concrete) is anticipated. This would result in an incremental and temporary increase in solid waste disposal at landfills and other waste disposal facilities. While it is anticipated that some excavated soil would be reused on-site, the remaining materials would be hauled off-site for disposal at any of the area landfills that accept and/or recycle construction/demolition materials.

As discussed in the Eastside Transit Corridor Phase 2 Hazardous Materials Impacts Report, the existing buildings to be demolished, to accommodate the construction of the LRT station areas, may contain asbestos and lead-based paint. The Department of Toxic Substances Control require the abatement of asbestos-containing materials and removal or stabilization of lead-based paint prior to demolition. Contaminated soils and hazardous building materials would be disposed of at a local landfill, such as Azusa Land Reclamation, Antelope Valley Public, Clean Harbors Buttonwillow, or Lancaster landfills, which are authorized to accept certain types of contaminated soils (e.g., petroleum hydrocarbon-impacted soils with hydrocarbon concentrations below specified limits) and asbestos-containing debris. These materials and wastes would be handled, transported, and disposed of in accordance with applicable laws and regulations by a certified hazardous materials handler.

There would be adequate capacity available in Los Angeles County to handle anticipated solid waste generation during the construction period and, thus, temporary solid waste generation associated with construction of Alternative 2 would not create a need for additional solid waste disposal facilities. In addition, the construction contractor would comply with AB 939, which requires a Solid Waste Diversion Program and diversion of at least 50 percent of the solid waste from landfills to recycling facilities; therefore, the construction of Alternative 2 would not conflict with policies and objectives to reduce the amount of solid waste disposed in landfills.

Construction of Alternative 2 would not generate solid waste in excess of state or local standards, outlined in **Section 3.1.2** and **Section 3.1.3**, respectively, or in excess of the capacity of the local infrastructure, or otherwise impair the attainment of solid waste reduction goals. Furthermore, construction would comply with federal, state, and local management and reduction statutes and regulations related to solid waste. Therefore, construction of Alternative 2 would have a less than significant impact related to solid waste generation.



Design Options

Atlantic/Pomona Station Option

Construction of Alternative 1 with the Atlantic/Pomona Station Option would have the same effects on solid waste generation as the base Alternative 2. Construction of Alternative 2 with the Atlantic/Pomona Station Option would involve the generation and removal of solid waste to accommodate the various demolition and construction activities. There would be adequate capacity available in Los Angeles County to handle anticipated solid waste generation during the construction period and, thus, temporary solid waste generation associated with construction activities would not create a need for additional solid waste disposal facilities. Hazardous materials would be handled, transported, and disposed of in accordance with applicable laws and regulations by a certified hazardous materials handler. Therefore, construction of Alternative 2 with the Atlantic/Pomona Station Option would result in a less than significant impact related to solid waste generation.

7.4.3 Alternative 3 Atlantic to Greenwood IOS

7.4.3.1 Operational Impacts

Alternative 3 does not include a direct operational source of solid waste. Indirectly, solid waste would be generated by transit users. Stations would include waste bins and recycle bins. The disposal of solid waste from each station would have no notable potential to affect landfill capacity or impair attainment of solid waste reduction goals. Therefore, operation of Alternative 3 would result in a less than significant impact related to solid waste generation.

Design Options

Atlantic/Pomona Station Option

Operation of Alternative 3 with the Atlantic/Pomona Station Option would not include a direct source of solid waste. Indirect solid waste generated by transit users would be collected in waste and recycle bins and would have no notable potential to affect landfill capacity or impair attainment of solid waste reduction goals. Therefore, operation of Alternative 3 with the Atlantic/Pomona Station Option would result in a less than significant impact related to solid waste generation.

Montebello At-Grade Option

Operation of Alternative 3 with the Montebello At-Grade Option would have the same effects on solid waste generation as the base Alternative 3. Therefore, operation of Alternative 3 with the Montebello At-Grade Option would result in a less than significant impact related to solid waste generation.

7.4.3.2 Construction Impacts

The construction of Alternative 3 would involve the generation and removal of solid waste to accommodate the various demolition and construction activities. At the proposed LRT station areas, generated waste may include bulky, heavy materials such as concrete, wood, metals, glass, and



building components. For construction of underground and surface elements, the removal of debris (e.g., soil, asphalt, concrete) is anticipated. This would result in an incremental and temporary increase in solid waste disposal at landfills and other waste disposal facilities. While it is anticipated that some excavated soil would be reused on-site, the remaining materials would be hauled off-site for disposal at any of the area landfills that accept and/or recycle construction/demolition materials.

As discussed in the Eastside Transit Corridor Phase 2 Hazardous Materials Impacts Report, the existing buildings to be demolished, to accommodate the construction of the LRT station areas, may contain asbestos and lead-based paint. The Department of Toxic Substances Control require the abatement of asbestos-containing materials and removal or stabilization of lead-based paint prior to demolition. Contaminated soils and hazardous building materials would be disposed of at a local landfill, such as Azusa Land Reclamation, Antelope Valley Public, Clean Harbors Buttonwillow, or Lancaster landfills, which are authorized to accept certain types of contaminated soils (e.g., petroleum hydrocarbon-impacted soils with hydrocarbon concentrations below specified limits) and asbestos-containing debris. These materials and wastes would be handled, transported, and disposed of in accordance with applicable laws and regulations by a certified hazardous materials handler.

There would be adequate capacity available in Los Angeles County to handle anticipated solid waste generation during the construction period and, thus, temporary solid waste generation associated with construction of Alternative 3 would not create a need for additional solid waste disposal facilities. In addition, the construction contractor would comply with AB 939, which requires a Solid Waste Diversion Program and diversion of at least 50 percent of the solid waste from landfills to recycling facilities; therefore, the construction of Alternative 3 would not conflict with policies and objectives to reduce the amount of solid waste disposed in landfills.

Construction of Alternative 3 would not generate solid waste in excess of state or local standards, outlined in **Section 3.1.2** and **Section 3.1.3**, respectively, or in excess of the capacity of the local infrastructure, or otherwise impair the attainment of solid waste reduction goals. Furthermore, construction would comply with federal, state, and local management and reduction statutes and regulations related to solid waste. Therefore, construction of Alternative 3 would have a less than significant impact related to solid waste generation.

Design Options

Atlantic/Pomona Station Option

Construction of Alternative 3 with the Atlantic/Pomona Station Option would have the same effects on solid waste generation as the base Alternative 3. Construction of Alternative 3 with the Atlantic/Pomona Station Option would involve the generation and removal of solid waste to accommodate the various demolition and construction activities. There would be adequate capacity available in Los Angeles County to handle anticipated solid waste generation during the construction period and, thus, temporary solid waste generation associated with construction activities would not create a need for additional solid waste disposal facilities. Hazardous materials would be handled, transported, and disposed of in accordance with applicable laws and regulations by a certified hazardous materials handler. Therefore, construction of Alternative 3 with the Atlantic/Pomona Station Option would result in a less than significant impact related to solid waste generation.



Montebello At-Grade Option

Construction of Alternative 3 with the Montebello At-Grade Option would have the same effects on solid waste generation as the base Alternative 3. Therefore, construction of Alternative 3 with the Montebello At-Grade Option would result in a less than significant impact related to solid waste generation.

7.4.4 Maintenance and Storage Facilities

7.4.4.1 Operational Impacts

7.4.4.1.1 Commerce MSF

Operation of the Commerce MSF site option would generate a range of recyclable and non-recyclable solid waste. As shown in **Table 6-1** the active and permitted solid waste disposal facilities serving Los Angeles County have sufficient daily and annual capacity to accommodate the solid waste generation associated with the operation of the Commerce MSF site option. Therefore, operation of the Commerce MSF site option would not create a need for additional solid waste disposal facilities. Thus, operation of the Commerce MSF site option would have a less than significant impact related to solid waste generation.

7.4.4.1.2 Montebello MSF

Operation of the Montebello MSF site option would generate a range of recyclable and non-recyclable solid waste. As shown in **Table 6-1**, the active and permitted solid waste disposal facilities serving Los Angeles County have sufficient daily and annual capacity to accommodate the solid waste generation associated with the operation of the Montebello MSF site option. Therefore, operation of the Montebello MSF site option would not create a need for additional solid waste disposal facilities. Thus, operation of the Montebello MSF would have a less than significant impact related to solid waste generation.

Design Option

Montebello MSF At-Grade Option

Operation of the Montebello MSF At-Grade Option would generate a range of recyclable and non-recyclable solid waste in the same quantities as the base Montebello MSF site option. Therefore, operation of the Montebello MSF At-Grade Option would result in the same impacts related to solid waste generation as the base Montebello MSF site option; operation would result in a less than significant impact related to solid waste generation.



7.4.4.2 Construction Impacts

7.4.4.2.1 Commerce MSF

The construction of the Commerce MSF site option would involve the generation and removal of solid waste to accommodate the various demolition and construction activities. Generated waste may include bulky, heavy materials such as soil, asphalt, concrete, wood, metals, glass, and building components. This would result in an incremental and temporary increase in solid waste disposal at landfills and other waste disposal facilities. While it is anticipated that some excavated soil would be reused on-site, the remaining materials would be hauled off-site for disposal at any of the area landfills that accept and/or recycle construction/demolition materials.

As discussed in the Eastside Transit Corridor Phase 2 Hazardous Materials Impacts Report, the existing buildings to be acquired and demolished, to accommodate the construction of the Commerce MSF site option, may contain asbestos and lead-based paint. The Department of Toxic Substances Control require the abatement of asbestos-containing materials and removal or stabilization of lead-based paint prior to demolition. Contaminated soils and hazardous building materials would be disposed of at a local landfill, such as Azusa Land Reclamation, Antelope Valley Public, Clean Harbors Buttonwillow, or Lancaster landfills, which are authorized to accept certain types of contaminated soils (e.g., petroleum hydrocarbon-impacted soils with hydrocarbon concentrations below specified limits) and asbestos-containing debris. These materials and wastes would be handled, transported, and disposed of in accordance with applicable laws and regulations by a certified hazardous materials handler.

There would be adequate capacity available in Los Angeles County to handle anticipated solid waste generation during the construction period and, thus, temporary solid waste generation associated with construction of the Commerce MSF site option would not create a need for additional solid waste disposal facilities. In addition, the construction contractor would comply with AB 939, which requires a Solid Waste Diversion Program and diversion of at least 50 percent of the solid waste from landfills to recycling facilities; therefore, the construction of the Commerce MSF site option would not conflict with policies and objectives to reduce the amount of solid waste disposed in landfills.

Construction of the Commerce MSF site option would not generate solid waste in excess of state or local standards, outlined in **Section 3.1.2** and **Section 3.1.3**, respectively, or in excess of the capacity of the local infrastructure, or otherwise impair the attainment of solid waste reduction goals. Furthermore, construction would comply with federal, state, and local management and reduction statutes and regulations related to solid waste. Therefore, construction of the Commerce MSF site option would have a less than significant impact related to solid waste.

7.4.4.2.2 Montebello MSF

The construction of the Montebello MSF site option would involve the generation and removal of solid waste to accommodate the various demolition and construction activities. Generated waste may include bulky, heavy materials such as soil, asphalt, concrete, wood, metals, glass, and building components. This would result in an incremental and temporary increase in solid waste disposal at landfills and other waste disposal facilities. While it is anticipated that some excavated soil would be reused on-site, the remaining materials would be hauled off-site for disposal at any of the area landfills that accept and/or recycle construction/demolition materials.



As discussed in the Eastside Transit Corridor Phase 2 Hazardous Materials Impacts Report, the existing buildings to be acquired and demolished, to accommodate the construction of the Montebello MSF site option, may contain asbestos and lead-based paint. The Department of Toxic Substances Control require the abatement of asbestos-containing materials and removal or stabilization of lead-based paint prior to demolition. Contaminated soils and hazardous building materials would be disposed of at a local landfill, such as Azusa Land Reclamation, Antelope Valley Public, Clean Harbors Buttonwillow, or Lancaster landfills, which are authorized to accept certain types of contaminated soils (e.g., petroleum hydrocarbon-impacted soils with hydrocarbon concentrations below specified limits) and asbestos-containing debris. These materials and wastes would be handled, transported, and disposed of in accordance with applicable laws and regulations by a certified hazardous materials handler.

There would be adequate capacity available in Los Angeles County to handle anticipated solid waste generation during the construction period and, thus, temporary solid waste generation associated with construction of the Montebello MSF site option would not create a need for additional solid waste disposal facilities. In addition, the construction contractor would comply with AB 939, which requires a Solid Waste Diversion Program and diversion of at least 50 percent of the solid waste from landfills to recycling facilities; therefore, the construction of the Montebello MSF site option would not conflict with policies and objectives to reduce the amount of solid waste disposed in landfills.

Construction of the Montebello MSF site option would not generate solid waste in excess of state or local standards, outlined in **Section 3.1.2** and **Section 3.1.3**, respectively, or in excess of the capacity of the local infrastructure, or otherwise impair the attainment of solid waste reduction goals. Furthermore, construction would comply with federal, state, and local management and reduction statutes and regulations related to solid waste. Therefore, construction of the Montebello MSF site option would have a less than significant impact related to solid waste.

Design Option

Montebello MSF At-Grade Option

Construction of the Montebello MSF At-Grade Option would have the same effects on solid waste generation as the base Montebello MSF site option. Generated waste may include bulky, heavy materials such as soil, asphalt, concrete, wood, metals, glass, and building components. This would result in an incremental and temporary increase in solid waste disposal at landfills and other waste disposal facilities. There would be adequate capacity available in Los Angeles County to handle anticipated solid waste generation during the construction period and, thus, temporary solid waste generation associated with construction of the Montebello MSF site option would not create a need for additional solid waste disposal facilities. The construction contractor would comply with AB 939, which requires a Solid Waste Diversion Program and diversion of at least 50 percent of the solid waste from landfills to recycling facilities. Therefore, construction of the Montebello MSF At-Grade Option would result in a less than significant impact related to solid waste.

7.5 Impact UTL-5: Regulations

Impact UTL-5: Would a Build Alternative comply with federal, state, and local management and reduction statutes and regulations related to solid waste?



7.5.1 Alternative 1 Washington Boulevard

7.5.1.1 Operational Impacts

Alternative 1 would be required to comply with all applicable federal, state, and local statutes and regulations, outlined in **Section 3.1**, pertaining to solid waste disposal. As discussed under Impact UTL-4, small amounts of solid waste would be generated during operation of Alternative 1; however, there is no element of operational activities that would be outside of compliance. Therefore, operation of Alternative 1 would result in a less than significant impact as it would comply with solid waste regulations.

Design Options

Atlantic/Pomona Station Option

Operation of Alternative 1 with the Atlantic/Pomona Station Option would be required to comply with all applicable federal, state, and local statutes and regulations, outlined in **Section 3.1**, pertaining to solid waste disposal. As discussed under Impact UTL-4, small amounts of solid waste would be generated during operation of Alternative 1; however, there is no element of operational activities that would be outside of compliance. Therefore, operation of Alternative 1 with the Atlantic/Pomona Station Option would result in a less than significant impact as it would comply with solid waste regulations.

Montebello At-Grade Option

As with the base Alternative 1, Alternative 1 with the Montebello At-Grade Option would be required to comply with all applicable federal, state, and local statutes and regulations, outlined in **Section 3.1**, pertaining to solid waste disposal. As discussed under Impact UTL-4, small amounts of solid waste would be generated during operation of Alternative 1; however, there is no element of operational activities that would be outside of compliance. Therefore, operation of Alternative 1 with the Montebello At-Grade Option would result in a less than significant impact as it would comply with solid waste regulations.

7.5.1.2 Construction Impacts

Alternative 1 would be required to comply with all applicable federal, state, and local statutes and regulations, outlined in **Section 3.1**, pertaining to solid waste disposal. As discussed under Impact UTL-4, solid waste would be generated during construction of Alternative 1; however, there is no element of construction activities that would be outside of compliance. Therefore, construction of Alternative 1 would result in a less than significant impact as it would comply with solid waste regulations.



Design Options

Atlantic/Pomona Station Option

Construction of Alternative 1 with the Atlantic/Pomona Station Option would be required to comply with all applicable federal, state, and local statutes and regulations, outlined in **Section 3.1**, pertaining to solid waste disposal. As discussed under Impact UTL-4, solid waste would be generated during construction of Alternative 1; however, there is no element of construction activities that would be outside of compliance. Therefore, construction of Alternative 1 with the Atlantic/Pomona Station Option would result in a less than significant impact as it would comply with solid waste regulations.

Montebello At-Grade Option

As with the base Alternative 1, Alternative 1 with the Montebello At-Grade Option would be required to comply with all applicable federal, state, and local statutes and regulations, outlined in **Section 3.1**, pertaining to solid waste disposal. As discussed under Impact UTL-4, solid waste would be generated during construction of Alternative 1; however, there is no element of construction activities that would be outside of compliance. Therefore, construction of Alternative 1 with the Montebello At-Grade Option would have a less than significant impact as it would comply with solid waste regulations.

7.5.2 Alternative 2 Atlantic to Commerce/Citadel IOS

Alternative 2 would be required to comply with all applicable federal, state, and local statutes and regulations, outlined in **Section 3.1**, pertaining to solid waste disposal. As discussed under Impact UTL-4, small amounts of solid waste would be generated during operation of Alternative 2; however, there is no element of operational activities that would be outside of compliance. Therefore, operation of Alternative 2 would result in a less than significant impact as it would comply with solid waste regulations.

Design Options

Atlantic/Pomona Station Option

Operation of Alternative 1 with the Atlantic/Pomona Station Option would be required to comply with all applicable federal, state, and local statutes and regulations, outlined in **Section 3.1**, pertaining to solid waste disposal. As discussed under Impact UTL-4, small amounts of solid waste would be generated during operation of Alternative 2; however, there is no element of operational activities that would be outside of compliance. Therefore, operation of Alternative 1 with the Atlantic/Pomona Station Option would result in a less than significant impact as it would comply with solid waste regulations.



7.5.2.1 Construction Impacts

Alternative 2 would be required to comply with all applicable federal, state, and local statutes and regulations, outlined in **Section 3.1**, pertaining to solid waste disposal. As discussed under Impact UTL-4, solid waste would be generated during construction of Alternative 2; however, there is no element of construction activities that would be outside of compliance. Therefore, construction of Alternative 2 would result in a less than significant impact as it would comply with solid waste regulations.

Design Options

Atlantic/Pomona Station Option

Construction of Alternative 2 with the Atlantic/Pomona Station Option would be required to comply with all applicable federal, state, and local statutes and regulations, outlined in **Section 3.1**, pertaining to solid waste disposal. As discussed under Impact UTL-4, solid waste would be generated during construction of Alternative 2; however, there is no element of construction activities that would be outside of compliance. Therefore, construction of Alternative 2 with the Atlantic/Pomona Station Option would result in a less than significant impact as it would comply with solid waste regulations.

7.5.3 Alternative 3 Atlantic to Greenwood IOS

7.5.3.1 Operational Impacts

Alternative 3 would be required to comply with all applicable federal, state, and local statutes and regulations, outlined in **Section 3.1**, pertaining to solid waste disposal. As discussed under Impact UTL-4, small amounts of solid waste would be generated during operation of Alternative 3; however, there is no element of operational activities that would be outside of compliance. Therefore, operation of Alternative 3 would result in a less than significant impact as it would comply with solid waste regulations.

Design Options

Atlantic/Pomona Station Option

Operation of Alternative 3 with the Atlantic/Pomona Station Option would be required to comply with all applicable federal, state, and local statutes and regulations, outlined in **Section 3.1**, pertaining to solid waste disposal. As discussed under Impact UTL-4, small amounts of solid waste would be generated during operation of Alternative 3; however, there is no element of operational activities that would be outside of compliance. Therefore, operation of Alternative 1 with the Atlantic/Pomona Station Option would result in a less than significant impact as it would comply with solid waste regulations.



Montebello At-Grade Option

As with the base Alternative 3, Alternative 3 with the Montebello At-Grade Option would be required to comply with all applicable federal, state, and local statutes and regulations, outlined in **Section 3.1**, pertaining to solid waste disposal. As discussed under Impact UTL-4, small amounts of solid waste would be generated during operation of Alternative 3; however, there is no element of operational activities that would be outside of compliance. Therefore, operation of Alternative 3 with the Montebello At-Grade Option would result in a less than significant impact as it would comply with solid waste regulations.

7.5.3.2 Construction Impacts

Alternative 3 would be required to comply with all applicable federal, state, and local statutes and regulations, outlined in **Section 3.1**, pertaining to solid waste disposal. As discussed under Impact UTL-4, solid waste would be generated during construction of Alternative 3; however, there is no element of construction activities that would be outside of compliance. Therefore, construction of Alternative 3 would result in a less than significant impact as it would comply with solid waste regulations.

Design Options

Atlantic/Pomona Station Option

Construction of Alternative 3 with the Atlantic/Pomona Station Option would be required to comply with all applicable federal, state, and local statutes and regulations, outlined in **Section 3.1**, pertaining to solid waste disposal. As discussed under Impact UTL-4, solid waste would be generated during construction of Alternative 3; however, there is no element of construction activities that would be outside of compliance. Therefore, construction of Alternative 3 with the Atlantic/Pomona Station Option would result in a less than significant impact as it would comply with solid waste regulations.

Montebello At-Grade Option

As with the base Alternative 3, Alternative 3 with the Montebello At-Grade Option would be required to comply with all applicable federal, state, and local statutes and regulations, outlined in **Section 3.1**, pertaining to solid waste disposal. As discussed under Impact UTL-4, solid waste would be generated during construction of Alternative 3; however, there is no element of construction activities that would be outside of compliance. Therefore, construction of Alternative 3 with the Montebello At-Grade Option would result in a less than significant impact as it would comply with solid waste regulations.



7.5.4 Maintenance and Storage Facilities

7.5.4.1 Operational Impacts

7.5.4.1.1 Commerce MSF

The Commerce MSF site option would be required to comply with all applicable federal, state, and local statutes and regulations, outlined in **Section 3.1**, pertaining to solid waste disposal. As discussed under Impact UTL-4, small amounts of solid waste would be generated during operation of the MSF; however, there is no element of operational activities that would be outside of compliance. Therefore, operation of the Commerce MSF site option would result in a less than significant impact as it would comply with solid waste regulations.

7.5.4.1.2 Montebello MSF

The Montebello MSF site option would be required to comply with all applicable federal, state, and local statutes and regulations, outlined in **Section 3.1**, pertaining to solid waste disposal. As discussed under Impact UTL-4, small amounts of solid waste would be generated during operation of the MSF; however, there is no element of operational activities that would be outside of compliance. Therefore, operation of the Montebello MSF site option would result in a less than significant impact as it would comply with solid waste regulations.

Design Option

Montebello MSF At-Grade Option

As with the base Montebello MSF site option, the Montebello MSF At-Grade Option would be required to comply with all applicable federal, state, and local statutes and regulations, outlined in **Section 3.1**, pertaining to solid waste disposal. As discussed under Impact UTL-4, small amounts of solid waste would be generated during operation of the MSF; however, there is no element of operational activities that would be outside of compliance. Therefore, the Montebello MSF At-Grade Option would result in a less than significant impact as it would comply with solid waste regulations.

7.5.4.2 Construction Impacts

7.5.4.2.1 Commerce MSF

The Commerce MSF site option would be required to comply with all applicable federal, state, and local statutes and regulations, outlined in **Section 3.1**, pertaining to solid waste disposal. As discussed under Impact UTL-4, solid waste would be generated during construction of the MSF; however, there is no element of construction activities that would be outside of compliance. Therefore, construction of the Commerce MSF site option would result in a less than significant impact as it would comply with solid waste regulations.



7.5.4.2.2 Montebello MSF

The Montebello MSF site option would be required to comply with all applicable federal, state, and local statutes and regulations, outlined in **Section 3.1**, pertaining to solid waste disposal. As discussed under Impact UTL-4, solid waste would be generated during construction of the MSF; however, there is no element of construction activities that would be outside of compliance. Therefore, construction of the Montebello MSF site option would result in a less than significant impact as it would comply with solid waste regulations.

Design Option

Montebello MSF At-Grade Option

As with the base Montebello MSF site option, the Montebello MSF At-Grade Option would be required to comply with all applicable federal, state, and local statutes and regulations, outlined in **Section 3.1**, pertaining to solid waste disposal. As discussed under Impact UTL-4, solid waste would be generated during construction of the MSF; however, there is no element of construction activities that would be outside of compliance. Therefore, the Montebello MSF At-Grade Option would result in a less than significant impact as it would comply with solid waste regulations.

7.6 Impact ENG-1: Energy Consumption

Impact ENG-1: Would a Build Alternative result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

7.6.1 Alternative 1 Washington Boulevard

Virtually every aspect of Alternative 1 construction and operation requires the consumption of some form of energy resources. This section analyzes the potential for significant environmental impacts from the wasteful, inefficient, or unnecessary consumption of energy resources under Alternative 1.

7.6.1.1 Operational Impacts

Operational energy use was estimated for Alternative 1 including the energy demand of project elements, such as LRVs, six new stations, parking facilities, and an MSF which is essential in maintaining a reliable light rail system. MSF operations are also discussed in **Section 7.6.4**. The energy use estimates also include the energy demand of regional elements whose energy use would be altered by the Project, such as regional traffic.

7.6.1.1.1 Light Rail and Station Operations

As shown in **Table 7-1** and **Table 7-2**, annual operations of the approximately 9.0 miles of new LRT guideway under this alternative would consume approximately 4.3 million kWh of electricity, equivalent



to 14.7 billion BTUs. Annual operation of the LRT stations would require an additional 0.8 million kWh of electricity, equivalent to 2.6 billion BTUs.

7.6.1.1.2 Parking Facilities

Annual operations of parking facilities to be constructed under Alternative 1 would consume 0.3 million kWh of electricity, equivalent to 0.9 billion BTUs based on an assumption of surface parking facilities under Alternative 1 at Greenwood station, Rosemead station, Norwalk station, and Lambert station.

7.6.1.1.3 Regional Traffic

Operation of Alternative 1 would reduce annual highway VMT within the region by approximately 3.2 million VMT compared to 2042 without Project Conditions. This decrease would result in annual regional reduction in consumption of approximately 89 thousand gallons of gasoline and four thousand gallons of diesel fuel from highway vehicles. This reduction is equivalent to 11.3 billion BTUs of energy. Reduction in vehicle energy consumption would result in a beneficial impact to energy resources in the region and would reduce regional reliance on fossil fuels.

7.6.1.1.4 Maintenance and Storage Facility

As shown in **Table 7-1**, annual operation of the Commerce MSF site option would require consumption of approximately 0.8 million kWh per year of electricity, equivalent to 2.7 billion BTU per year. It would also consume a small amount of natural gas for comfort heating, totaling approximately 0.2 billion BTU per year.

As shown in **Table 7-2**, annual operation of the Montebello MSF site option would require consumption of approximately 0.8 million kWh per year of electricity, equivalent to 2.8 billion BTU per year. It would also consume a small amount of natural gas for comfort heating, totaling approximately 0.2 billion BTU per year.

7.6.1.1.5 Total Operational Energy Consumption

As shown in **Table 7-1** and **Table 7-2**, total operational energy consumption under Alternative 1 would be greater than the energy consumption under 2042 without Project Conditions. This increase would result from increased electrical demand associated with operation of the LRT guideway, stations, and an MSF. This alternative would reduce highway VMT and as such, fossil fuel energy demand would decrease as compared to 2042 without Project Conditions. When considering only non-renewable energy demand (i.e., fossil fuel combustion in highway vehicles and the portion of grid power provided by non-renewable sources), regional energy consumption under Alternative 1 would be reduced as compared to 2042 without Project Conditions. Alternative 1 would result in a net annual reduction in non-renewable energy consumption of approximately 7.8 billion BTUs with the Commerce MSF site option or 7.9 billion BTUs with the Montebello MSF site option relative to 2042 without Project Conditions.

Alternative 1 would result in a shift of 11.3 billion BTUs of fossil fuel energy demand from highway vehicles to regional electricity demand. Regional electricity supplies are becoming increasingly renewable, with a minimum 60 percent renewables energy portfolio (RPS) required to be achieved for



public energy providers in the State of California by 2030 and a 100 percent RPS (e.g., fully renewable grid energy supply) required by 2045. Alternative 1 would result in long-term beneficial impacts to energy resources through decreased reliance on non-renewable fossil fuels and increased reliance on the renewable grid energy supplies. Therefore, operation of Alternative 1 would not result in the wasteful, inefficient, or unnecessary consumption of energy resources and would have less than significant impacts on energy consumption.

Regional energy demand under Alternative 1 would be less than that under the 2019 existing conditions. As presented for information purposes in **Table 7-1** and **Table 7-2**, fuel consumption in the study area would decrease by over 1 million gallons of gasoline and would increase by less than 15 thousand gallons of diesel. This change in fuel consumption would be driven by regional growth and improvements to vehicle fuel efficiencies that will occur independent of the Project. Electricity demand would increase by a total of 6.1 million kWh associated with operation of the Project facilities. Overall energy demand under Alternative 1 would be 126,345 billion BTUs less than that under the 2019 existing conditions, with the difference driven by non-project vehicle engine efficiency standards.

Operational energy impacts are summarized in **Table 7-1** and **Table 7-2**.



**Table 7-1. Estimated Energy Consumption from Operation – Alternative 1 with
Commerce MSF Site Option**

Operational Component	Gasoline Demand (Thousand Gallons)	Diesel Demand (Thousand Gallons)	Electrical Demand (kWh)	Natural Gas Demand (Billion BTU)	Operational Energy Total (Billion BTU) ¹
Light Rail Guideway	n/a	n/a	4,296,555	n/a	14.7
Stations	n/a	n/a	770,938	n/a	2.6
Parking Facilities	n/a	n/a	254,800	n/a	0.9
Commerce MSF	n/a	n/a	753,899	0.2	2.7
Regional Highway Traffic	5,207,869	252,980	n/a	n/a	661,248
2042 Total Alternative 1 Energy Demand	5,207,869	252,980	6,076,191	0.2	661,268
2019 Existing Conditions Energy Demand	6,274,509	238,829	n/a	n/a	787,613
2042 Alternative 1 minus 2019 Existing Conditions Energy Demand ²	(1,066,640)	14,151	6,076,191	0.2	(126,345)
2042 without Project Conditions Energy Demand	5,207,958	252,984	n/a	n/a	661,259
2042 Alternative 1 minus 2042 without Project Conditions Net Energy Demand ²	(89)	(4)	6,076,191	0.2	9.6
2042 Alternative 1 minus 2042 without Project Conditions Non-Renewable Net Energy Demand ^{2,3}	(89)	(4)	972,191	0.2	(7.9)

Source: CDM Smith/AECOM, JV 2021.

Notes:

1 USEIA energy-unit conversion factors used to convert different project energy consumptions to common energy units (BTU) as follows: 0.137 million BTU per gallon of diesel fuel; 0.120 million BTU per gallon of gasoline; 3,412 BTU per kilowatt-hour. (USEIA 2021c).

2 Energy reductions (beneficial impacts) are shown in parentheses.

3 Non-renewable energy includes electricity after accounting for 84 percent clean energy, consistent with the 2030 target in SCE's 2020 *Integrated Resource Plan, 38 MMT Preferred Conforming Portfolio and Action Plan*.

Key:

BTU = British thermal unit; kWh = kilowatt-hours



**Table 7-2. Estimated Energy Consumption from Operation – Alternative 1
with Montebello MSF Site Option**

Operational Component	Gasoline Demand (Thousand Gallons)	Diesel Demand (Thousand Gallons)	Electrical Demand (kWh)	Natural Gas Demand (Billion BTU)	Operational Energy Total (Billion BTU) ¹
Light Rail Guideway	n/a	n/a	4,296,555	n/a	14.7
Stations	n/a	n/a	770,938	n/a	2.6
Montebello MSF	n/a	n/a	776,768	0.2	2.8
Regional Highway Traffic	5,207,869	252,980	n/a	n/a	661,248
2042 Total Alternative 1 Energy Consumption	5,207,869	252,980	6,099,061	0.2	661,269
2019 Existing Conditions Energy Demand	6,274,509	238,829	n/a	n/a	787,613
2042 Alternative 1 minus 2019 Existing Conditions Energy Demand ²	(1,066,640)	14,151	6,099,061	0.2	(126,345)
2042 without Project Conditions Energy Demand	5,207,958	252,984	n/a	n/a	661,259
2042 Alternative 1 minus 2042 without Project Conditions Net Energy Demand ²	(89)	(4)	6,099,061	0.2	9.6
2042 Alternative 1 minus 2042 without Project Conditions Non-Renewable Net Energy Demand ^{2,3}	(89)	(4)	975,850	0.2	(7.8)

Source: CDM Smith/AECOM, JV 2021.

Notes:

¹ USEIA energy-unit conversion factors used to convert different project energy consumptions to common energy units (BTU) as follows: 0.137 million BTU per gallon of diesel fuel; 0.120 million BTU per gallon of gasoline; 3,412 BTU per kilowatt-hour. (USEIA 2021c).

² Energy reductions (beneficial impacts) are shown in parentheses.

³ Non-renewable energy includes electricity adjustments to account for 84 percent clean energy, consistent with the 2030 target in SCE's 2020 *Integrated Resource Plan, 38 MMT Preferred Conforming Portfolio and Action Plan*.

Key:

BTU = British thermal unit; kWh = kilowatt-hours

Design Options

Atlantic/Pomona Station Option

As described above, the operation of Alternative 1 would not result in the wasteful, inefficient, or unnecessary consumption of energy resources. Implementation of Alternative 1 with the Atlantic/Pomona Station Option would not result in any appreciable change to the Project's operational energy consumption as compared to the base Alternative 1. Thus, operation of Alternative 1 with the Atlantic/Pomona Station Option would result in less than significant impacts on energy consumption.



Montebello At-Grade Option

As described above, the operation of Alternative 1 would not result in the wasteful, inefficient, or unnecessary consumption of energy resources. Implementation of Alternative 1 with the Montebello At-Grade Option would not result in any appreciable change to the Project’s operational energy consumption as compared to the base Alternative 1. Thus, operation of Alternative 1 with the Montebello At-Grade Option would result in less than significant impacts on energy consumption.

7.6.1.2 Construction Impacts

To determine construction-related energy consumption, the analysis used construction GHG emissions and USEIA CO₂ energy factors as described in **Section 4.2.1**. Construction energy impacts are summarized in **Table 7-3** and **Table 7-4**.

Construction of Alternative 1 would result in a temporary energy demand of 117.6 billion BTUs with the Commerce MSF site option and 121.3 billion BTUs with the Montebello MSF site option. This impact would be temporary, whereas the Project would result in long-term, beneficial impacts to energy resources in the region (e.g., decreased dependence on fossil fuels).

Table 7-3. Estimated Total Energy Consumption from Construction – Alternative 1 with Commerce MSF

Project Component ¹	Construction GHG Emissions (MTCO ₂ e)	Diesel Fuel Demand (Thousand Gallons)	Gasoline Fuel Demand (Thousand Gallons)	Energy Consumption (Billion BTUs) ²
Light Rail Guideway	3,690	289	88	50.3
Stations	2,601	233	27	35.2
Parking Facilities	86	5	4	1.2
Commerce MSF	1,099	68	48	15.1
Street Widening and TPSS	1,162	100	17	15.8
Total	8,639	694	184	117.6

Source: CDM Smith/AECOM, JV 2021.

Note:

1 GHG emissions associated with off-site vehicle trips (vendor trips, hauling trips, and worker commuting) are included in GHG emissions for each component of Project construction.

2 USEIA energy-unit conversion factors used to convert different project energy consumptions to common energy units (BTU) as follows: 0.137 million BTU per gallon of diesel fuel; 0.120 million BTU per gallon of gasoline. (USEIA 2021c).

Key:

BTU = British thermal unit; MSF = maintenance and storage facility; MTCO₂e = metric tons carbon dioxide equivalents;

TPSS = traction power substations



Table 7-4. Estimated Total Energy Consumption from Construction – Alternative 1 with Montebello MSF

Project Component ¹	Construction GHG Emissions (MTCO ₂ e)	Diesel Fuel Demand (Thousand Gallons)	Gasoline Fuel Demand (Thousand Gallons)	Energy Consumption (Billion BTUs) ²
Light Rail Guideway	3,690	289	88	50.3
Stations	2,601	233	27	35.2
Parking Facilities	86	5	4	1.2
Montebello MSF	1,374	85	60	18.9
Street Widening and TPSS	1,162	100	17	15.8
Total	8,914	711	196	121.3

Source: CDM Smith/AECOM, JV 2021.

Notes:

1 GHG emissions associated with off-site vehicle trips (vendor trips, hauling trips, and worker commuting) are included in GHG emissions for each component of Project construction.

2 USEIA energy-unit conversion factors used to convert different project energy consumptions to common energy units (BTU) as follows: 0.137 million BTU per gallon of diesel fuel; 0.120 million BTU per gallon of gasoline. (USEIA 2021c).

Key:

BTU = British thermal unit; MSF = maintenance and storage facility; MTCO₂e = metric tons carbon dioxide equivalents;

TPSS = traction power substations

Specific energy conservation measures would be confirmed in final design consistent with Metro’s 2011 ECMP and 2013 *Sustainable Rail Plan*, as well as Metro’s energy and environmental policies summarized in **Section 3.2.3.2.1**. Additional BMPs set forth in Metro’s Green construction policy would further reduce energy consumption during construction. These BMPs include, but are not limited to, the required use of renewable diesel fuel in construction equipment; the required use of Tier 4 off-road emission standard equipment as regionally available; the required use of USEPA 2007 on-road emission standard compliant trucks; the limitation of vehicle idling to 5 minutes or fewer when not in use; and the use of grid-power in lieu of diesel generators where available. Therefore, construction of Alternative 1 would not result in the wasteful, inefficient, or unnecessary consumption of energy resources and would have less than significant impacts on energy consumption.

Design Options

Atlantic/Pomona Station Option

As described above, the construction of Alternative 1 would not result in the wasteful, inefficient, or unnecessary consumption of energy resources. While the Atlantic/Pomona Station, the TBM receiving pit, and the alignment north of the proposed Atlantic/Whittier station would be located at a different position from the base Alternative 2, comparable construction and excavation activities would be performed for the Atlantic/Pomona Station Option. Substantial additional construction is not anticipated for the Atlantic/Pomona Station Option and construction GHG emissions would not materially differ from the base Alternative 1. Therefore, implementation of the Atlantic/Pomona Station Option would not result in a meaningful change to the consumption of energy resources. Thus, construction of Alternative 1 with the Atlantic/Pomona Station Option would result in less than significant impacts on energy consumption.



Montebello At-Grade Option

As described above, the construction of Alternative 1 would not result in the wasteful, inefficient, or unnecessary consumption of energy resources. Implementation of Alternative 1 with the Montebello At-Grade Option would result in a 2.5 billion BTU difference in construction energy consumption compared to the base Alternative 1, less than five percent of total construction energy consumption. Therefore, implementation of the Montebello At-Grade option would not cause a substantial change to the consumption of energy resources. **Table 7-5** presents the energy demand associated with the Montebello At-Grade Option and corresponding portion of the base alternative. Thus, construction of Alternative 1 with the Montebello At-Grade Option would result in less than significant impacts on energy consumption.

Table 7-5. Estimated Energy Consumption from Construction – Montebello At-Grade Option

Project Component ¹	Construction GHG Emissions (MTCO ₂ e)	Diesel Fuel Demand (Thousand Gallons)	Gasoline Fuel Demand (Thousand Gallons)	Energy Consumption (Billion BTUs)
Montebello Aerial Option (Base Alternative)	399	32	9	5.4
Montebello At-Grade Option	211	16	6	2.9

Source: CDM Smith/AECOM, JV 2021.

Note:

¹ GHG emissions associated with off-site vehicle trips (vendor trips, hauling trips, and worker commuting) are included in GHG emissions for each component of Project construction.

Key:

BTU = British thermal unit; MSF = maintenance and storage facility; MTCO₂e = metric tons carbon dioxide equivalents

7.6.2 Alternative 2 Atlantic to Commerce/Citadel IOS

Virtually every aspect of Alternative 2 construction and operation requires the consumption of some form of energy resources. This section analyzes the potential for significant environmental impacts from the wasteful, inefficient, or unnecessary consumption of energy resources under Alternative 2.

7.6.2.1 Operational Impacts

Operational energy use was estimated for Alternative 2 including the energy demand of project elements, such as LRVs, three new stations, and an MSF which is essential in maintaining a reliable light rail system. MSF operations are discussed in **Section 7.6.4**. The energy use estimates also include the energy demand of regional elements whose energy use would be altered by the Project, such as regional traffic.



7.6.2.1.1 Light Rail and Station Operations

As shown in Table 7-6, annual operations of the approximately 3.2 miles of new LRT guideway under this alternative would consume approximately 1.1 million kWh of electricity, equivalent to 3.9 billion BTUs. Annual operation of the LRT stations would require an additional 0.3 million kWh of electricity, equivalent to 1.2 billion BTUs.

7.6.2.1.2 Parking Facilities

No new parking facilities would be constructed as part of Alternative 2.

7.6.2.1.3 Regional Traffic

Operation of Alternative 2 would reduce annual highway VMT within the region by approximately 1.6 million VMT compared to 2042 without Project Conditions. This decrease would result in annual regional reduction in consumption of approximately 45 thousand gallons of gasoline and two thousand gallons of diesel fuel from highway vehicles. This reduction is equivalent to 5.7 billion BTUs of energy. Reduction in vehicle energy consumption would result in a beneficial impact to energy resources in the region and would reduce regional reliance on fossil fuels.

7.6.2.1.4 Maintenance and Storage Facility

Annual operation of the Commerce MSF site option would require consumption of approximately 0.8 million kWh per year of electricity, equivalent to 2.7 billion BTU per year. It would also consume a small amount of natural gas for comfort heating, totaling approximately 0.2 billion BTU per year.

7.6.2.1.5 Total Operational Energy Consumption

As shown in Table 7-6, total operational energy consumption under Alternative 2 would be greater than the energy consumption under 2042 without Project Conditions. This increase would result from increased electrical demand associated with operation of the LRT guideway, stations, and MSF. This alternative would reduce highway VMT and as such, fossil fuel energy demand would decrease as compared to 2042 without Project Conditions. When considering only non-renewable energy demand (i.e., fossil fuel combustion in highway vehicles and the portion of grid power provided by non-renewable sources), regional energy consumption under Alternative 2 would be reduced as compared to 2042 without Project Conditions. Alternative 2 with the Commerce MSF site option would result in a net annual reduction in non-renewable energy consumption of 4.3 billion BTUs relative to 2042 without Project Conditions.

Alternative 2 would result in a shift of 5.7 billion BTUs of fossil fuel energy demand from highway vehicles to regional electricity demand. Regional electricity supplies are becoming increasingly renewable, with a minimum 60 percent RPS required to be achieved for public energy providers in the State of California by 2030 and a 100 percent RPS (i.e., fully renewable grid energy supply) required by 2045. Alternative 2 would result in long-term beneficial impacts to energy resources through decreased reliance on non-renewable fossil fuels and increased reliance on the renewable grid energy supplies. Therefore, operation of Alternative 2 would not result in the wasteful, inefficient, or unnecessary consumption of energy resources and would have less than significant impacts on energy consumption.



Regional energy demand under Alternative 2 would be less than that under the 2019 existing conditions. As presented for information purposes in **Table 7-6**, fuel consumption in the study area would decrease by over 1 million gallons of gasoline and would increase by less than 14 thousand gallons of diesel. This change in fuel consumption would be driven by regional growth and improvements to vehicle fuel efficiencies that will occur independent of the Project. Electricity demand would increase by a total of 2.2 million kWh associated with operation of the Project facilities. Overall energy demand under Alternative 2 would be 126,352 billion BTUs less than that under the 2019 existing conditions, with the difference driven by non-project vehicle engine efficiency standards.

Operational energy impacts are summarized in **Table 7-6**.

Table 7-6. Estimated Energy Consumption from Operation – Alternative 2 with Commerce MSF

Operational Component	Gasoline Demand (Thousand Gallons)	Diesel Demand (Thousand Gallons)	Electrical Demand (kWh)	Natural Gas Demand (Billion BTU)	Operational Energy Total (Billion BTU) ¹
Light Rail Guideway	n/a	n/a	1,130,672	n/a	3.9
Stations	n/a	n/a	342,716	n/a	1.2
Commerce MSF	n/a	n/a	753,899	0.2	2.7
Regional Highway Traffic	5,207,914	252,982	n/a	n/a	661,253
2042 Total Alternative 2 Energy Consumption	5,207,914	252,982	2,227,287	0.2	661,261
2019 Existing Conditions Energy Demand	6,274,509	238,829	n/a	n/a	787,613
2042 Alternative 2 minus 2019 Existing Conditions Energy Demand ²	(1,066,595)	14,153	2,227,287	0.2	(126,352)
2042 without Project Conditions Energy Demand	5,207,958	252,984	n/a	n/a	661,259
2042 Alternative 2 minus 2042 without Project Conditions Net Energy Demand ²	(45)	(2)	2,227,287	0.2	2.1
2042 Alternative 2 minus 2042 without Project Conditions Non-Renewable Net Energy Demand ^{2,3}	(45)	(2)	356,366	0.2	(4.3)

Source: CDM Smith/AECOM, JV 2021.

Notes:

1 USEIA energy-unit conversion factors used to convert different project energy consumptions to common energy units (BTU) as follows: 0.137 million BTU per gallon of diesel fuel; 0.120 million BTU per gallon of gasoline; 3,412 BTU per kilowatt-hour. (USEIA 2021c).

2 Energy reductions (beneficial impacts) are shown in parentheses.

3 Non-renewable energy includes electricity after accounting for 84 percent clean energy, consistent with the 2030 target in SCE's 2020 *Integrated Resource Plan, 38 MMT Preferred Conforming Portfolio and Action Plan*.

Key:

BTU = British thermal unit; kWh = kilowatt-hours



Design Options

Atlantic/Pomona Station Option

As described above, the operation of Alternative 2 would not result in the wasteful, inefficient, or unnecessary consumption of energy resources. Implementation of Alternative 2 with the Atlantic/Pomona Station Option would not result in any appreciable change to the Project’s operational energy consumption as compared to the base Alternative 2. Thus, operation of Alternative 2 with the Atlantic/Pomona Station Option would result in less than significant impacts on energy consumption.

7.6.2.2 Construction Impacts

To determine construction-related energy consumption, the analysis used construction GHG emissions and USEIA CO₂ energy factors as described in Section 4.2.1. Construction energy impacts are summarized in Table 7-7.

Construction of Alternative 2 would result in a temporary energy demand of 63.9 billion BTUs with the Commerce MSF site option. This impact would be temporary, whereas the Project would result in long-term, beneficial impacts to energy resources in the region (i.e., decreased dependence on fossil fuels).

Table 7-7. Estimated Total Energy Consumption from Construction – Alternative 2 with Commerce MSF

Project Component ¹	Construction GHG Emissions (MTCO ₂ e)	Diesel Fuel Demand (Thousand Gallons)	Gasoline Fuel Demand (Thousand Gallons)	Energy Consumption (Billion BTUs) ²
Light Rail Guideway	1,602	129	34	21.8
Stations	1,955	177	18	26.5
Commerce MSF	1,099	68	48	15.1
Street Widening and TPSS	39	3	1	0.5
Total	4,696	377	100	63.9

Source: CDM Smith/AECOM, JV 2021.

Notes:

¹ GHG emissions associated with off-site vehicle trips (vendor trips, hauling trips, and worker commuting) are included in GHG emissions for each component of Project construction.

² USEIA energy-unit conversion factors used to convert different project energy consumptions to common energy units (BTU) as follows: 0.137 million BTU per gallon of diesel fuel; 0.120 million BTU per gallon of gasoline. (USEIA 2021c).

Key:

BTU = British thermal unit; MSF = maintenance and storage facility; MTCO₂e = metric tons carbon dioxide equivalents;

TPSS = traction power substations

Specific energy conservation measures would be confirmed in final design consistent with Metro’s 2011 ECMP and 2013 *Sustainable Rail Plan*, as well as Metro’s energy and environmental policies summarized in Section 3.2.3.2.1. Additional BMPs set forth in Metro’s Green construction policy would further reduce energy consumption during construction. These BMPs include, but are not limited to, the required use of renewable diesel fuel in construction equipment; the required use of Tier 4 off-road emission standard equipment as regionally available; the required use of USEPA 2007 on-road



emission standard compliant trucks; the limitation of vehicle idling to 5 minutes or fewer when not in use; and the use of grid-power in lieu of diesel generators where available. Therefore, construction of Alternative 2 would not result in the wasteful, inefficient, or unnecessary consumption of energy resources and would have less than significant impacts on energy consumption.

Design Options

Atlantic/Pomona Station Option

As described above, the construction of Alternative 2 would not result in the wasteful, inefficient, or unnecessary consumption of energy resources. While the Atlantic/Pomona Station, the TBM receiving pit, and the alignment north of the proposed Atlantic/Whittier station would be located at a different position from the base Alternative 2, comparable construction and excavation activities would be performed for the Atlantic/Pomona Station Option. Substantial additional construction is not anticipated for the Atlantic/Pomona Station Option and construction GHG emissions would not materially differ from the base Alternative 2. Therefore, implementation of the Atlantic/Pomona Station Option would not result in a meaningful change to the consumption of energy resources. Thus, construction of Alternative 2 with the Atlantic/Pomona Station Option would result in less than significant impacts on energy consumption.

7.6.3 Alternative 3 Atlantic to Greenwood IOS

Virtually every aspect of Alternative 3 construction and operation requires the consumption of some form of energy resources. This section analyzes the potential for significant environmental impacts from the wasteful, inefficient, or unnecessary consumption of energy resources under Alternative 3.

7.6.3.1 Operational Impacts

Operational energy use was estimated for Alternative 3 including the energy demand of project elements, such as LRVs, four new stations, regional traffic, parking facilities, and an MSF which is essential in maintaining a reliable light rail system. MSF operations are discussed in Section 7.6.4. The energy use estimates also include the energy demand of regional elements whose energy use would be altered by the Project, such as regional traffic.

7.6.3.1.1 Light Rail and Station Operations

As shown in **Table 7-8** and **Table 7-9**, annual operations of the approximately 4.6 miles of new LRT guideway under this alternative would consume approximately 2.0 million kWh of electricity, equivalent to 6.9 billion BTUs. Annual operation of the LRT stations would require an additional 0.5 million kWh of electricity, equivalent to 1.6 billion BTUs.

7.6.3.1.2 Parking Facilities

Annual operations of parking facilities to be constructed under Alternative 3 would consume less than 52 thousand kWh of electricity, equivalent to 0.2 billion BTUs. Parking facilities assumed under this alternative include surface parking lot at Greenwood station.



7.6.3.1.3 Regional Traffic

Operation of Alternative 3 would reduce annual highway VMT within the region by approximately 2.5 million VMT compared to 2042 without Project Conditions. This decrease would result in annual regional reduction in consumption of approximately 71 thousand gallons of gasoline and 3 thousand gallons of diesel fuel from highway vehicles. This reduction is equivalent to 9.1 billion BTUs of energy. Reduction in vehicle energy consumption would result in a beneficial impact to energy resources in the region and would reduce regional reliance on fossil fuels.

7.6.3.1.4 Maintenance and Storage Facility

As shown in **Table 7-8**, annual operation of the Commerce MSF site option would require consumption of approximately 0.8 million kWh per year of electricity, equivalent to 2.7 billion BTU per year. It would also consume a small amount of natural gas for comfort heating, totaling approximately 0.2 billion BTU per year.

As shown in **Table 7-9**, annual operation of the Montebello MSF site option would require consumption of approximately 0.8 million kWh per year of electricity, equivalent to 2.8 billion BTU per year. It would also consume a small amount of natural gas for comfort heating, totaling approximately 0.2 billion BTU per year.

7.6.3.1.5 Total Operational Energy Consumption

As shown in **Table 7-8** and **Table 7-9**, total operational energy consumption under Alternative 3 would be greater than the energy consumption under 2042 without Project Conditions. This increase would result from increased electrical demand associated with operation of the LRT guideway, stations, and MSF. This alternative would reduce highway VMT and as such, fossil fuel energy demand would decrease as compared to 2042 without Project Conditions. When considering only non-renewable energy demand (i.e., fossil fuel combustion in highway vehicles and the portion of grid power provided by non-renewable sources), regional energy consumption under Alternative 3 would be reduced as compared to 2042 without Project Conditions. Alternative 3 with either the Commerce MSF or Montebello MSF site option would result in a net annual reduction in non-renewable energy consumption of 7.1 billion BTUs relative to 2042 without Project Conditions.

Alternative 3 would result in a shift of 9.1 billion BTUs of fossil fuel energy demand from highway vehicles to regional electricity demand. Regional electricity supplies are becoming increasingly renewable, with a minimum 60 percent RPS required to be achieved for public energy providers in the State of California by 2030 and a 100 percent RPS (i.e., fully renewable grid energy supply) required by 2045. Alternative 3 would result in long-term beneficial impacts to energy resources through decreased reliance on non-renewable fossil fuels and increased reliance on the renewable grid energy supplies. Therefore, operation of Alternative 3 would not result in the wasteful, inefficient, or unnecessary consumption of energy resources and would have less than significant impacts on energy consumption.

Regional energy demand under Alternative 3 would be less than that under the 2019 existing conditions. As presented for information purposes in **Table 7-8** and **Table 7-9**, fuel consumption in the study area would decrease by over 1 million gallons of gasoline and would increase by less than 14 thousand gallons of diesel. This change in fuel consumption would be driven by regional growth and improvements to vehicle fuel efficiencies that will occur independent of the Project. Electricity demand



would increase by a total of 3.3 million kWh associated with operation of the Project facilities. Overall energy demand under Alternative 3 would be 126,352 billion BTUs less than that under the 2019 existing conditions, with the difference driven by non-project vehicle engine efficiency standards.

Operational energy impacts are summarized in **Table 7-8** and **Table 7-9**.

Table 7-8. Estimated Energy Consumption from Operation – Alternative 3 with Commerce MSF

Operational Component	Gasoline Demand (Thousand Gallons)	Diesel Demand (Thousand Gallons)	Electrical Demand (kWh)	Natural Gas Demand (Billion BTU)	Operational Energy Total (Billion BTU) ¹
Light Rail Guideway	n/a	n/a	2,035,210	n/a	6.9
Stations	n/a	n/a	463,488	n/a	1.6
Parking Facilities	n/a	n/a	51,800	n/a	0.2
Commerce MSF	n/a	n/a	753,899	0.2	2.7
Regional Highway Traffic	5,207,887	252,981	n/a	n/a	661,250
Total Energy Consumption	5,207,887	252,981	3,304,397	0.2	661,261
2019 Existing Conditions Energy Demand	6,274,509	238,829	n/a	n/a	787,613
2042 Alternative 3 minus 2019 Existing Conditions Energy Demand ²	(1,066,622)	14,152	3,304,397	0.2	(126,352)
2042 without Project Conditions Energy Demand	5,207,958	252,984	n/a	n/a	661,259
2042 Alternative 3 minus 2042 without Project Conditions Net Energy Demand ²	(71)	(3)	3,304,397	0.2	2.4
2042 Alternative 3 minus 2042 without Project Conditions Non-Renewable Net Energy Demand ^{2,3}	(71)	(3)	528,704	0.2	(7.1)

Source: CDM Smith/AECOM, JV 2021.

Notes:

1 USEIA energy-unit conversion factors used to convert different project energy consumptions to common energy units (BTU) as follows: 0.137 million BTU per gallon of diesel fuel; 0.120 million BTU per gallon of gasoline; 3,412 BTU per kilowatt-hour. (USEIA 2021c).

2 Energy reductions (beneficial impacts) are shown in parentheses.

3 Non-renewable energy includes electricity after accounting for 84 percent clean energy, consistent with the 2030 target in SCE's 2020 *Integrated Resource Plan, 38 MMT Preferred Conforming Portfolio and Action Plan*.

Key:

BTU = British thermal unit; kWh = kilowatt-hours



**Table 7-9. Estimated Energy Consumption from Operation – Alternative 3
with Montebello MSF**

Operational Component	Gasoline Demand (Thousand Gallons)	Diesel Demand (Thousand Gallons)	Electrical Demand (kWh)	Natural Gas Demand (Billion BTU)	Operational Energy Total (Billion BTU) ¹
Light Rail Guideway	n/a	n/a	2,035,210	n/a	6.9
Stations	n/a	n/a	463,488	n/a	1.6
Parking Facilities	n/a	n/a	51,800	n/a	0.2
Montebello MSF	n/a	n/a	776,768	0.2	2.8
Regional Highway Traffic	5,207,887	252,981	n/a	n/a	661,250
2019 Existing Conditions Energy Demand	5,207,887	252,981	3,275,466	0.2	661,261
2042 Alternative 3 minus 2019 Existing Conditions Energy Demand ²	6,274,509	238,829	n/a	n/a	787,613
2042 without Project Conditions Energy Demand	(1,066,622)	14,152	3,327,266	0.2	(126,352)
2042 Alternative 3 minus 2042 without Project Conditions Net Energy Demand ²	5,207,958	252,984	n/a	n/a	661,259
2042 Alternative 3 minus 2042 without Project Conditions Non-Renewable Net Energy Demand ^{2,3}	(71)	(3)	3,327,266	0.2	2.4
2019 Existing Conditions Energy Demand	(71)	(3)	532,363	0.2	(7.1)

Source: CDM Smith/AECOM, JV 2021.

Notes:

1 USEIA energy-unit conversion factors used to convert different project energy consumptions to common energy units (BTU) as follows: 0.137 million BTU per gallon of diesel fuel; 0.120 million BTU per gallon of gasoline; 3,412 BTU per kilowatt-hour. (USEIA 2021c).

2 Energy reductions (beneficial impacts) are shown in parentheses.

3 Non-renewable energy includes electricity adjustments to account for 84 percent clean energy, consistent with the 2030 target in SCE's 2020 Integrated Resource Plan, 38 MMT Preferred Conforming Portfolio and Action Plan.

Key:

BTU = British thermal unit; kWh = kilowatt-hours

Design Options

Atlantic/Pomona Station Option

As described above, the operation of Alternative 3 would not result in the wasteful, inefficient, or unnecessary consumption of energy resources. Implementation of Alternative 3 with the Atlantic/Pomona Station Option would not result in any appreciable change to the Project's operational energy consumption as compared to the base Alternative 3. Thus, operation of Alternative



3 with the Atlantic/Pomona Station Option would result in less than significant impacts on energy consumption.

Montebello At-Grade Option

As described above, the operation of Alternative 3 would not result in the wasteful, inefficient, or unnecessary consumption of energy resources. Implementation of Alternative 3 with the Montebello At-Grade Option would not result in any appreciable change in energy consumption compared to the base Alternative 3. Thus, operation of Alternative 3 with the Montebello At-Grade Option would result in less than significant impacts on energy consumption.

7.6.3.2 Construction Impacts

To determine construction-related energy consumption, the analysis used construction GHG emissions and USEIA CO₂ energy factors as described in **Section 4.2.1**. Construction energy impacts are summarized in **Table 7-10** and **Table 7-11**.

Construction of Alternative 3 would result in a temporary energy demand of 74.5 billion BTUs with the Commerce MSF site option and 78.3 billion BTUs with the Montebello MSF site option. This impact would be temporary, whereas the Project would result in long-term, beneficial impacts to energy resources in the region (i.e., decreased dependence on fossil fuels).

Table 7-10. Estimated Total Energy Consumption from Construction – Alternative 3 with Commerce MSF

Project Component ¹	Construction GHG Emissions (MTCO ₂ e)	Diesel Fuel Demand (Thousand Gallons)	Gasoline Fuel Demand (Thousand Gallons)	Energy Consumption (Billion BTUs) ²
Light Rail Guideway	2,001	160	43	27.2
Stations	2,178	198	19	29.5
Parking Facilities	17	1	1	0.2
Commerce MSF	1,099	68	48	15.1
Street Widening and TPSS	182	16	3	2.5
Total	5,477	443	114	74.5

Source: CDM Smith/AECOM, JV 2021.

Notes:

1 GHG emissions associated with off-site vehicle trips (vendor trips, hauling trips, and worker commuting) are included in GHG emissions for each component of Project construction.

2 USEIA energy-unit conversion factors used to convert different project energy consumptions to common energy units (BTU) as follows: 0.137 million BTU per gallon of diesel fuel; 0.120 million BTU per gallon of gasoline. (USEIA 2021c).

Key:

BTU = British thermal unit; MSF = maintenance and storage facility; MTCO₂e = metric tons carbon dioxide equivalents;

TPSS = traction power substations



Table 7-11. Estimated Total Energy Consumption from Construction – Alternative 3 with Montebello MSF

Project Component ¹	Construction GHG Emissions (MTCO ₂ e)	Diesel Fuel Demand (Thousand Gallons)	Gasoline Fuel Demand (Thousand Gallons)	Energy Consumption (Billion BTUs) ²
Light Rail Guideway	2,001	160	43	27.2
Stations	2,178	198	19	29.5
Parking Facilities	17	1	1	0.2
Montebello MSF	1,374	85	60	18.9
Street Widening and TPSS	182	16	3	2.5
Total	5,752	460	126	78.3

Source: CDM Smith/AECOM, JV 2021.

Notes:

1 GHG emissions associated with off-site vehicle trips (vendor trips, hauling trips, and worker commuting) are included in GHG emissions for each component of Project construction.

2 USEIA energy-unit conversion factors used to convert different project energy consumptions to common energy units (BTU) as follows: 0.137 million BTU per gallon of diesel fuel; 0.120 million BTU per gallon of gasoline. (USEIA 2021c).

Key:

BTU = British thermal unit; MSF = maintenance and storage facility; MTCO₂e = metric tons carbon dioxide equivalents;

TPSS = traction power substations

Specific energy conservation measures would be confirmed in final design consistent with Metro’s 2011 ECMP and 2013 *Sustainable Rail Plan*, as well as Metro’s energy and environmental policies summarized in **Section 3.2.3.2.1**. Additional BMPs set forth in Metro’s Green construction policy would further reduce energy consumption during construction. These BMPs include but are not limited to the required use of renewable diesel fuel in construction equipment; the required use of Tier 4 off-road emission standard equipment as regionally available; the required use of USEPA 2007 on-road emission standard compliant trucks; the limitation of vehicle idling to 5 minutes or fewer when not in use; and the use of grid-power in lieu of diesel generators where available. Therefore, construction of Alternative 3 would not result in the wasteful, inefficient, or unnecessary consumption of energy resources and would have less than significant impacts on energy consumption.

Design Options

Atlantic/Pomona Station Option

As described above, the construction of Alternative 3 would not result in the wasteful, inefficient, or unnecessary consumption of energy resources. While the Atlantic/Pomona Station, the TBM receiving pit, and the alignment north of the proposed Atlantic/Whittier station would be located at a different position from the base Alternative 2, comparable construction and excavation activities would be performed for the Atlantic/Pomona Station Option. Substantial additional construction is not anticipated for the Atlantic/Pomona Station Option and construction GHG emissions would not materially differ from the base Alternative 3. Therefore, implementation of the Atlantic/Pomona Station Option would not result in a meaningful change to the consumption of energy resources. Thus, construction of Alternative 3 with the Atlantic/Pomona Station Option would result in less than significant impacts on energy consumption.



Montebello At-Grade Option

As described above, the construction of Alternative 3 would not result in the wasteful, inefficient, or unnecessary consumption of energy resources. Implementation of Alternative 3 with the Montebello At-Grade Option would result in a 2.5 billion BTU difference in construction energy consumption compared to the base Alternative 3, less than five percent of total construction energy consumption. Therefore, implementation of the Montebello At-Grade option would not cause a substantial change to the consumption of energy resources during construction. **Table 7-5** presents the energy demand associated with the Montebello At-Grade Option and corresponding portion of the base alternative, which would be the same under Alternative 3 as under Alternative 1. Thus, construction of Alternative 3 with the Montebello At-Grade Option would result in less than significant impacts on energy consumption.

7.6.4 Maintenance and Storage Facilities

7.6.4.1 Operational Impacts

As detailed in **Section 7.6.1.1**, **Section 7.6.2.1**, and **Section 7.6.3.1**, the operation of the Project would not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources. Each Build Alternative would result in a substantial shift in energy demand from fossil fuel highway vehicles to increasingly renewable regional electricity demand. Operation of an MSF is essential in maintaining a reliable light rail system and was included in the Project energy assessment. While operation of an MSF would require a small amount of natural gas for comfort heating, the Project under any of its Build Alternatives would nonetheless represent a substantial shift in energy resource dependence away from fossil fuels. Therefore, operation of an MSF would not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project operation.

7.6.4.1.1 Commerce MSF

Annual operation of the Commerce MSF site option would require consumption of approximately 0.8 million kWh per year of electricity, equivalent to 2.7 billion BTU per year. It would also consume a small amount of natural gas for comfort heating, totaling approximately 0.2 billion BTU per year. As described above, the operation of the Commerce MSF site option, would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources. Thus, operation of the Commerce MSF site option would result in less than significant impacts on energy consumption.

7.6.4.1.2 Montebello MSF

Annual operation of the Montebello MSF site option would require consumption of approximately 0.8 million kWh per year of electricity, equivalent to 2.8 billion BTU per year. It would also consume a small amount of natural gas for comfort heating, totaling approximately 0.2 billion BTU per year. As described above, the operation of the Montebello MSF site option, would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources. Thus, operation of the Montebello MSF site option would result in less than significant impacts on energy consumption.



Design Option

Montebello MSF At-Grade Option

As described above, the operation of the Montebello MSF site option would not result in the wasteful, inefficient, or unnecessary consumption of energy resources. Implementation of the Montebello MSF At-Grade Option would not result in any appreciable change to operational energy consumption as compared to the base Montebello MSF site option. Thus, operation of the Montebello MSF At-Grade Option would result in less than significant impacts on energy consumption.

7.6.4.2 Construction Impacts

As detailed in **Section 7.6.1.2**, **Section 7.6.2.2**, and **Section 7.6.3.2**, the construction of the Project would not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction. The operation of an MSF is essential in maintaining a reliable light rail system; therefore, construction of an MSF was included in the Project energy assessment. While construction of an MSF would require the short-term consumption of energy resources, primarily in the form of diesel fuel, the Project under any of its Build Alternatives would contribute to a long-term regional shift in energy resource dependence away from fossil fuels. Therefore, construction of an MSF would not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction.

7.6.4.2.1 Commerce MSF

As specified previously, construction of the Commerce MSF site option would require 68 thousand gallons of diesel fuel and 48 thousand gallons of gasoline, equivalent to 15.1 billion BTUs. Energy consumption required for construction would be temporary. Since the Project would result in long-term beneficial impacts to energy resources and operation of an MSF is essential aspect of Project operations, the construction energy consumption associated with the MSF would not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources. Thus, construction of the Commerce MSF site option would result in less than significant impacts on energy consumption.

7.6.4.2.2 Montebello MSF

As specified previously, construction of the Montebello MSF site option would require 85 thousand gallons of diesel fuel and 60 thousand gallons of gasoline fuel, equivalent to 18.9 billion BTUs. Since the Project would result in long-term beneficial impacts to energy resources and operation of an MSF is essential aspect of Project operations, the construction energy consumption associated with the MSF would not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources. Thus, construction of the Montebello MSF site option would result in less than significant impacts on energy consumption.



Design Option

Montebello MSF At-Grade Option

Similar to the base Montebello MSF site option, the Montebello MSF At-Grade Option would not result in the wasteful, inefficient, or unnecessary consumption of energy resources. To illustrate, **Table 7-5** presents a comparison of the construction energy consumption of the Montebello At-Grade Option, to the construction energy consumption of the base Build Alternative, a one-mile length of alignment in an aerial configuration. The energy consumption difference for one mile of alignment would be 2.5 billion BTUs, which is less than five percent of total construction energy consumption. The length of affected alignment under the Montebello MSF At-Grade Option would be less than one quarter of a mile and would therefore result in an even smaller difference in energy consumption. Thus, construction of the Montebello MSF At-Grade Option would result in less than significant impacts on energy consumption.

7.7 Impact ENG-2: Energy Plans

Impact ENG-2: Would a Build Alternative conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

7.7.1 Alternative 1 Washington Boulevard

7.7.1.1 Operational Impacts

Various state and local plans influence the adoption of renewable energy and energy efficiency requirements in the GSA. Many of the applicable energy plans include components that are larger state or regional regulatory actions with which the Project cannot directly or indirectly comply with or obstruct. Such plans include the California Clean Cars Program which governs emission standards for automobile manufacturers, the Alternative and Renewable Fuel and Vehicle Technology Program which empowers the CEC to incentivize the development of alternative and renewable fuel technologies, and the California RPS which requires 60 percent renewable or zero-carbon grid power by 2030 and 100 percent renewable or zero-carbon grid power by 2045. Other plans and policies have goals which could be directly or indirectly impacted by the project.

The California Alternative Fuels Plan aims to expand alternative fuel adoption and availability to protect the state economy from petroleum pricing variations and spikes but included topics such as conventional vehicle efficiency and other components of the transportation system. The plan concludes that significant reductions to regional VMT, and enhanced land use and transportation planning would be necessary. As stated in **Section 7.6.1.1.3**, Alternative 1 would reduce regional highway travel by 3.2 million VMT and would thus not conflict with the plan.

While SCAG's 2020 RTP/SCS is primarily a transportation and land-use plan, the plan includes transportation policies which would reduce energy and fossil fuel demand and encourage energy efficiency. The Project is identified in the 2020 RTP/SCS as a major transit capital project and is included in the plan's regional growth and transportation projections. Further, the Project, alongside other transit improvement projects planned to be implemented throughout the region, would facilitate



broader adoption of mass transit and contribute to regional VMT reductions, as projected in the 2020 RTP/SCS. Therefore, the Project would not conflict with or obstruct the 2020 RTP/SCS.

Metro has established multiple energy-related plans and policies including the 2007 Energy and Sustainability Policy, 2009 Environmental Policy, 2011 Renewable Energy Policy, 2011 Energy Conservation and Management Plan, 2013 *Sustainable Rail Plan*, 2014 Complete Streets Policy, 2016 *First/Last Mile Strategic Plan*, 2019 CAAP, and 2020 *Moving Beyond Sustainability Strategic Plan*. While each of these plans addresses a specific aspect of Metro operations or planning, from an operational energy perspective, the plans cumulatively encourage:

- Reductions to natural resources and fossil fuel consumption
- Efficient use of fuels and electricity
- The promotion and procurement of renewable energy sources, such as PV installations, as feasible
- Enhancing community-transit integration through improvements to walking, biking, and other transit-mode connections

Alternative 1 would contribute to a regional shift in transportation energy demand away from fossil fuels toward grid power. Stations, lighting in parking lots, and the MSF would each be designed and constructed to achieve energy efficiency consistent with or exceeding Metro's and CCR Title 24 efficiency requirements. Further, the Project would, by its nature, enhance community access to public transit through the operation of the LRT. Therefore, the Project would not conflict with or obstruct Metro's energy-related plans and policies.

Local plans by the County of Los Angeles and cities of Commerce, Montebello, Pico Rivera, Santa Fe Springs, and Whittier establish energy-related requirements and goals. The applicable energy-related aspects of these plans can be summarized as:

- Enhance, promote, and make accessible user-friendly public transit systems
- Encourage the use of alternative fuels and energy sources
- Encourage energy conservation features and reduce energy demand in new development
- Reduce trips and VMT
- Reduce natural resource and fossil fuel consumption

Alternative 1 would enhance and make public transit systems more accessible in the GSA. Additionally, the Project LRT vehicles would use electricity rather than conventional fossil fuels and would contribute to a regional shift in transportation energy demand away from fossil fuels and onto increasingly renewable grid power. Further, new Project construction would include energy conservation and efficiency features consistent with Title 24. For these reasons, and the VMT reductions previously discussed, operation of Alternative 1 would be consistent with and would not conflict with or obstruct the applicable local plans for renewable energy or energy efficiency. Thus, operation of Alternative 1 would have a less than significant impact.



Design Options

Atlantic/Pomona Station Option

As described above, the operation of the base Alternative 1 would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. The operation of Alternative 1 with the Atlantic/Pomona Station Option would remain consistent with applicable plans. Thus, operation of Alternative 1 with the Atlantic/Pomona Station Option would have a less than significant impact.

Montebello At-Grade Option

As described above, the operation of the base Alternative 1 would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. The operation of Alternative 1 with the Montebello At-Grade Option would remain consistent with applicable plans. Thus, operation of Alternative 1 with the Montebello At-Grade Option would have a less than significant impact.

7.7.1.2 Construction Impacts

The CCR Title 24 establishes energy efficiency metrics by which all newly constructed buildings in the State of California must comply. The Project would be constructed in a manner consistent with the regulations and efficiency requirements at the time of construction and would not conflict with Title 24.

Metro's 2011 Green Construction Policy addresses the air quality implications of construction from Metro projects. From a construction energy perspective, the plan encourages the limiting of idling and the use of grid-electric power when feasible during construction. Construction of Alternative 1 would be consistent with Metro's Green Construction Policy. Thus, construction of Alternative 1 would have a less than significant impact.

Design Options

Atlantic/Pomona Station Option

As described above, the construction of the base Alternative 1 would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. The construction of Alternative 1 with the Atlantic/Pomona Station Option would remain consistent with applicable plans. Thus, construction of Alternative 1 with the Atlantic/Pomona Station Option would have a less than significant impact.

Montebello At-Grade Option

As described above, the construction of the base Alternative 1 would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. The construction of Alternative 1 with the Montebello At-Grade Option would remain consistent with applicable plans. Thus, construction of Alternative 1 with the Montebello At-Grade Option would have a less than significant impact.



7.7.2 Alternative 2 Atlantic to Commerce/Citadel IOS

7.7.2.1 Operational Impacts

Various state and local plans influence the adoption of renewable energy and energy efficiency requirements in the GSA. Many of the applicable energy plans include components that are larger state or regional regulatory actions with which the Project cannot directly or indirectly comply with or obstruct. Such plans include the California Clean Cars Program which governs emission standards for automobile manufacturers, the Alternative and Renewable Fuel and Vehicle Technology Program which empowers the CEC to incentivize the development of alternative and renewable fuel technologies, and the California Renewables Portfolio Standard which requires 60 percent renewable or zero-carbon grid power by 2030 and 100 percent renewable or zero-carbon grid power by 2045. Other plans and policies have goals which could be directly or indirectly impacted by the project.

California EO B-16-12 established a 1.5-billion-gallon fuel reduction target to be met by 2025. The Project would not be constructed until after this time, therefore the Project would not contribute to or conflict with the achievement of this target.

The California Alternative Fuels Plan aimed to expand alternative fuel adoption and availability to protect the state economy from petroleum pricing variations and spikes but included topics such as conventional vehicle efficiency and other components of the transportation system. The plan concluded that significant reductions to regional VMT, and enhanced land use and transportation planning would be necessary. As stated in **Section 7.6.2.1.3**, Alternative 2 would reduce regional highway travel by 1.6 million VMT compared to 2042 without Project Conditions and would thus not conflict with the plan.

While SCAG's 2020 RTP/SCS is primarily a transportation and land-use plan, the plan includes transportation policies which would reduce energy and fossil fuel demand and encourage energy efficiency. The Project is identified in the 2020 RTP/SCS as a major transit capital project and is included in the plan's regional growth and transportation projections. Further, the Project, alongside other transit improvement projects planned to be implemented throughout the region, would facilitate broader adoption of mass transit and contribute to regional VMT reductions, as projected in the 2020 RTP/SCS. Therefore, the Project would not conflict with or obstruct the 2020 RTP/SCS.

Metro has established multiple energy-related plans and policies including the 2007 Energy and Sustainability Policy, 2009 Environmental Policy, 2011 Renewable Energy Policy, 2011 Energy Conservation and Management Plan, 2012 CAAP, 2013 *Sustainable Rail Plan*, 2014 Complete Streets Policy, *Moving Beyond Sustainability Strategic Plan*, and 2016 *First/Last Mile Strategic Plan*. While each of these plans addresses a specific aspect of Metro operations or planning, from an operational energy perspective, the plans cumulatively encourage:

- Reductions to natural resources and fossil fuel consumption
- Efficient use of fuels and electricity



- The promotion and procurement of renewable energy sources, such as PV installations, as feasible
- Enhancing community-transit integration through improvements to walking, biking, and other transit-mode connections

Alternative 2 would contribute to a regional shift in transportation energy demand away from fossil fuels toward grid power. Stations, lighting in parking lots, and the MSF would each be designed and constructed to achieve energy efficiency consistent with or exceeding Metro's and CCR Title 24 efficiency requirements. Further, the Project would, by its nature, enhance community access to public transit through the operation of the LRT. Therefore, the Project would not conflict with or obstruct Metro's energy-related plans and policies.

Various local plans by the County of Los Angeles and Cities of Commerce, Montebello, Pico Rivera, Santa Fe Springs, and Whittier establish energy-related requirements and goals. The applicable energy-related aspects of these plans can be summarized as:

- Enhance, promote, and make accessible user-friendly public transit systems
- Encourage the use of alternative fuels and energy sources
- Encourage energy conservation features and reduce energy demand in new development
- Reduce trips and VMT
- Reduce natural resource and fossil fuel consumption

Alternative 2 would, by its nature, enhance and make more accessible public transit systems in the GSA. Additionally, the Project LRT vehicles would use electricity rather than conventional fossil fuels and would contribute to a regional shift in transportation energy demand away from fossil fuels and onto increasingly renewable grid power. Further, new Project construction would include energy conservation and efficiency features consistent with Title 24. For these reasons, and the VMT reductions previously discussed, the operation of Alternative 2 would be consistent with and would not conflict with or obstruct the applicable local plans for renewable energy or energy efficiency. Thus, operation of Alternative 2 would have a less than significant impact.

Design Options

Atlantic/Pomona Station Option

As described above, the operation of the base Alternative 2 would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. The operation of Alternative 2 with the Atlantic/Pomona Station Option would remain consistent with applicable plans. Thus, operation of Alternative 2 with the Atlantic/Pomona Station Option would have a less than significant impact.

7.7.2.2 Construction Impacts

The CCR Title 24 establishes energy efficiency metrics by which all newly constructed buildings in the State of California must comply. The Project would be constructed in a manner consistent with the



regulations and efficiency requirements at the time of construction and would not conflict with Title 24.

Metro’s 2011 Green Construction Policy addresses the air quality implications of construction from Metro projects. From a construction energy perspective, the policy encourages the limiting of idling and the use of grid-electric power when feasible during construction. Construction of Alternative 2 would be consistent with Metro’s Green Construction Policy during construction. Thus, construction of Alternative 2 would have a less than significant impact.

Design Options

Atlantic/Pomona Station Option

As described above, the construction of the base Alternative 2 would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. The construction of Alternative 2 with the Atlantic/Pomona Station Option would remain consistent with applicable plans. Thus, construction of Alternative 2 with the Atlantic/Pomona Station Option would have a less than significant impact.

7.7.3 Alternative 3 Atlantic to Greenwood IOS

7.7.3.1 Operational Impacts

Various state and local plans influence the adoption of renewable energy and energy efficiency requirements in the GSA. Many of the applicable energy plans include components that are larger state or regional regulatory actions with which the Project cannot directly or indirectly comply with or obstruct. Such plans include the California Clean Cars Program which governs emission standards for automobile manufacturers, the Alternative and Renewable Fuel and Vehicle Technology Program which empowers the CEC to incentivize the development of alternative and renewable fuel technologies, and the California Renewables Portfolio Standard which requires 60 percent renewable or zero-carbon grid power by 2030 and 100 percent renewable or zero-carbon grid power by 2045. Other plans and policies have goals which could be directly or indirectly impacted by the project.

California EO B-16-12 established a 1.5-billion-gallon fuel reduction target to be met by 2025. The Project would not be constructed until after this time, therefore the Project would not contribute to or conflict with the achievement of this target.

The California Alternative Fuels Plan aimed to expand alternative fuel adoption and availability to protect the state economy from petroleum pricing variations and spikes but included topics such as conventional vehicle efficiency and other components of the transportation system. The plan concluded that significant reductions to regional VMT, and enhanced land use and transportation planning would be necessary. As stated in **Section 7.6.3.1.3**, Alternative 3 would reduce regional highway travel by 2.5 million VMT compared to 2042 without Project Conditions and would thus not conflict with the plan.

While SCAG’s 2020 RTP/SCS is primarily a transportation and land-use plan, the plan includes transportation policies which would reduce energy and fossil fuel demand and encourage energy efficiency. The Project is identified in the 2020 RTP/SCS as a major transit capital project and is



included in the plan's regional growth and transportation projections. Further, the Project, alongside other transit improvement projects planned to be implemented throughout the region, would facilitate broader adoption of mass transit and contribute to regional VMT reductions, as projected in the 2020 RTP/SCS. Therefore, the Project would not conflict with or obstruct the 2020 RTP/SCS.

Metro has established multiple energy-related plans and policies including the 2007 Energy and Sustainability Policy, 2009 Environmental Policy, 2011 Renewable Energy Policy, 2011 Energy Conservation and Management Plan, 2012 CAAP, 2013 *Sustainable Rail Plan*, 2014 Complete Streets Policy, *Moving Beyond Sustainability Strategic Plan*, and 2016 *First/Last Mile Strategic Plan*. While each of these plans addresses a specific aspect of Metro operations or planning, from an operational energy perspective, the plans cumulatively encourage:

- Reductions to natural resources and fossil fuel consumption
- Efficient use of fuels and electricity
- The promotion and procurement of renewable energy sources, such as PV installations, as feasible
- Enhancing community-transit integration through improvements to walking, biking, and other transit-mode connections

Alternative 3 would contribute to a regional shift in transportation energy demand away from fossil fuels toward grid power. Stations, lighting in parking lots, and the MSF would each be designed and constructed to achieve energy efficiency consistent with or exceeding Metro's and CCR Title 24 efficiency requirements. Further, the Project would, by its nature, enhance community access to public transit through the operation of the LRT. Therefore, the Project would not conflict with or obstruct Metro's energy-related plans and policies.

Various local plans by the County of Los Angeles and Cities of Commerce, Montebello, Pico Rivera, Santa Fe Springs, and Whittier establish energy-related requirements and goals. The applicable energy-related aspects of these plans can be summarized as:

- Enhance, promote, and make accessible user-friendly public transit systems
- Encourage the use of alternative fuels and energy sources
- Encourage energy conservation features and reduce energy demand in new development
- Reduce trips and VMT
- Reduce natural resource and fossil fuel consumption

Alternative 3 would, by its nature, enhance and make more accessible public transit systems in the GSA. Additionally, the Project LRT vehicles would use electricity rather than conventional fossil fuels and would contribute to a regional shift in transportation energy demand away from fossil fuels and onto increasingly renewable grid power. Further, new Project construction would include energy conservation and efficiency features consistent with Title 24. For these reasons, and the VMT reductions previously discussed, the operation of Alternative 3 would be consistent with and would



not conflict with or obstruct the applicable local plans for renewable energy or energy efficiency. Thus, operation of Alternative 3 would have a less than significant impact.

Design Options

Atlantic/Pomona Station Option

As described above, the operation of the base Alternative 3 would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. The operation of Alternative 3 with the Atlantic/Pomona Station Option would remain consistent with applicable plans. Thus, operation of Alternative 3 with the Atlantic/Pomona Station Option would have a less than significant impact.

Montebello At-Grade Option

As described above, the operation of the base Alternative 3 would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. The operation of Alternative 3 with the Montebello At-Grade Option would remain consistent with applicable plans. Thus, operation of Alternative 3 with the Montebello At-Grade Option would have a less than significant impact.

7.7.3.2 Construction Impacts

The CCR Title 24 establishes energy efficiency metrics by which all newly constructed buildings in the State of California must comply. Alternative 3 would be constructed in a manner consistent with the regulations and efficiency requirements at the time of construction and would not conflict with Title 24.

Metro's 2011 Green Construction Policy addresses the air quality implications of construction from Metro projects. From a construction energy perspective, the policy encourages the limiting of idling and the use of grid-electric power when feasible during construction. Construction of Alternative 3 would be consistent with Metro's Green Construction Policy during construction. Thus, construction of Alternative 3 would have a less than significant impact.

Design Options

Atlantic/Pomona Station Option

As described above, the construction of the base Alternative 3 would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. The construction of Alternative 3 with the Atlantic/Pomona Station Option would remain consistent with applicable plans. Thus, construction of Alternative 3 with the Atlantic/Pomona Station Option would have a less than significant impact.

Montebello At-Grade Option

As described above, the construction of the base Alternative 3 would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. The construction of Alternative 3 with the Montebello At-Grade Option would remain consistent with applicable plans. Thus, construction of Alternative 3 with the Montebello At-Grade Option would have a less than significant impact.



7.7.4 Maintenance and Storage Facilities

7.7.4.1 Operational Impacts

As detailed in **Section 7.7.1.1**, **Section 7.7.2.1**, and **Section 7.7.3.1**, the operation of the Project would not conflict with or obstruct applicable state or local plans for renewable energy or energy efficiency. Moreover, the Project would reduce highway VMT, transition regional transportation energy demand away from natural resources (such as fossil fuels) to increasingly renewable grid electricity and would enhance transit in the GSA – consistent with the goals of the applicable plans. Operation of an MSF is essential in maintaining a reliable light rail system and was included in the Project energy assessment and energy plan consistency analysis. Therefore, operation of an MSF would not conflict with or obstruct applicable state or local plans for renewable energy or energy efficiency.

7.7.4.1.1 Commerce MSF

As described above, the operation of the Commerce MSF site option would not conflict with or obstruct applicable state or local plans for renewable energy or energy efficiency. Thus, operation of the Commerce MSF site option would have a less than significant impact.

7.7.4.1.2 Montebello MSF

As described above, the operation of the Montebello MSF site option, would not conflict with or obstruct applicable state or local plans for renewable energy or energy efficiency. Thus, operation of the Montebello MSF site option would have a less than significant impact.

Design Option

Montebello MSF At-Grade Option

As with the base Montebello MSF site option, operation of the Montebello MSF At-Grade Option would not conflict with or obstruct applicable state or local plans for renewable energy or energy efficiency. Thus, operation of the Montebello MSF At-Grade Option would have a less than significant impact.

7.7.4.2 Construction Impacts

As detailed in **Section 7.7.1.2**, **Section 7.7.2.2**, and **Section 7.7.3.2** the construction of the Project would not conflict with or obstruct applicable state or local plans for renewable energy or energy efficiency. Moreover, the Project would reduce highway VMT, transition regional transportation energy demand away from natural resources (such as fossil fuels) to increasingly renewable grid electricity, and would enhance transit in the GSA – consistent with the goals of the applicable plans. Operation of an MSF is essential in maintaining a reliable light rail system; therefore, construction of an MSF was included in the Project energy assessment and energy plan consistency analysis. Therefore, construction of an MSF would not conflict with or obstruct applicable state or local plans for renewable energy or energy efficiency.



7.7.4.2.1 Commerce MSF

As described above, the construction of the Commerce MSF site option would not conflict with or obstruct applicable state or local plans for renewable energy or energy efficiency. Thus, construction of the Commerce MSF site option would have a less than significant impact.

7.7.4.2.2 Montebello MSF

As described above, the construction of the Montebello MSF site option, would not conflict with or obstruct applicable state or local plans for renewable energy or energy efficiency. Thus, construction of the Montebello MSF site option would have a less than significant impact.

Design Option

Montebello MSF At-Grade Option

As with the base Montebello MSF site option, construction of the Montebello MSF At-Grade Option would not conflict with or obstruct applicable state or local plans for renewable energy or energy efficiency. Thus, construction of the Montebello MSF At-Grade Option would have a less than significant impact.



8.0 MITIGATION MEASURES AND IMPACTS AFTER MITIGATION

8.1 Impact UTL-1: Relocation or Construction

Impact UTL-1: Would a Build Alternative require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

8.1.1 Alternative 1 Washington Boulevard

As discussed in **Section 7.1.1**, operation and construction of the base Alternative 1 or Alternative 1 with the Atlantic/Pomona Station Option and/or the Montebello At-Grade Option would have a less than significant impact under Impact UTL-1; therefore, no mitigation would be required.

8.1.2 Alternative 2 Atlantic to Commerce/Citadel IOS

As discussed in **Section 7.1.2**, operation and construction of the base Alternative 2 or Alternative 2 with the Atlantic/Pomona Station Option would have a less than significant impact under Impact UTL-1; therefore, no mitigation would be required.

8.1.3 Alternative 3 Atlantic to Greenwood IOS

As discussed in **Section 7.1.3**, operation and construction of the base Alternative 3 or Alternative 3 with the Atlantic/Pomona Station Option and/or the Montebello At-Grade Option would have a less than significant impact under Impact UTL-1; therefore, no mitigation would be required.

8.1.4 Maintenance and Storage Facilities

As discussed in **Section 7.1.4**, operation and construction of either the Commerce MSF site option, the Montebello MSF site option, or the Montebello MSF At-Grade Option would have a less than significant impact under Impact UTL-1. Therefore, no mitigation would be required.



8.2 Impact UTL-2: Water Supplies

Impact UTL-2: Would a Build Alternative have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

8.2.1 Alternative 1 Washington Boulevard

As discussed in **Section 7.2.1**, operation and construction of the base Alternative 1 or Alternative 1 with the Atlantic/Pomona Station Option and/or the Montebello At-Grade Option would have a less than significant impact under Impact UTL-2; therefore, no mitigation would be required.

8.2.2 Alternative 2 Atlantic to Commerce/Citadel IOS

As discussed in **Section 7.2.2**, operation and construction of the base Alternative 2 or Alternative 2 with the Atlantic/Pomona Station Option would have a less than significant impact under Impact UTL-2; therefore, no mitigation would be required.

8.2.3 Alternative 3 Atlantic to Greenwood IOS

As discussed in **Section 7.2.3**, operation and construction of the base Alternative 3 or Alternative 3 with the Atlantic/Pomona Station Option and/or the Montebello At-Grade Option would have a less than significant impact under Impact UTL-2; therefore, no mitigation would be required.

8.2.4 Maintenance and Storage Facilities

As discussed in **Section 7.2.4**, operation and construction of either the Commerce MSF site option, the Montebello MSF site option, or the Montebello MSF At-Grade Option would have a less than significant impact under Impact UTL-2; therefore, no mitigation would be required.

8.3 Impact UTL-3: Wastewater

Impact UTL-3: Would a Build Alternative result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?



8.3.1 Alternative 1 Washington Boulevard

As discussed in **Section 7.3.1**, operation and construction of the base Alternative 1 or Alternative 1 with the Atlantic/Pomona Station Option and/or the Montebello At-Grade would have a less than significant impact under Impact UTL-3; therefore, no mitigation would be required.

8.3.2 Alternative 2 Atlantic to Commerce/Citadel IOS

As discussed in **Section 7.3.2**, operation and construction of the base Alternative 2 or Alternative 2 with the Atlantic/Pomona Station Option would have a less than significant impact under Impact UTL-3; therefore, no mitigation would be required.

8.3.3 Alternative 3 Atlantic to Greenwood IOS

As discussed in **Section 7.3.3**, operation and construction of the base Alternative 3 or Alternative 3 with the Atlantic/Pomona Station Option and/or the Montebello At-Grade Option would have a less than significant impact under Impact UTL-3; therefore, no mitigation would be required.

8.3.4 Maintenance and Storage Facilities

As discussed in **Section 7.3.4**, operation and construction of either the Commerce MSF site option, the Montebello MSF site option, or the Montebello MSF At-Grade Option would have a less than significant impact under Impact UTL-3; therefore, no mitigation would be required.

8.4 Impact UTL-4: Solid Waste

Impact UTL-4: Would a Build Alternative generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

8.4.1 Alternative 1 Washington Boulevard

As discussed in **Section 7.4.1**, operation and construction of the base Alternative 1 or Alternative 1 with the Atlantic/Pomona Station Option and/or the Montebello At-Grade Option would have a less than significant impact under Impact UTL-4; therefore, no mitigation would be required.



8.4.2 Alternative 2 Atlantic to Commerce/Citadel IOS

As discussed in **Section 7.4.2**, operation and construction of the base Alternative 2 or Alternative 2 with the Atlantic/Pomona Station Option would have a less than significant impact under Impact UTL-4; therefore, no mitigation would be required.

8.4.3 Alternative 3 Atlantic to Greenwood IOS

As discussed in **Section 7.4.3**, operation and construction of the base Alternative 3 or Alternative 3 with the Atlantic/Pomona Station Option and/or the Montebello At-Grade Option would have a less than significant impact under Impact UTL-4; therefore, no mitigation would be required.

8.4.4 Maintenance and Storage Facilities

As discussed in **Section 7.4.4**, operation and construction of either the Commerce MSF site option, the Montebello MSF site option, or the Montebello MSF At-Grade Option would have a less than significant impact under Impact UTL-4; therefore, no mitigation would be required.

8.5 Impact UTL-5: Regulations

Impact UTL-: Would a Build Alternative comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

8.5.1 Alternative 1 Washington Boulevard

As discussed in **Section 7.5.1**, operation and construction of the base Alternative 1 or Alternative 1 with the Atlantic/Pomona Station Option and/or the Montebello At-Grade Option would have a less than significant impact under Impact UTL-5; therefore, no mitigation would be required.

8.5.2 Alternative 2 Atlantic to Commerce/Citadel IOS

As discussed in **Section 7.5.2**, operation and construction of the base Alternative 2 or Alternative 2 with the Atlantic/Pomona Station Option would have a less than significant impact under Impact UTL-5; therefore, no mitigation would be required.



8.5.3 Alternative 3 Atlantic to Greenwood IOS

As discussed in **Section 7.5.3**, operation and construction of the base Alternative 3 or Alternative 3 with the Atlantic/Pomona Station Option and/or the Montebello At-Grade Option would have a less than significant impact under Impact UTL-5; therefore, no mitigation would be required.

8.5.4 Maintenance and Storage Facilities

As discussed in **Section 7.5.4**, operation and construction of either the Commerce MSF site option, the Montebello MSF site option, or the Montebello MSF At-Grade Option would have a less than significant impact under Impact UTL-5; therefore, no mitigation would be required.

8.6 Impact ENG-1: Energy Consumption

Impact ENG-1: Would a Build Alternative result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

8.6.1 Alternative 1 Washington Boulevard

As discussed in **Section 7.6.1**, operation and construction of the base Alternative 1 or Alternative 1 with the Atlantic/Pomona Station Option and/or the Montebello At-Grade Option would have a less than significant impact under Impact ENG-1; therefore, no mitigation would be required.

8.6.2 Alternative 2 Atlantic to Commerce/Citadel IOS

As discussed in **Section 7.6.2**, operation and construction of the base Alternative 2 or Alternative 2 with the Atlantic/Pomona Station Option would have a less than significant impact under Impact ENG-1; therefore, no mitigation would be required.

8.6.3 Alternative 3 Atlantic to Greenwood IOS

As discussed in **Section 7.6.3**, operation and construction of the base Alternative 3 or Alternative 3 with the Atlantic/Pomona Station Option and/or the Montebello At-Grade Option would have a less than significant impact under Impact ENG-1; therefore, no mitigation would be required.



8.6.4 Maintenance and Storage Facilities

As discussed in **Section 7.6.4**, operation and construction of either the Commerce MSF site option, the Montebello MSF site option, or the Montebello MSF At-Grade Option would have a less than significant impact under Impact ENG-1; therefore, no mitigation would be required.

8.7 Impact ENG-2: Energy Plans

Impact ENG-2: Would a Build Alternative conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

8.7.1 Alternative 1 Washington Boulevard

As discussed in **Section 7.7.1**, operation and construction of the base Alternative 1 or Alternative 1 with the Atlantic/Pomona Station Option and/or the Montebello At-Grade Option would have a less than significant impact under Impact ENG-2; therefore, no mitigation would be required.

8.7.2 Alternative 2 Atlantic to Commerce/Citadel IOS

As discussed in **Section 7.7.2**, operation and construction of the base Alternative 2 or Alternative 2 with the Atlantic/Pomona Station Option would have a less than significant impact under Impact ENG-2; therefore, no mitigation would be required.

8.7.3 Alternative 3 Atlantic to Greenwood IOS

As discussed in **Section 7.7.3**, operation and construction of the base Alternative 3 or Alternative 3 with the Atlantic/Pomona Station Option and/or the Montebello At-Grade Option would have a less than significant impact under Impact ENG-2; therefore, no mitigation would be required.

8.7.4 Maintenance and Storage Facilities

As discussed in **Section 7.7.4**, operation and construction of either the Commerce MSF site option, the Montebello MSF site option, or the Montebello MSF At-Grade Option would have a less than significant impact under Impact ENG-2; therefore, no mitigation would be required.



8.8 Mitigation Measure Applicability

As described above, none of the Build Alternatives, including design options, and/or MSF site options would have significant impacts on utilities services and systems or energy conservation. Therefore, no mitigation measures are required.



9.0 NO PROJECT ALTERNATIVE

9.1 No Project Alternative

9.1.1 Description

The No Project Alternative would not involve construction of a new LRT service in the GSA. 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 also include highway and transit projects identified for funding in Metro’s LRTP and SCAG’s 2020 RTP/SCS. The transit network within the GSA would be largely the same as it is now.

9.1.2 Impacts

9.1.2.1 Impact UTL-1 through UTL-5

Under the No Project Alternative, no construction of a new LRT service would occur and there would be no change demand for utility services. The No Project Alternative would not result in Project-related utility disruptions or relocations or require new or expanded utility facilities or infrastructure. Therefore, no impact would occur, and mitigation would not be required.

9.1.2.2 Impact ENG-1: Energy Consumption

Under the No Project Alternative, the Metro L (Gold) Line would not be extended east from its current terminus at Atlantic Station in East Los Angeles. No construction would be required under the No Project Alternative and there would therefore be no Project-related construction energy consumption.

Energy impacts relative to the consumption of energy resources are evaluated relative to the baseline. For this Project, the baseline is established to be the conditions in 2019 adjusted for regional growth that would occur by 2042 (i.e., the “projected future conditions baseline” or “2042 without Project Conditions”), equivalent to the No Project Alternative. Therefore, there would be no change in Project-related operational energy consumption under the No Project Alternative and no impacts with respect to Project-related operational energy consumption.

9.1.2.3 Impact ENG-2: Energy Plans

Under the No Project Alternative, the Metro L (Gold) Line would not be extended east from its current terminus at Atlantic Station in East Los Angeles. No construction would be required under the No Project Alternative. The energy-related portions of applicable construction plans relate to the efficient use of construction equipment and minimization of fuel burn, or to minimum energy efficiency standards for constructed structures; therefore, without the occurrence of construction, the No Project Alternative would not conflict with or obstruct any applicable construction-related energy plan.



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 impacts with respect to consistency with the applicable energy plans would be significant and unavoidable.



10.0 SUMMARY OF ALTERNATIVES

See Table 10-1 below.

Table 10-1. Significant/Adverse Impacts Remaining After Mitigation

Impact Topic	No Project Alternative	Alternative 1	Alternative 2	Alternative 3	MSF
Impact UTL-1: Relocation or Construction	No impact	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
Impact UTL-2: Water Supplies	No impact	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
Impact UTL-3: Wastewater	No impact	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
Impact UTL-4: Solid Waste	No impact	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
Impact UTL-5: Regulations	No impact	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
Impact ENG-1: Energy Consumption	No impact	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
Impact ENG-2: Energy Plans	Significant and Unavoidable	Less than significant impact			

10.1 No Project

There would be no impacts on utilities service/systems under the No Project Alternative. 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 impacts with respect to consistency with the applicable energy plans would be significant and unavoidable.

10.2 Alternative 1 Washington + MSF

The operation and construction of the base Alternative 1 and either the Commerce MSF site option or Montebello MSF site option would have a less than significant impact on public utilities and services under Impact UTL-1 (Relocation or Construction), UTL-2 (Water Supplies), UTL-3 (Wastewater), UTL-4 (Solid Waste), and Impact UTL-5 (Regulations).



Construction of the base Alternative 1 would result in a temporary one-time, non-recoverable energy use in the GSA. Operation of the base Alternative 1 would result in an increase in net annual energy use of approximately 8.7 billion BTUs in the region with the Commerce MSF site option or 8.8 billion BTUs in the region with the Montebello MSF site option. However, construction of additional LRT service in the GSA would encourage decreases in per capita transportation-related energy consumption, as well as the region’s reliance on fossil fuels for transportation. This alternative would shift regional energy reliance away from fossil fuels under the No Build Alternative to partially renewable grid power. Overall, Alternative 1 operations would result in an annual decrease in non-renewable energy use of approximately 8.0 billion BTUs in the region with either of the Commerce MSF or the Montebello MSF site options.

Construction and operations of the base Alternative 1 would comply with federal, state, and local energy plans and standards.

Thus, operation and construction of the base Alternative 1 and either the Commerce MSF site option or the Montebello MSF site option would have a less than significant impact on energy resources under Impact ENG-1 (Energy Consumption) and ENG-2 (Energy Plans).

10.2.1 Alternative 1 Washington + MSF + Design Options

The operation and construction of Alternative 1 with the Atlantic/Pomona Station Option and/or the Montebello At-Grade Option and either the Commerce site option, Montebello MSF site option, or the Montebello MSF At-Grade Option would have a less than significant impact on public utilities and services under Impact UTL-1 (Relocation or Construction), UTL-2 (Water Supplies), UTL-3 (Wastewater), UTL-4 (Solid Waste), and Impact UTL-5 (Regulations).

The operation and construction of Alternative 1 with the Atlantic/Pomona Station Option and/or the Montebello At-Grade Option and either the Commerce site option, Montebello MSF site option, or the Montebello MSF At-Grade Option would result in a long-term, beneficial effect to energy resources in the region when compared to 2042 without Project Conditions and would have a less than significant impact on energy resources under Impact ENG-1 (Energy Consumption) and ENG-2 (Energy Plans).

10.3 Alternative 2 Atlantic to Commerce/Citadel IOS + Commerce MSF

The operation and construction of the base Alternative 2 and the Commerce MSF site option would have a less than significant impact on public utilities and services under Impact UTL-1 (Relocation or Construction), UTL-2 (Water Supplies), UTL-3 (Wastewater), UTL-4 (Solid Waste), and Impact UTL-5 (Regulations).

Construction of the base Alternative 2 would result in a temporary one-time, non-recoverable energy use in the GSA. Operation of Alternative 2 would result in an increase in net annual energy use of



approximately 2.1 billion BTUs in the region with the Commerce MSF site option. However, construction of additional LRT service in the GSA would encourage decreases in per capita transportation-related energy consumption, as well as the region's reliance on fossil fuels for transportation. This alternative would shift regional energy reliance away from fossil fuels under the No Build Alternative to partially renewable grid power. Overall, Alternative 2 operations would result in an annual decrease in non-renewable energy use of approximately 4.3 billion BTUs in the region with the Commerce MSF site option.

Construction and operations of the base Alternative 2 would comply with federal, state, and local energy plans and standards.

Thus, the operation and construction of the base Alternative 2 and the Commerce MSF site option would have a less than significant impact on energy resources under Impact ENG-1 (Energy Consumption) and ENG-2 (Energy Plans).

10.3.1 Alternative 2 Atlantic to Commerce/Citadel IOS + Commerce MSF + Design Option

The operation and construction of Alternative 2 with the Atlantic/Pomona Station Option and the Commerce MSF site option would have a less than significant impact on public utilities and services under Impact UTL-1 (Relocation or Construction), UTL-2 (Water Supplies), UTL-3 (Wastewater), UTL-4 (Solid Waste), and Impact UTL-5 (Regulations).

The operation and construction of Alternative 2 with the Atlantic/Pomona Station Option and the Commerce MSF site option would result in a long-term, beneficial effect to energy resources in the region when compared to 2042 without Project Conditions and would have a less than significant impact on energy resources under Impact ENG-1 (Energy Consumption) and ENG-2 (Energy Plans).

10.4 Alternative 3 Atlantic to Greenwood IOS + MSF

The operation and construction of the base Alternative 3 and either the Commerce site option or Montebello MSF site option would have a less than significant impact on public utilities and services under Impact UTL-1 (Relocation or Construction), UTL-2 (Water Supplies), UTL-3 (Wastewater), UTL-4 (Solid Waste), and Impact UTL-5 (Regulations).

Construction of the base Alternative 3 would result in a temporary one-time, non-recoverable energy use in the GSA. Operation of the base Alternative 3 would result in an increase in net annual energy use of approximately 2.2 billion BTUs in the region with the Commerce MSF site option or 2.3 billion BTUs in the region with the Montebello MSF site option. However, construction of additional LRT service in the GSA would encourage decreases in per capita transportation-related energy consumption, as well as the region's reliance on fossil fuels for transportation. This alternative would shift regional energy reliance away from fossil fuels under the No Build Alternative to partially renewable grid power. Overall, Alternative 3 operations would result in an annual decrease in non-



renewable energy use of approximately 7.1 billion BTUs in the region with either of the Commerce MSF or the Montebello MSF site options.

Construction and operation of the base Alternative 3 would comply with federal, state, and local energy plans and standards.

Thus, the operation and construction of the base Alternative 3 and either the Commerce site option or Montebello MSF site option would have a less than significant impact on energy resources under Impact ENG-1 (Energy Consumption) and ENG-2 (Energy Plans).

10.4.1 Alternative 3 Atlantic to Greenwood + MSF + Design Option

The operation and construction of Alternative 3 with the Atlantic/Pomona Station Option and/or the Montebello At-Grade Option and either the Commerce site option, Montebello MSF site option, or the Montebello MSF At-Grade Option would have a less than significant impact on public utilities and services under Impact UTL-1 (Relocation or Construction), UTL-2 (Water Supplies), UTL-3 (Wastewater), UTL-4 (Solid Waste), and Impact UTL-5 (Regulations).

The operation and construction of Alternative 3 with the Atlantic/Pomona Station Option and/or the Montebello At-Grade Option and either the Commerce site option, Montebello MSF site option, or the Montebello MSF At-Grade Option would result in a long-term, beneficial effect to energy resources in the region when compared to 2042 without Project Conditions and would have a less than significant impact on energy resources under Impact ENG-1 (Energy Consumption) and ENG-2 (Energy Plans).



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Alex Kessel	Environmental Planner	MA – Urban and Regional Planning, University of California, 2019 BA – Geology and Environmental Sciences, University of Colorado, 2013	2



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