3.0 TRANSPORTATION IMPACTS AND MITIGATION

The transportation chapter includes evaluation of the LRT system, traffic, parking, bicycling, and pedestrian modes within the Eastside Corridor. This section of the SEIS/SEIR covers the affected environment, existing conditions, anticipated impacts, and proposed mitigation for both the build and no-build LRT project alternatives. Detailed technical information may be found in the supporting Transportation Technical Report (December 2000) and Transportation Technical Report Addendum (November 2001) available at MTA's offices, One Gateway Plaza, Los Angeles, CA. These documents are hereby incorporated by reference to this Final SEIS/SEIR.

Anticipated impacts and the resulting proposed mitigations for the Eastside Corridor are based on ridership forecasts developed using the MTA's Travel Demand Model. The MTA Travel Demand Model uses the typical four-step modeling process: trip generation, trip distribution, mode choice and trip assignment. The regional demographics used in the modeling process are provided by the Southern California Association of Governments (SCAG), which is the metropolitan planning organization for the Southern California region.

The MTA mode choice model was developed and calibrated as a part of the Eastside Corridor Project to estimate the mode split between vehicular and transit usage. The mode split estimates the modal shares of the travel market given the time and cost characteristics of the various competing modes and the socio-economic and demographic characteristics of the urban residents. The MTA travel demand modeling process has been validated using observations of individual travel choices obtained through surveys in the region focusing on travel characteristics and behavior of travelers and their households. More detailed information concerning assumptions, land use and demographic forecasts, travel forecasting procedures and calibration results of the model is available through MTA.

3.1 TRANSIT

3.1.1 Affected Environment

The Eastside Corridor study area has one of the most extensive networks of bus routes in Los Angeles County. The study area's transit routes generally follow a grid pattern and include many express and local routes, one limited service route, and one new Metro Rapid bus route. Five public transit agencies operate bus service in the Eastside Corridor: Metropolitan Transportation Authority, Montebello Transit, the City of Monterey Park, the City of Commerce, and the County of Los Angeles. Table 3-1 lists all the current Eastside Corridor bus transit routes with the end destinations of their services, and Figure 3-1 illustrates these routes.

Most of the heavily used routes are those that run in an east-west direction. These include bus routes that operate on Cesar Chavez Avenue, 1st Street, Whittier Boulevard, and Olympic Boulevard. Soto Street and Atlantic Boulevard are two north-south streets on which heavily used bus routes also operate. Regional north-south travel is limited to these two main bus lines on Soto Street and Atlantic Boulevard. The predominant flow of transit passengers in the Corridor is in an east-west orientation. Many of these routes experience very high ridership during peak periods. Table 3-2 shows the service frequency (headways) for all the bus lines in the Corridor. This table illustrates the high demand for service on many of the lines, particularly on MTA lines 30/31 and 66 where headways during the morning peak period average three to four minutes.

A demonstration service called Metro Rapid Bus, now officially operating, debuted on June 24, 2000 on Whittier Boulevard in the Eastside Corridor. Operated by the MTA, this new streamlined, limited-stop

service connects Santa Monica and Montebello via Wilshire and Whittier Boulevards through Downtown Los Angeles, Boyle Heights, and East Los Angeles as Line 720. A similar route began operation at the same time in the San Fernando Valley along Ventura Boulevard as Line 750 that connects Warner Center and the Universal City Metro Red Line station. The Metro Rapid service utilizes buses equipped with devices that can be used to extend the green phase at traffic signals. This speeds up the limited bus service and provides improved reliability in travel time for passengers. In the Eastside Corridor, the new Metro Rapid bus line 720 replaces MTA line 318 on Whittier Boulevard. Line 318 east of Garfield Avenue in Montebello was converted into an extension of MTA line 18 to Whittier. Line 18 still provides local bus service along the Whittier Boulevard corridor. The Rapid Bus demonstration program is designed to provide long-distance corridor service, time savings, and service reliability with the ability to extend the green phase at signalized intersections. It has reported excellent ridership and efficiency in its first year.

TABLE 3-1
BUS TRANSIT ROUTES IN THE EASTSIDE CORRIDOR

Operator	Line(s)	Destinations
Commerce Municipal Bus	Blue	Community Circulator (Commerce)
	Green	Community Circulator (Commerce)
	Orange	Community Circulator (Commerce)
	Red	Community Circulator (Commerce)
	Yellow	Community Circulator (Commerce)
Los Angeles County Shuttle	Gold	East Los Angeles
	Green	East Los Angeles
	Orange	East Los Angeles - CSULA
Montebello Transit	10	East LA College - Pico Rivera
	40	Downtown LA - Whittier
	341,342,343	Downtown LA - Montebello Express
Monterey Park Spirit Bus	1	Community Circulator (Monterey Park)
	2	Community Circulator (Monterey Park)
	5	Community Circulator (Monterey Park)
MTA	18	Wilshire Center - Whittier
	30,31	Mid City - East LA College
	65	Downtown Los Angeles - CSULA
	66	Wilshire Center - Montebello
	68	W. LA Transit Center - Montebello Towne Center
	71	Downtown Los Angeles - CSULA
	250	LAC+USC - Boyle Heights
	251	Cypress Park - Watts
	252	El Sereno - Lynwood
	253	LAC+USC - Boyle Heights
	254	LAC+USC - Willowbrook
	255	Montecito Heights - East Los Angeles
	256	Altadena - East Los Angeles
	258	Alhambra - South Gate
	259	El Sereno - South Gate
	260	Altadena - Compton
	362	Downtown Los Angeles - Hawaiian Gardens
	605	LAC+USC - Boyle Heights
	620	LAC+USC - Boyle Heights
	720 (Rapid)	Santa Monica – Montebello

Source: 1999-2000 MTA, Montebello, Monterey Park, Los Angeles County, and Commerce bus timetables.

Figure 3-1: Current Bus Routes in the Eastside Corridor

TABLE 3-2
FREQUENCY OF TRANSIT SERVICE (IN MINUTES)

Operator	Line	Days	AM Peak 6-9am	Midday 9am-3pm	PM Peak 3-7pm	Evening 7-11pm	Owl 11pm-6am	Hours of Service
Commerce	Red	Weekday	60	60	60			6am-6pm
		Saturday	60	60	60			6am-6pm
	Blue	Weekday		60	60			9am-6pm
		Saturday		60	60			9am-6pm
	Green	Weekday	60	60	60			6am-9:30pm
		Saturday	60	60	60			6am-9:30pm
	Orange	Weekday	60	60	60			5:30am-6pm
	Yellow	Weekday	60	60	60			6am-9am
Los Angeles County	Gold	Weekday	60	60	60			6am-6pm
		Saturday		60	60			9am-5pm
	Green	Weekday	60	60	60			6am-6pm
		Saturday		60	60			9am-5pm
	Orange	Weekday	60	60	60			6am-6pm
		Saturday		60	60			9am-5pm
Montebello	10	Weekday	8	10	15			5am-11pm
		Saturday	20	10	20			5am-11pm
		Sunday	20	10	20			5am-11pm
	40	Weekday	10	12	30			5am-11pm
		Saturday	15	15	30			5am-12am
		Sunday	20	20	20			5am-11pm
	341	Weekday	30					7-9:30am,3-6pm
	342	Weekday	180					6-7am, 5-6pm
	343	Weekday	30					6-8am, 5-7pm
Monterey Park	1	Weekday	40	40	40			6:30am-6pm
		Saturday	40	40	40			6:30am-6pm
	2	Weekday	40	40	40			6:30am-6pm
		Saturday	40	40	40			6:30am-6pm
	5	Weekday	50	30	30			6:30am-6pm
MTA	18	Weekday	10	15	10	15	60	24 hours
		Saturday	15	12	15	20	60	24 hours
		Sunday	20	30	15	30	60	24 hours
	30 / 31	Weekday	4	7.5	5	15	60	24 hours
		Saturday	7	7	12	30	60	24 hours
		Sunday	12	7	8	30	60	24 hours
	65	Weekday	15	30	25	50		5:30am-10pm
		Saturday	60	60	60	60		6am-8pm
		Sunday		60	60	60		8am-8pm
	66	Weekday	3	8	7	30		4:30am-1:30am
		Saturday	4	10	15	30		5am-1:30am
		Sunday	15	12	12	30		5am-1am
	68	Weekday	8	12	12	40		4am-12:30am
		Saturday	15	10	15	40		4am-12:30am
		Sunday	40	15	20	40		4:30am-12:30am
	250	Weekday	40	40	40			6am-7pm
	251/252	Weekday	5	12	10	30	60	24 hours
		Saturday	15	15	12	30	60	24 hours
		Sunday	30	20	20	30	60	24 hours
	253	Weekday	40	40	40			6am-8pm
		Saturday	40	40	40			6am-7:30pm
		Sunday	35	40	40			8am-6:30pm

TABLE 3-2
FREQUENCY OF TRANSIT SERVICE (IN MINUTES)

Operator	Line	Days	AM Peak 6-9am	Midday 9am-3pm	PM Peak 3-7pm	Evening 7-11pm	Owl 11pm-6am	Hours of Service
	254	Weekday	60	55	30	60		4:30am-8:30pm
		Saturday	60	60	60			6:30am-7:30pm
		Sunday	45	60	60			7:30am-7:30pm
	255	Weekday	45	50	45			5am-8:30pm
		Saturday		45	45			5:30am-8:30pm
		Sunday		45	45			5:30am-8:30pm
	256	Weekday	35	50	35	50		6am-10:30pm
		Saturday	60	60	60	60		5:30am-9pm
		Sunday	60	60	60	60		5:30am-9pm
	258/259	Weekday	20	30	30			5am-8pm
	260	Weekday	12	15	15	60		4am-11:30pm
		Saturday	30	25	20	60		5am-12m
		Sunday	50	25	25	60		6am-12m
	362	Weekday	20	30	25	60		5am-11:30pm
		Saturday	50	60	60	60		5am-11:30pm
		Sunday	50	60	60	60		5am-11:30pm
	605	Weekday	15	30	15	30		6am-7:30pm
		Saturday	30	30	30			6am-7:30pm
		Sunday	30	30	30			6am-7:30pm
	620	Weekday		12	12			9am-6:30pm
	720	Weekday	8	10	8	20		5am-1am
		Saturday	12	12	12	20		5am-1am
		Sunday	12	12	12	20		5am-1am

Source: 1999-2000 LACMTA, Montebello, Commerce, Los Angeles County, and Monterey Park bus timetables.

3.1.2 Impacts

3.1.2.1 No-Build Alternative

The No-Build Alternative provides no significant improvement in transit services in the Eastside Corridor. As the population grows, the demand for increased transit service provision and service reliability increases. Without the introduction of premium transit service in the Eastside Corridor, such as a light rail system, transit service performance will likely decrease due to increased traffic congestion. This is likely to make travel via transit a less attractive option for Eastside patrons. For those transit patrons that have no other travel options, travel times will increase and transit usage will be less convenient. There will be a negative impact upon those who rely on the public transit system if no significant improvements in transit service are provided in the No-Build Alternative.

3.1.2.2 LRT Build Alternative – Option A

Regional Transit Access and Connectivity

If the LRT Build Alternative is implemented, an increase in the provision of transit service will occur in the Eastside Corridor. There will be the introduction of a premium service that will be regionally serving and provide improved service reliability and a decrease in travel times for transit patrons. Forecast data indicate that transit ridership will increase in the Corridor with the introduction of the improved service.

The introduction of a light rail system into the Eastside Corridor will provide passengers with greater access to regional transit opportunities and will provide for improved regional transit connectivity. Transfers could be made at Union Station to a variety of different transit alternatives. The Eastside Corridor Light Rail system will provide continuing service to Pasadena via the Pasadena Blue Line, which is expected to open for service in 2003. Transfers can be made to the Metro Red Line at Union Station with its subway service to Wilshire Center and North Hollywood. The Long Beach Blue Line can also be accessed via the Red Line at the 7th/Metro Center station in Downtown Los Angeles, and the Green Line to Norwalk and Redondo Beach is accessible via the Long Beach Blue Line. Dozens of local and express bus lines converge at Union Station, and several transit providers service Union Station, including Santa Monica's Big Blue Bus, LADOT, Orange County Transportation Authority (OCTA), Foothill Transit, Torrance Transit, Santa Clarita Transit, and the Antelope Valley Transportation Authority. Metrolink commuter rail service is also available for regional travel to Ventura, San Bernardino, Riverside, Orange, and San Diego counties as well as to northern Los Angeles County. Amtrak rail service can also be accessed at Union Station for long-distance travel to other cities in California and the nation. Impacts on regional transit access and connectivity as a result of the LRT Build Alternative are beneficial.

Bus Route Interface

There are several bus lines that will operate on the same streets as the LRT Build Alternative. These include MTA lines 30, 31, 65, Montebello lines 40, 341, 342, and 343, and Los Angeles County Gold, Green and Orange shuttles. The LRT Build Alternative will overlap MTA lines 30 and 31 on 1st Street, MTA line 65 (rerouted) and the Los Angeles County shuttles on 3rd Street, and Montebello lines 40, 341, 342, and 343 on 3rd Street and Beverly Boulevard. Bus transit service will continue to operate on streets where the LRT system will be running in order to maintain existing local service levels along these streets. Table 3-3 summarizes the bus lines that will overlap the alignment of the LRT Build Alternative.

In order to maintain connectivity with other transit operators and bus services within the Corridor, it is important that proposed stations interface with existing and proposed bus routes. The proposed transit operating plan for the LRT Build Alternative offers a connection of existing bus lines at each station location. Figure 3-2 shows how the LRT system will fit into the Eastside Corridor's bus route network. At three station locations, it is proposed that certain bus lines be considered for rerouting in order to provide improved access to the light rail system. Rerouting considerations will follow the typical MTA bus route changes process, including some type of public review and comment process and input from members of the Bus Riders Union. The lines considered for rerouting include:

- MTA Line 65 to 3rd/Rowan Station via 3rd Street and Rowan Avenue
- MTA Line 530 to 1st/Soto Station via Soto and 1st Street
- MTA Line 620 to 1st/Utah Station via Utah Street
- Monterey Park Lines 1, 2 and 5 to Beverly/Atlantic Station via Atlantic Boulevard

MTA Line 65 is a local bus line that currently runs north on Indiana Street in the vicinity of the LRT Build Alternative alignment and turns east on 1st Street to Gage Avenue. In order to provide access to the 3rd/Rowan Station, it is proposed to consider rerouting this line onto 3rd Street east to Rowan Avenue and then on Rowan to 1st Street. This minor reroute will not have a significant impact on transit ridership or transit access due to its proximity to the current routing one quarter of a mile to the west on Indiana. Access to the business district on 1st Street will still be provided at 1st and Rowan. Routing this bus line away from Indiana Street also will help to mitigate the impacts of Option A on Indiana for the transition between 1st and 3rd Streets if this option is chosen. All relevant agencies and organizations will be included in the discussion concerning any proposed bus routes considered for modification.

TABLE 3-3
BUS ROUTES OVERLAPPING THE LRT ALIGNMENT AT-GRADE

Operator	Line	Street along Alignment	Limits of Overlapping Routes
Los Angeles County	Gold	3rd Street	Ford Blvd – Beverly Blvd
	Green	Indiana Street	1st Street – 3rd Street
		3rd Street	Ford Blvd – La Verne Ave
	Orange	3rd Street	Mednik Ave – Beverly Blvd
LADOT	430	Alameda Street	Commercial St – Temple St
Montebello Transit	40	3rd Street/Beverly Blvd	Indiana St – Atlantic Blvd
	341	3rd Street/Beverly Blvd	Indiana St – Atlantic Blvd
	342	3rd Street/Beverly Blvd	Indiana St – Atlantic Blvd
	343	3rd Street/Beverly Blvd	Indiana St – Atlantic Blvd
MTA	30 / 31	1st Street	Alameda St – 101 Freeway
	30 / 31	1st Street	Fresno St – Indiana St
	40	Alameda Street	Commercial St – Temple St
	42	Alameda Street	Commercial St – Temple St
	65 (reroute)	3rd Street	Indiana St – Rowan Ave
	434	Alameda Street	Commercial St – Temple St
	436	Alameda Street	Commercial St – Temple St
	444	Alameda Street	Commercial St – Temple St
	445	Alameda Street	Commercial St – Temple St
	466	Alameda Street	Commercial St – Temple St
	530 (reroute)	1st Street	Soto St – Lorena St
	620	1st Street	Utah St – 101 Freeway

Source: 1999-2000 MTA, Montebello, Monterey Park, Los Angeles County, and Commerce bus timetables; Parsons Brinckerhoff.

MTA Line 530 is a new service that will debut in 2001 as outlined in the MTA's 1998 Five-Year Plan. Line 530 is an express route that will connect East Los Angeles College and Boyle Heights with Panorama City via the County-USC Medical Center and the Burbank Media District. Line 530 currently is proposed to run south on Soto Street from the San Bernardino Freeway (I-10) to Cesar Chavez Avenue and then turn east to East Los Angeles College. In order to provide service to the 1st/Soto Station, it is proposed to consider rerouting this line south on Soto Street to 1st Street. It will then continue east on 1st Street to Lorena Street back to Cesar Chavez Avenue. Alternative routes for this line include utilizing Mott or Evergreen Streets should Lorena Street not be acceptable. Line 530 will also serve the 1st/Lorena Station on its amended route. All relevant agencies and organizations will be invited to provide input concerning any proposed route modifications.

MTA Line 620 is a community shuttle service jointly operated by MTA and LADOT that currently runs on Gless Street west of the 101 Freeway between 4th and 1st Streets. It is proposed that this line be considered for rerouting from Clarence Street to 3rd Street and Utah Street where it will continue north to interface with the 1st/Utah Station at the corner of 1st and Utah Streets. This minor reroute will not affect line patronage because of the close proximity of Utah Street to Clarence Street one block away. However, since this line directly serves the 1st/Boyle station, the proposed rerouting may not be required.

Figure 3-2: Modified Bus System with LRT

Monterey Park's Spirit Transit system provides community transportation services on five routes within the City of Monterey Park. Three of its lines currently operate in the vicinity of Cesar Chavez Avenue and Atlantic Boulevard. It is proposed to consider extending these three routes (1, 2, and 5) southward along Atlantic to the Beverly/Atlantic Station. The extension of these three routes will provide convenient access to the LRT system from the City of Monterey Park. The three Monterey Park lines will also provide connecting service from the LRT system to the Atlantic Square shopping area as well as to East Los Angeles College. This is a beneficial impact under CEQA.

According to Federal Transit Administration regulations and guidelines for entities that receive federal transit funding, a public hearing must be offered for a change in fare structure or for service changes that affect more than 25 percent of the revenue or route-miles for a given transit line. CEQA requires that impacts be measured against criteria for significance and that all significant impacts be addressed and/or mitigated. The above bus route modifications constitute a less than significant impact and require no mitigation. Table 3-4 shows the interface of bus lines at each station (except Union Station) along the alignment of the LRT Build Alternative - Option A.

Bus Operation Impacts

Generally speaking, bus stop locations will remain in the current locations under the LRT Build Alternative scenario – Option A. Some stops may be relocated in order to better interface with the LRT station at station locations along 1st and 3rd Streets and Beverly Boulevard. Bus stops will be located close to the street corner where there is access to the station entrance at station locations.

Along 1st Street between LRT stations, buses will utilize curbside bus stops as provided in the No-Build condition. Because 1st Street will retain two lanes in each direction along most of the alignment, there should be few impacts to traffic operations. Between the 1st Street Bridge and the tunnel portal, as well as between Concord and Indiana Streets, the street will have one lane in each direction. In LRT station areas where parking is prohibited and only one traffic lane will exist, buses will utilize the traffic lane to accommodate the boarding and alighting of passengers. Along 3rd Street and Beverly Boulevard where there will be two lanes available, buses will utilize the curb lane to stop. As is the case in the No-Build condition, parking will be prohibited at bus stop locations.

Traffic lanes on major and secondary arterials on which bus lines will continue to operate, where the LRT has an at-grade profile, will be at least 11 feet wide to accommodate the operation of buses. On 1st Street, the traffic lanes will be between 11 and 13.5 feet wide, while 3rd Street and Beverly Boulevard will have traffic lanes between 12 and 15 feet wide. Indiana Street under Option A will have 11-foot traffic lanes, and this will provide for the operation of the County shuttle buses on this portion of Indiana Street. Alameda Street will have 11- to 12-foot traffic lanes, as will be the case in the No-Build Alternative. Overall, there may be significant impacts on local bus operations as a result of the LRT Build Alternative because of potential bus stop displacements and possible increases in bus operating times resulting from one lane operations along parts of 1st Street.

TABLE 3-4
BUS ROUTE INTERFACE AT LRT STATIONS – OPTION A

Station	Operator	Line	Destinations
Union Station	Antelope Valley	785	Gateway Transit Center – Antelope Valley
	LADOT	DASH D	Union Station – Grand Blue Line Station
	MTA	33	Union Station – Venice Bl.
		40	Union Station – South Bay Galleria
		42	Union Station – LA Int'l Airport
		55	Union Station – Rosa Parks Metro Rail Station
		60	Union Station – Long Beach
		333	Union Station – Venice Bl.
		434	Union Station – Malibu
		436	Union Station – Ocean Park
		439	Union Station – Redondo Beach
		442	Union Station – South Bay Galleria
		444	Union Station – Rancho Palos Verdes
		445	Union Station – San Pedro
		446	Union Station – San Pedro
		447	Union Station – San Pedro
		466	Union Station – La Mirada
	OCTA	701	Union Station – Huntington Beach
	Santa Clarita	794	Union Station – Santa Clarita
1st/Alameda	LADOT	DASH A	Little Tokyo – Los Angeles Convention Center
		DASH D	Union Station – Grand Blue Line Station
	MTA	30 / 31	Mid City – East LA College
		40	Union Station – South Bay Galleria
		42	Union Station – LA Int'l Airport
		58	Union Station – Washington Blue Line Station
		434	Union Station – Malibu
		436	Union Station – Ocean Park
		442	Union Station – South Bay Galleria
		445	Union Station – San Pedro
		446	Union Station – San Pedro
1st/Utah	MTA	30 / 31	Mid City – East LA College
		620 (reroute)	LAC+USC – Boyle Heights
1st/Boyle	MTA	30 / 31	Mid City – East LA College
		250	LAC+USC – Boyle/Olympic
		620	LAC+USC – Boyle Heights
1st/Soto	MTA	30 / 31	Mid City – East LA College
		250	Cypress Park – Watts
		251	El Sereno – Lynwood
		530 (reroute)	Panorama City – East LA College
		605	LAC+USC – Boyle Heights
1st/Lorena	MTA	30 / 31	Mid City – East LA College
		254	LAC+USC – Willowbrook
		530 (reroute)	Panorama City – East LA College
3rd/Rowan	Montebello	40	Downtown LA – Whittier
	MTA	65 (reroute)	Downtown LA – CSULA
		255	Montecito Heights – East Los Angeles
3rd/Mednik	Los Angeles County	Gold	East Los Angeles
		Green	East Los Angeles
		Orange	East Los Angeles – City Terrace – CSULA
	Montebello	40	Downtown LA – Whittier
	MTA	258	El Sereno – South Gate
		259	Alhambra – South Gate

TABLE 3-4
BUS ROUTE INTERFACE AT LRT STATIONS – OPTION A

Station	Operator	Line	Destinations
Beverly/Atlantic	Montebello	10	East LA College – Pico Rivera
		40	Downtown LA – Whittier
		341, 342, 343	Downtown LA – Montebello Express
	Monterey Park	1 (reroute)	Monterey Park
		2 (reroute)	Monterey Park
		5 (reroute)	Monterey Park – CSULA
	MTA	260	Altadena – Compton

Source: 1999-2000 MTA, Montebello, Monterey Park, Los Angeles County, and Commerce bus timetables; Parsons Brinckerhoff.

Eastside LRT Patronage Forecasts

Table 3-5 shows the projected passenger boardings at each station based on transportation demand model results for the year 2020 LRT Build Alternative. The highest number of passengers boarding the system is at Union Station, with the next highest being at 1st/Alameda and the terminal station at Beverly/Atlantic. The stations with the highest patronage have the greatest number of connecting transit services. The highest concentration of boardings is in the peak periods as people utilize the system on their trips to and from their places of employment. Total boardings for the Eastside Corridor LRT system are projected to be 16,020 passengers per day by the year 2020. Combined boardings for the Pasadena Blue Line and the Eastside LRT are expected to be 44,700 passengers per day by the year 2020. These forecasts were determined using the MTA's Travel Demand Model, as discussed previously.

TABLE 3-5
YEAR 2020 DAILY BOARDINGS BY STATION – OPTION A

Station	Peak Boardings	Off-Peak Boardings	Total Daily Boardings
Union Station	2,577	1,222	3,799
1st/Alameda	1,893	778	2,671
1st/Utah	597	396	993
1st/Boyle	618	385	1,003
1st/Soto	925	521	1,446
1st/Lorena	991	525	1,516
3rd/Rowan	678	407	1,085
3rd/Mednik	614	391	1,005
Beverly/Atlantic	1,660	844	2,504
Total Eastside LRT Daily Boardings			16,020
Combined Pasadena Blue Line and Eastside LRT Daily Boardings			44,700

Source: Parsons Brinckerhoff, 2000.

3.1.2.3 LRT Build Alternative – Option B

For the most part, the transit impacts are the same as Option A, with a few exceptions. These are discussed below. The impacts on the stations at Beverly/Atlantic and Pomona/Atlantic are very similar.

Regional Transit Access and Connectivity

There are no changes from Option A.

Bus Route Interface

Option B moves the eastern terminus to Pomona/Atlantic. Because there are no bus lines operating on Pomona Boulevard along the LRT alignment, the impacts on the bus route interface remain similar to those detailed in the previous section.

In order to maintain connectivity with other transit operators and bus services within the Corridor, it is important that proposed stations interface with existing and proposed bus routes. The proposed transit operating plan for the LRT Build Alternative Option B offers a connection of existing bus lines at each station location. At three station locations, it is proposed that certain bus lines be considered for rerouting in order to provide improved access to the light rail system. Rerouting considerations will follow the typical MTA bus route changes process, including some type of public review and comment process. The lines considered for rerouting include:

- MTA Line 530 to 1st/Soto Station via Soto and 1st Street
- MTA Line 620 to 1st/Utah Station via Utah Street
- Monterey Park Lines 1, 2 and 5 to Pomona/Atlantic Station via Atlantic Boulevard

The first two route changes (MTA Lines 530 and 620) remain as previously described in Option A. Monterey Park's Spirit Transit system provides community transportation services on five routes within the city of Monterey Park. Three of its lines currently operate in the vicinity of Cesar Chavez Avenue and Atlantic Boulevard. It is proposed to consider extending these three routes (1, 2, and 5) southward along Atlantic to the Pomona/Atlantic Station. The extension of these three routes will provide convenient access to the LRT system from the City of Monterey Park. The three Monterey Park lines will also provide connecting service from the LRT system to the Atlantic Square shopping area, as well as to East Los Angeles College. This is a beneficial impact under CEQA.

Table 3-6 shows the interface of bus lines at the revised stations along the alignment of the LRT Build Alternative Option B. Stations not included in the table remain the same as under Option A.

TABLE 3-6
BUS ROUTE INTERFACE AT SELECTED LRT STATIONS – OPTION B

Station	Operator	Line	Destinations
3rd/Indiana	MTA	65	Downtown LA – CSULA
3rd/Ford	N/A	N/A	N/A
Pomona/Atlantic	Montebello	10	East LA College – Pico Rivera
	Monterey Park	1 (reroute)	Monterey Park
		2 (reroute)	Monterey Park
		5 (reroute)	Monterey Park – CSULA
	MTA	260	Altadena – Compton

Source: 1999-2000 MTA, Montebello, Monterey Park, Los Angeles County, and Commerce bus timetables; Parsons Brinckerhoff.

Bus Operation Impacts

Generally speaking, bus stop locations will remain in the same locations under Option B. Some stops may be relocated in order to better interface with the LRT station at station locations along 1st and 3rd Streets and Pomona Boulevard. Bus stops will be located close to the street corner where there is access to the station entrance at station locations.

Bus operation impacts will remain the same as under Option A, with the exception of along Indiana Street between 1st and 3rd Streets. Indiana Street under Option B will have no change in traffic lane widths.

Eastside LRT Patronage Forecasts

Table 3-7 shows the projected passenger boardings at each station based on transportation demand model results for the year 2020 LRT Build Alternative. The highest number of passengers boarding the system is at Union Station, with the next highest being at 1st/Alameda and the terminal station at Pomona/Atlantic. The stations with the highest patronage have the greatest number of connecting transit services. The highest concentration of boardings is in the peak periods as people utilize the system on their trips to and from their places of employment. Total boardings for the Eastside Corridor LRT system are projected to be 16,330 passengers per day by the year 2020. Combined boardings for the Pasadena Blue Line and the Eastside LRT are expected to be 46,400 passengers per day by the year 2020.

TABLE 3-7
YEAR 2020 DAILY BOARDINGS BY STATION – OPTION B

Station	Peak Boardings	Off-Peak Boardings	Total Daily Boardings
Union Station	2,700	1,232	3,932
1st/Alameda	1,825	661	2,486
1st/Utah	615	416	1,031
1st/Boyle	696	365	1,061
1st/Soto	1,110	594	1,704
3rd/Indiana	1,026	629	1,655
3rd/Ford	603	375	978
3rd/Mednik	683	360	1,043
Pomona/Atlantic	1,648	792	2,440
Total Eastside LRT Daily Boardings			16,330
Combined Pasadena Blue Line and Eastside LRT Daily Boardings			46,400

Source: Parsons Brinckerhoff, 2000.

3.1.3 Mitigation

3.1.3.1 Rerouted Bus Lines

No mitigation is required for either option because no significant impacts have been identified. The re-routing of bus lines to connect with the LRT system at certain stations does not create any significant impacts.

3.1.3.2 Bus Operations

For both options, if any bus stops are displaced due to street design changes with the introduction of the LRT system, a replacement bus stop will be designated within one-eighth of a mile of the original stop. Bus stops will be relocated to the adjacent corner of the same intersection if possible in order to maintain service access for bus passengers. Local bus service schedules will be reviewed and adjusted if required to reflect the modified traffic conditions with LRT operations. These measures will reduce any potential impacts to a level that is less than significant for both options.

3.2 TRAFFIC

3.2.1 Affected Environment

The environment in which traffic will be examined includes the north-south major and secondary arterials between and including Alameda Street and Atlantic Boulevard and the east-west major and secondary arterials that are located one half mile to the north and south of the LRT alignment. The north-south streets include Alameda Street, Mission Road, Boyle Avenue, State Street, Soto Street, Evergreen Avenue, Lorena Street, Indiana Street, Rowan Avenue, Eastern Avenue, Ford Boulevard, Mednik Avenue, and Atlantic Boulevard. The east-west streets include Cesar Chavez Avenue, 1st Street, 3rd Street, 4th Street, Pomona Boulevard, and Beverly Boulevard. Figure 3-3 illustrates the street network in the Eastside Corridor.

3.2.2 Existing Traffic Conditions

3.2.2.1 Traffic Analysis Locations

In order to determine the existing traffic operating conditions in the Eastside Corridor and perform traffic analysis for the future year 2020, seven screenline locations and 54 intersections were identified. The jurisdictions that are represented by the traffic analysis locations include the City of Los Angeles, County of Los Angeles, and City of Monterey Park. The screenline locations were used to identify traffic on different streets at a point in the Corridor to compare volumes and aggregate Corridor traffic flows. Screenline analysis was performed using average daily traffic (ADT) volumes, and intersections were analyzed using PM peak hour volumes. Figure 3-4 shows the screenline and intersection locations that were used in the traffic analysis for this Draft SEIS/SEIR.

3.2.2.2 Screenline Traffic Analysis

Seven screenlines were used in the analysis to determine existing daily traffic operations. Five intercepted east-west streets and two summarized north-south street traffic volumes. There were 29 locations at which Average Daily Traffic (ADT) volumes were collected. Existing ADT count information was obtained from the City of Los Angeles, County of Los Angeles, and City of Monterey Park. New traffic counts were taken in June 2000, which account for 10 of the ADT counts and 49 of the peak hour counts. Figure 3-3 illustrates the existing street network and Figure 3-4 details the locations of the screenlines.

LADOT requested that information be added that explains how Level of Service (LOS) was determined. Volume/Capacity (V/C) was used as a method for determining LOS in the intersection analysis. V/C is obtained by dividing the measured volume (vehicles per day) by the capacity of that street. Capacity is based on the street classification as shown in the Transportation Element of the *Los Angeles General Plan* and presented in Section 1.3.1 of this Final SEIS/SEIR.

According to analysis results, one screenline crossing location experienced an existing level of service (LOS) F. This location was on Atlantic Boulevard south of 1st Street in the vicinity of the Pomona Freeway (SR-60) interchange. LOS D was found east of Alameda Street at Cesar Chavez Avenue and south of Temple Street at Alameda Street. The remaining screenline locations exhibit levels of service A, B, and C operating conditions.

Figure 3-3: Eastside Corridor Street Network

Figure 3-4: Traffic Analysis Locations

Levels of service were also calculated across screenlines to assess overall Corridor performance for more than one street at a given point in the Corridor. These calculations reveal that each screenline operated at LOS A or B, which indicates good levels of service for all streets within the Corridor taken together at one screenline location. Table 3-8 shows ADT capacities, volumes, volume-to-capacity ratios and corresponding levels of service (LOS) for each screenline location analyzed in the Eastside Corridor.

3.2.2.3 Peak Hour Traffic Analysis

The existing peak hour traffic conditions were assessed within the study area. This analysis concentrated on 54 study intersections located both along the proposed LRT alignment and along adjacent streets. The evening peak hour was identified as the critical time period for an assessment of existing conditions because, in general, it represents the worst-case conditions. Evening peak hour traffic counts were conducted at the majority of the study intersections in June of 2000. Peak hour traffic count data was also provided by LADOT for five locations.

The list of intersections analyzed in this report was assembled and approved in conjunction with MTA, LADOT, and Los Angeles County. Previously, the evening peak hour was identified as the critical time period for an assessment of existing conditions because, in general, it represents the worst-case conditions. However, AM counts have been requested by LADOT. They will not be completed in time to include in the Final SEIS/SEIR, but will be circulated under separate cover, per agreement with LADOT.

Signalized intersections within the study area and under the jurisdiction of the City of Los Angeles were recently connected to the City's Automated Traffic Surveillance and Control (ATSAC) signal system. The Boyle Heights ATSAC project provides an interconnected and coordinated signal system along major streets within the City limits from Indiana Street west to Downtown Los Angeles. The system includes signalized intersections along the LRT alignment from the intersection of Commercial Street and Alameda Street to 1st Street and Indiana Street. The remaining signalized intersections along the LRT alignment are located outside the City limits and are not included within the ATSAC system. However, the Los Angeles County Department of Public Works has recently begun administering numerous multi-jurisdictional Intelligent Transportation Systems projects. Currently the program is underway in the Gateway Cities I-5/Telegraph Road Corridor and in Pomona Valley.

Each study intersection was analyzed to determine peak hour operations and level of service. LOS is a qualitative measure used to describe the condition of traffic flow, ranging from excellent conditions at LOS A to overload conditions at LOS F. LOS D is typically recognized as the minimum LOS that is acceptable in urban areas. This measure is obtained using V/C in the case of signalized intersections, and delay in the case of unsignalized intersections. V/C is obtained by dividing the measured volume (vehicles per day) by the capacity of that street. The definition of each LOS is included in Tables 3-9 and 3-10 for signalized and stop-controlled intersections, respectively. The CalcaDB program, developed by LADOT, was utilized to analyze the signalized intersections. This program is based upon the analysis methods outlined in *Circular 212*, by the Transportation Research Board in 1980. The stop-controlled intersection analysis techniques published in the *Highway Capacity Manual* by the Transportation Research Board in 1997 were used to analyze the unsignalized intersections.

TABLE 3-8
EXISTING CONDITIONS SCREENLINE ADT ANALYSIS

Screenline Location	Street	Capacity	Volume	V/C[1]	LOS[2]
1. East of Alameda	Cesar Chavez Ave	32,000[3]	26,839	0.84	D
	1st Street	32,000	17,370	0.54	A
	3rd Street (WB street)	18,000[4]	13,784	0.77	C
	4th Street (EB street)	24,000[5]	11,135	0.46	A
	Screenline Total	**106,000**	**69,128**	**0.65**	**B**
2. West of I-5 Freeway	Cesar Chavez Ave	28,000[6]	20,919	0.75	C
	1st Street	28,000	13,333	0.48	A
	4th Street	32,000	19,509	0.61	B
	Screenline Total	**88,000**	**53,761**	**0.61**	**B**
3. West of Lorena	Cesar Chavez Ave	28,000	21,731	0.78	C
	1st Street	28,000	15,277	0.55	A
	4th Street	28,000	17,337	0.62	B
	Screenline Total	**84,000**	**54,345**	**0.65**	**B**
4. West of Eastern	Cesar Chavez Ave	28,000	20,823	0.74	C
	1st Street	28,000	10,242	0.37	A
	3rd Street	32,000	19,126	0.60	B
	Screenline Total	**88,000**	**50,191**	**0.57**	**A**
5. West of Atlantic	Cesar Chavez Ave	28,000	13,637	0.49	A
	1st Street	28,000	7,334	0.26	A
	Pomona Blvd	32,000	11,588	0.36	A
	Beverly Blvd	32,000	17,864	0.56	A
	Screenline Total	**120,000**	**50,423**	**0.42**	**A**
6. South of Temple St	Alameda St	32,000	26,577	0.83	D
	Mission Rd	24,000	11,769	0.49	A
	Screenline Total	**56,000**	**38,346**	**0.69**	**B**
7. South of 1st Street	Alameda St	32,000	19,181	0.60	B
	Mission Rd	12,000[7]	2,609	0.22	A
	Boyle Ave	28,000	12,099	0.43	A
	Soto St	28,000	17,492	0.62	B
	Evergreen Ave	12,000	5,746	0.48	A
	Lorena St	28,000	12,309	0.44	A
	Indiana St	14,000[8]	10,532	0.75	C
	Eastern Ave	28,000	12,827	0.46	A
	Mednik Ave	32,000	12,291	0.38	A
	Atlantic Blvd	32,000	35,058	1.10	F
	Screenline Total	**246,000**	**140,144**	**0.57**	**A**

[1] Volume/Capacity Ratio.
[2] Level of Service.
[3] Capacity of 32,000 assumes 800 vehicles per lane per hour and 10% of daily demand in peak hour.
[4] Capacity of 18,000 assumes 600 vehicles per lane per hour and 10% of daily demand in peak hour.
[5] Capacity of 24,000 assumes 600 vehicles per lane per hour and 10% of daily demand in peak hour.
[6] Capacity of 28,000 assumes 700 vehicles per lane per hour and 10% of daily demand in peak hour.
[7] Capacity of 12,000 assumes 600 vehicles per lane per hour and 10% of daily demand in peak hour.
[8] Capacity of 14,000 assumes 700 vehicles per lane per hour and 10% of daily demand in peak hour.
Sources: LADOT, County of Los Angeles Dept. of Public Works, The Traffic Solution, Parsons Brinckerhoff, 1997-2000.

TABLE 3-9
SIGNALIZED LEVEL OF SERVICE DEFINITIONS

Level of Service	Volume/Capacity Ratio	Definition
A	0.000 - 0.600	EXCELLENT. No vehicle waits longer than one red light and no approach phase is fully used.
B	0.601 - 0.700	VERY GOOD. An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.
C	0.701 - 0.800	GOOD. Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.
D	0.801 - 0.900	FAIR. Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups.
E	0.901 - 1.000	POOR. Represents the most vehicles intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.
F	>1.000	FAILURE. Backups from nearby locations or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Tremendous delays with continuously increasing queue lengths.

Source: Transportation Research Board, *Transportation Research Circ. No. 212, Interim Materials on Highway Capacity*, 1980.

TABLE 3-10
UNSIGNALIZED LEVEL OF SERVICE DEFINITIONS

Level of Service	Average Vehicle Delay (seconds)
A	$\leq$ 10.0
B	> 10.0 and $\leq$ 15.0
C	> 15.0 and $\leq$ 25.0
D	> 25.0 and $\leq$ 35.0
E	> 35.0 and $\leq$ 50.0
F	> 50.0

Source: Transportation Research Board, *Highway Capacity Manual, Special Report 209*, 1997.

Table 3-11 summarizes the existing peak hour operations and corresponding level of service at each of the study intersections. As shown in the table, the majority of the study intersections are currently operating at LOS D or better during the evening peak hour. The following four intersections are currently operating at LOS E or F during this period:

- Cesar Chavez Avenue and Mednik Avenue (signalized)
- 1st Street and Alma Avenue (stop sign)
- 4th Street and the I-5 SB Ramps (stop sign)
- Beverly Boulevard and Atlantic Boulevard (signalized)

TABLE 3-11
EXISTING[1] INTERSECTION LEVEL OF SERVICE ANALYSIS

E/W Street	N/S Street	Jurisdiction	Traffic Conditions	
			V/C or Delay	LOS[2]
Cesar Chavez Av	Vignes St	LADOT	0.686	B
Cesar Chavez Av	Mission Rd	LADOT	0.636	B
Cesar Chavez Av	Boyle Ave	LADOT	0.501	A
Cesar Chavez Av	State	LADOT	0.604	B
Cesar Chavez Av	I-5 SB Ramps	LADOT	10.9	B
Cesar Chavez Av	I-5 NB Ramps	LADOT	0.379	A
Cesar Chavez Av	Soto St	LADOT	0.583	A
Cesar Chavez Av	Evergreen Ave	LADOT	0.531	A
Cesar Chavez Av	Lorena St	LADOT	0.516	A
Cesar Chavez Av	Indiana St	LA County	27.6	D
Cesar Chavez Av	Rowan Ave	LA County	0.553	A
Cesar Chavez Av	Eastern Ave	LA County	0.561	A
Cesar Chavez Av	***Mednik Ave***	***LA County***	***0.951***	***E***
Cesar Chavez Av	Atlantic Blvd	Monterey Park	0.888	D
Commercial St	Alameda St	LADOT	0.482	A
Commercial St	Vignes St	LADOT	12.97	B
Temple St	Alameda St	LADOT	0.691	B
1st St	Alameda St	LADOT	0.895	D
1st St	Vignes St	LADOT	0.483	A
1st St	Mission Rd	LADOT	0.748	C
1st St	101 SB Ramps	LADOT	21.5	C
1st St	101 NB Ramps	LADOT	0.364	A
1st St	Boyle Ave	LADOT	0.493	A
1st St	Soto St	LADOT	0.622	B
1st St	Evergreen Ave	LADOT	0.448	A
1st St	Lorena St	LADOT	0.348	A
1st St	Indiana St	LADOT	0.560	A
1st St	***Alma Ave***	***LA County***	***128.1***	***F***
1st St	Rowan Ave	LA County	0.300	A
1st St	Eastern Ave	LA County	0.401	A
1st St	Mednik Ave	LA County	0.471	A
1st St	Atlantic Blvd	Monterey Park	0.850	D
3rd St	Alameda St	LADOT	0.521	A
4th St	Alameda St	LADOT	0.664	B
4th St	101 SB Ramps	LADOT	11.2	B
4th St	101 NB Ramps	LADOT	0.395	A
4th St	Boyle Ave	LADOT	0.416	A
4th St	***I-5 SB Ramps***	***LADOT***	***97.6***	***F***
4th St	I-5 NB Ramps	LADOT	0.536	A
4th St	Soto St	LADOT	0.542	A
4th St	Evergreen Ave	LADOT	0.373	A
4th St	Euclid Ave	LADOT	0.384	A
3rd St	Indiana St	LADOT	0.853	D

TABLE 3-11
EXISTING[1] INTERSECTION LEVEL OF SERVICE ANALYSIS

E/W Street	N/S Street	Jurisdiction	Traffic Conditions	
			V/C or Delay	LOS[2]
3rd St	Alma Ave	LA County	17.1	C
3rd St	Rowan Ave	LA County	0.550	A
3rd St	Eastern Ave	LA County	0.707	C
3rd St	Ford Blvd	LA County	0.473	A
3rd St	Mednik Ave	LA County	0.602	B
3rd St	Pomona / Beverly / Woods	LA County	0.727	C
Pomona Blvd	Atlantic Blvd	LA County	0.817	D
Beverly Blvd	***Atlantic Blvd***	***LA County***	***0.959***	***E***
Beverly Blvd	Hillview Ave	LA County	0.527	A
SR 60 EB Ramp	Atlantic Blvd	LA County	0.575	A
4th St	Atlantic Blvd	LA County	0.541	A

[1] Year 2000 PM peak hour.
[2] Bolded, italicized text indicates intersections currently operating at LOS E or F.
Source: LADOT Data, Kaku Associates, 2000.

3.2.3 Future Traffic Impacts

3.2.3.1 No-Build Alternative

Intersection Traffic Conditions

In order to determine the potential changes in traffic operations within the study area with the proposed LRT system, the future conditions were first assessed without the LRT project.

The No-Build conditions for the next 20 years were discussed with representatives of the project team and LADOT. The study area was analyzed based upon: historical traffic data, potential growth within the study area and within areas directly adjacent to the study area, and the long-range traffic projections from the modeling efforts as part of this study. This assessment resulted in the determination that the No-Build future traffic projections would be developed by factoring the existing peak hour traffic data by 1.20. This factor represents an average annual growth rate of one percent.

The 1.20 growth factor was applied to each of the 54 study intersections. The future conditions (without the LRT) were analyzed and the resulting operating conditions and corresponding level of service are provided in Table 3-12. This analysis assumed no improvements to the existing roadway system. A review of the results indicates that under No-Build conditions, 42 intersections will continue to operate at level of service D or better. The 12 intersections that are projected to operate at level of service E or F are highlighted in the table.

3.2.3.2 LRT Build Alternative – Option A

The LRT Build Alternative Option A includes 4.1 miles of at-grade light rail where trains will run in the center or to the side of existing streets, including Commercial Street, Alameda Street, 1st Street, Indiana Street, 3rd Street, and Beverly Boulevard. The typical width of the LRT envelope is 26 feet between stations and 37 feet at stations. Mountable raised curbs would be constructed along the edge of the LRT envelope to keep traffic out of the LRT right-of-way while allowing for emergency vehicle access.

TABLE 3-12
2020 NO-BUILD INTERSECTION LEVEL OF SERVICE ANALYSIS

E/W Street	N/S Street	Jurisdiction	Traffic Conditions	
			V/C or Delay	LOS[1]
Cesar Chavez Av	Vignes St	LADOT	0.836	D
Cesar Chavez Av	Mission Rd	LADOT	0.764	C
Cesar Chavez Av	Boyle Av	LADOT	0.602	B
Cesar Chavez Av	State	LADOT	0.725	C
Cesar Chavez Av	I-5 SB Ramps	LADOT	12.5	B
Cesar Chavez Av	I-5 NB Ramps	LADOT	0.454	A
Cesar Chavez Av	Soto St	LADOT	0.680	B
Cesar Chavez Av	Evergreen Av	LADOT	0.637	B
Cesar Chavez Av	Lorena St	LADOT	0.618	B
Cesar Chavez Av	***Indiana St***	***LA County***	***76.5***	***F***
Cesar Chavez Av	Rowan Av	LA County	0.663	B
Cesar Chavez Av	Eastern Av	LA County	0.673	B
Cesar Chavez Av	***Mednik Av***	***LA County***	***1.141***	***F***
Cesar Chavez Av	***Atlantic Bl***	***Monterey Park***	***1.065***	***F***
Commercial St	Alameda St	LADOT	0.593	A
Commercial St	Vignes St	LADOT	18.04	C
Temple St	Alameda St	LADOT	0.843	D
1st St	***Alameda St***	***LADOT***	***1.087***	***F***
1st St	Vignes St	LADOT	0.595	A
1st St	Mission Rd	LADOT	0.898	D
1st St	***101 SB Ramps***	***LADOT***	***36.4***	***E***
1st St	101 NB Ramps	LADOT	0.437	A
1st St	Boyle Av	LADOT	0.613	B
1st St	Soto St	LADOT	0.835	D
1st St	Evergreen Av	LADOT	0.538	A
1st St	Lorena St	LADOT	0.451	A
1st St	Indiana St	LADOT	0.672	B
1st St	***Alma Av***	***LA County***	***229.3***	***F***
1st St	Rowan Av	LA County	0.361	A
1st St	Eastern Av	LA County	0.482	A
1st St	Mednik Av	LA County	0.565	A
1st St	***Atlantic Bl***	***Monterey Park***	***1.020***	***F***
3rd St	Alameda St	LADOT	0.625	B
4th St	Alameda St	LADOT	0.810	D
4th St	101 SB Ramps	LADOT	12.5	B
4th St	101 NB Ramps	LADOT	0.488	A
4th St	Boyle Av	LADOT	0.464	A
4th St	***I-5 SB Ramps***	***LADOT***	*******	***F***
4th St	I-5 NB Ramps	LADOT	0.658	B
4th St	Soto St	LADOT	0.664	B
4th St	Evergreen Av	LADOT	0.461	A
4th St	Euclid Av	LADOT	0.475	A
3rd St	***Indiana St***	***LADOT***	***1.024***	***F***

TABLE 3-12
2020 NO-BUILD INTERSECTION LEVEL OF SERVICE ANALYSIS

E/W Street	N/S Street	Jurisdiction	Traffic Conditions	
			V/C or Delay	LOS[1]
3rd St	Alma Av	LA County	23.5	C
3rd St	Rowan Av	LA County	0.701	C
3rd St	***Eastern Av***	***LA County***	***0.939***	***E***
3rd St	Ford Bl	LA County	0.567	A
3rd St	Mednik Av	LA County	0.722	C
3rd St	Pomona Bl/Beverly Bl/Woods Av	LA County	0.873	D
Pomona Bl	***Atlantic Bl***	***LA County***	***0.981***	***E***
Beverly Bl	***Atlantic Bl***	***LA County***	***1.151***	***F***
Beverly Bl	Hillview Av	LA County	0.631	B
SR 60 EB Ramp	Atlantic Bl	LA County	0.691	B
4th St	Atlantic Bl	LA County	0.649	B

* Denotes delay estimated to be greater than 999.9 sec/veh.
[1] Bolded, italicized text indicates intersections projected to operate at LOS E or F.
Source: Kaku Associates, 2000.

Traffic and pedestrians would be allowed to cross the LRT tracks only at signalized intersections along the alignment. All driveways and unsignalized intersections would have right-in and right-out access where vehicles, bicyclists, and pedestrians would be prohibited from crossing the tracks. Through and left turn movements across the tracks would be prohibited at these locations.

Some unsignalized intersections will be signalized to accommodate LRT crossings, such as the on-ramps to the SR-60 and I-710 Freeways. Where traffic signals will affect operation of the ramps, a Permitting, Engineering Evaluation Report will be developed, as per Caltrans regulations, to be approved by the California Transportation Commission. In the County of Los Angeles, from Indiana Street, along 3rd Street, to the terminus on Beverly Boulevard, MTA will consult with the California Highway Patrol (CHP) on traffic matters including intersections and pedestrians.

In order to maintain the flow of traffic, left turns from the LRT alignment streets will be accommodated at signalized intersections only. At these locations, split-phase signal operation will be implemented to accommodate the left turn demand. In order to provide for safe LRT operations, these left turns across the tracks will be controlled via left turn arrows. Specific locations that would experience significant traffic impacts are identified in subsequent sections. At several locations, the mitigation consists of left turn prohibitions to reduce intersection traffic impacts.

Traffic Lane Reductions

In the at-grade segments of the alignment, the LRT tracks will, for the most part, utilize existing street right-of-way. For most at-grade sections, the LRT will run in or near the center of the street. The removal of some traffic lanes and elimination of some left turns is reflected in the analysis of intersection traffic impacts presented in the following pages.

Commercial Street

The LRT system would utilize portions of Caltrans right-of-way and enter Commercial Street east of its intersection with Alameda Street. At this location, the LRT tracks would begin to curve through the

intersection and require that the westbound intersection stop line be moved back slightly in order to keep the LRT right-of-way clear and to avoid conflicts between cars and trains. There would be no traffic lanes removed on Commercial Street.

Alameda Street

Alameda Street will be widened to the east by 14 feet to 24.5 feet in order to maintain the number of through traffic lanes provided in the No-Build Alternative, and to provide for adequate space on the east side of the street for the LRT system. No through traffic lanes will be eliminated on Alameda Street. However, the northbound right turn lane will be eliminated at the intersection of Temple Street. Turner and Banning Streets will be closed at Alameda Street due to the new station location on the east side of Alameda. Figure 3-5 illustrates the typical Alameda Street cross-section.

1st Street

Under the LRT Build Alternative Option A, 1st Street will maintain two traffic lanes in each direction, plus curb parking, in sections where the LRT system is at-grade between Alameda and Vignes Streets. Figure 3-6 illustrates the typical 1st Street cross-section, and Figure 3-7 shows the LA River Bridge cross-section, where one lane of traffic in each direction will remain up until the train enters the tunnel section just east of Gless Street. In at-grade station areas, the traffic lane will be 13.5 feet wide, curb parking will be prohibited, and sidewalks will be narrowed from 10 feet to 8 feet to maintain one traffic lane in each direction. The LRT alignment will run in the center of the street between Alameda and Gless Streets.

In the areas of 1st Street where the LRT has a tunnel profile, between the US-101 Freeway and Fresno Street, there will be no street modifications. However, some limited street modifications may occur at tunnel station locations, depending on specific designs. Upon exiting the eastern tunnel portal, the LRT will run on the north side of the street for one block to Lorena, where it will cross over to the center of the street before turning south on Indiana Street. The station at 1st/Lorena is located on the north side of the street, with one traffic lane in each direction and parking on the south side of the street.

From Cheesbroughs Lane to Indiana Street, one lane in each direction (11-foot traffic lanes) and 8-foot curb parking lanes will be provided. Sidewalk narrowing from 12 feet to 8 feet will be necessary to accommodate the traffic lanes plus curb parking at these locations. Where curb parking is not required, 15-foot traffic lanes and existing 12-foot sidewalks with no curb parking will be provided within the existing 80-foot right-of-way.

The station at 1st/Lorena, directly east of the portal, will be located on the north side of 1st Street. To the east of the station, the LRT alignment would cross over to the center of 1st Street before turning south down Indiana Street.

As part of the Mangrove Estates Development, a signal is proposed at 1st and Hewitt Streets to access the site. The signal will be shown in the design and implemented by others upon the successful development of Mangrove Estates.

Indiana Street

Under Option A of the LRT Build Alternative, a 26-foot LRT system will occupy the center of the street at-grade, and one 11-foot traffic lane will remain in each direction. Curb parking will be prohibited. At this location, the sidewalk will be narrowed to six feet on the west side to accommodate the LRT tracks within the existing 60-foot right-of-way. Figure 3-8 illustrates the typical Indiana Street cross-section.

Figure 3-5: Alameda Street Cross-Section
Figure 3-6: 1st Street Cross-Section

Figure 3-7: 1st Street Bridge Cross-Section

Figure 3-8: Indiana Street Cross-Sections

3rd Street

3rd Street will have one traffic lane removed in each direction between Indiana Street and Beverly Boulevard. After the introduction of the LRT system on 3rd Street, one traffic lane plus curb parking will remain in each direction. The inside traffic lane will be 13 feet and 10.5 feet wide between stations and at station locations, respectively. The curb parking lane will be 15 feet and 12 feet wide between stations and at station locations, respectively. Similar to existing conditions and the No-Build Alternative, curb parking will be prohibited and the curb lane will be utilized as a traffic lane during the hours of 6:30 to 9:00 a.m. in the westbound direction and 4:00 to 6:00 p.m. in the eastbound direction. Lane continuity will be maintained for through traffic movements during both the peak and off-peak hours. At all other times, the curb lanes will continue to provide for parking. Sidewalks will not be modified along 3rd Street. Figure 3-9 illustrates the typical 3rd Street cross-section.

Beverly Boulevard

Under Option A, Beverly Boulevard will have one traffic lane removed in each direction because the LRT system will have an at-grade profile. Figure 3-10 shows the typical street cross-section of Beverly Boulevard at the Atlantic Boulevard station. The median will be removed on Beverly where the LRT will occupy the center of the street between 3rd Street/Woods Avenue and Hillview Avenue. One 10.5-foot traffic lane in each direction will be provided at the station. Curb parking will be maintained with existing regulations that stipulate that 2-hour parking is permitted between 7 a.m. and 6 p.m. Sidewalks will not be modified along Beverly Boulevard.

Summary of Traffic Lane Reductions along the LRT Alignment

A summary of lane reductions under both Options A and B is provided in Table 3-13. Refer to Section 3.2.3.3 for more information about Option B. Figure 3-11 illustrates the traffic lane reductions along the LRT alignment.

TABLE 3-13
SUMMARY OF THROUGH TRAVEL LANES

Street	From	To	Total Number of Traffic Lanes		
			No Build	Option A	Option B
Alameda St	Commercial St	1st Street	4	4	4
1st Street	Alameda St	Vignes St	4	4	4
1st Street[1]	Vignes St[1]	Gless St[1]	4	2	2
1st Street[2]	Gless St[2]	Fresno St[2]	4	4	4
1st Street	Fresno St	Indiana St	4	2	2
Indiana St	1st Street	3rd Street	2	2	2
3rd Street	Indiana St	Beverly Blvd	5 / 4[3]	3 / 2[4]	3 / 2[4]
Beverly Blvd	3rd Street	Hillview Ave	4	2	4
Pomona Blvd	Beverly Blvd	Hillview Ave	4	4	2

[1] The alignment crosses over the LA River Bridge.
[2] There is no at-grade LRT operation in this segment.
[3] 5 lanes during peak periods/4 lanes during off-peak periods.
[4] 3 lanes during peak periods/2 lanes during off-peak periods.
Source: Parsons Brinckerhoff, 2000-2001

Figure 3-9: 3rd Street Cross-Section
Figure 3-10: Beverly Boulevard Cross-Section

Figure 3-11: Traffic Lane Reductions

Traffic Circulation and Neighborhood Accessibility

Local neighborhood traffic patterns and pedestrian circulation across the LRT tracks would be modified with the LRT Build Alternative Option A. Traffic and pedestrian crossings at stop sign-controlled streets along the at-grade segments of the alignment will not be allowed to cross the tracks. This would also be the case for mid-block driveways. As stated earlier, these locations will be converted to right-in and right-out traffic operation. Delivery trucks will be able to access business via right hand turns. If there is not enough room to accommodate a right hand turn, the MTA will provide an alternative access point. Traffic and pedestrian movements that cross the tracks will be accommodated at signalized crossings with special traffic signal phasing to provide safe, separated intervals for train, traffic, and pedestrian crossings.

Due to the limited number of crossings of the tracks introduced by the LRT Build Alternative, traffic on streets that do cross the tracks may increase. Pedestrian paths may be modified if pedestrians are not able to cross the tracks at an unauthorized location. Pedestrians would be directed to cross the tracks at the nearest signalized intersection. Emergency vehicles would be the only vehicles allowed to mount the low curb and drive on the tracks.

Shifts in Traffic Patterns along the LRT Alignment

Adjustments to traffic flow patterns due to the proposed LRT project were determined by utilizing MTA model projections developed for this study, described previously in the introduction to Section 3.0. The future No-Build and LRT peak hour model data were compared to determine the effects of the proposed project on traffic flow. The PM peak hour link data from each model output were utilized in this analysis. The results of this analysis are summarized below, comparing the 2020 traffic forecasts with the LRT project versus the 2020 traffic forecasts without the LRT.

- On Cesar Chavez, the traffic volumes increased overall by an average of 2 to 3 percent.
- Along 1st Street, west of Indiana Street, the traffic volumes decreased within a range of 16 to 24 percent. East of Indiana Street, the traffic volumes on 1st Street increased by an average of 12 percent.
- On 3rd Street, the traffic volumes increased by 2 to 3 percent west of Interstate 5. Between I-5 and Indiana the volumes decreased by 3 to 4 percent. Along the alignment, east of Indiana Street, the traffic volumes on 3rd Street decreased by 40 to 45 percent. It is expected that much of the traffic would shift to adjacent parallel facilities in order to avoid traffic conditions due to the effects of the LRT alignment. Because of the reduction in number of travel lanes and/or the restriction of turn movements at key intersections, the 40 to 45 percent reduction could be expected.
- On the north/south roadways, the peak hour traffic volumes in general increased by 2 to 4 percent. The noted exceptions to this were along the alignment. On Alameda Street, the traffic decreased by 5 to 8 percent and along Indiana Street the traffic decreased by an average 24 percent.

The overall shifts in traffic identified above were applied to the Year 2020 No-Build peak hour turning movement volumes in order to develop the future LRT Build traffic volumes at each of the 54 study intersections.

Intersection Traffic Service

The future intersection geometrics for the No-Build conditions assumed no changes to the existing geometrics. As discussed previously, the proposed LRT project will result in changes to the geometrics at intersections along the alignment. The intersection traffic analysis accounted for these modifications.

The traffic signals on the proposed LRT alignment will require modification. An exclusive signal phase for the LRT is necessary at most locations. The intersection analysis assumed split phasing at intersections where no exclusive left-turn lane would be available due to the LRT project. The analysis incorporated a capacity reduction factor to reflect the time required by the LRT signal phase. The LRT capacity reduction factor was determined to be equivalent to a V/C of 0.22. This amount was added to the V/C ratio and equates to approximately 300 to 330 passenger cars added to the critical movement. This factor was based upon the following assumptions:

- Operation of 3-car trains at 5-minute headways per direction (train length is assumed to be approximately 270 feet).
- An average street running operating speed of 20 miles per hour.
- An average cross-street width of 80 feet.

The proposed Atlantic/Beverly Station was assessed to account for the patron related traffic utilizing the station. Parking areas are planned for the Pep Boys parking lot and at the intersection of Pomona and Atlantic Boulevards. A total of 200 parking spaces are planned. Future patron projections indicate that approximately 75 kiss-n-ride patrons would utilize the station during the evening peak hour. Traffic generated by the station was estimated and assigned to the local roadway system. Access to the parking and drop-off areas was assumed to be limited to right-turns entering and exiting only.

The future peak hour traffic volumes at the 54 study intersections were determined based upon the anticipated shifts in traffic and accounting for localized station related traffic. The future traffic operations were then analyzed utilizing the projected peak hour traffic volumes and accounting for modifications to the roadway geometrics and signal operations along the proposed alignment. The resulting intersection operations and LOS are provided in Table 3-14. As indicated in the table, 32 intersections are anticipated to operate at LOS D or better. Twenty-two intersections would operate at LOS E or F.

Summary of Impacts

The future intersection operations under the No-Build and the LRT Build Alternative – Option A were compared. This comparison identified the study intersections where the LRT Build Alternative will result in significant traffic impacts under CEQA. The significant impact criteria utilized in this comparison were based upon the guidelines set forth by LADOT for the intersections within the City of Los Angeles, and by the County of Los Angeles for the intersections located in the County. The LADOT criteria are provided in Table 3-15, and the County criteria are provided in Table 3-16. As seen in Table 3-14, a total of 20 intersections are anticipated to be significantly impacted prior to mitigation. It should be noted that 11 intersections are expected to be positively impacted by the proposed LRT Build Alternative.

TABLE 3-14
SUMMARY OF 2020 INTERSECTION IMPACTS – OPTION A

E/W Street	N/S Street	Jurisdiction	LRT		V/C or Delay Increase [1]	Significant Impact
			V/C	LOS		
Cesar Chavez Av	Vignes St	LADOT	0.851	D	0.015	NO
Cesar Chavez Av	Mission Rd	LADOT	0.769	C	0.005	NO
Cesar Chavez Av	Boyle Av	LADOT	0.608	B	0.006	NO
Cesar Chavez Av	State St	LADOT	0.733	C	0.008	NO
Cesar Chavez Av	I-5 SB Ramps	LADOT	13.2	B	0.7	NO
Cesar Chavez Av	I-5 NB Ramps	LADOT	0.467	A	0.013	NO
Cesar Chavez Av	Soto St	LADOT	0.697	B	0.017	NO

TABLE 3-14
SUMMARY OF 2020 INTERSECTION IMPACTS – OPTION A

E/W Street	N/S Street	Jurisdiction	LRT		V/C or Delay Increase [1]	Significant Impact
			V/C	LOS		
Cesar Chavez Av	Evergreen Av	LADOT	0.657	B	0.020	NO
Cesar Chavez Av	Lorena St	LADOT	0.636	B	0.018	NO
Cesar Chavez Av	Indiana St	LA County	48.2	E	-28.3	NO
Cesar Chavez Av	Rowan Av	LA County	0.676	B	0.013	NO
Cesar Chavez Av	Eastern Av	LA County	0.693	B	0.020	NO
Cesar Chavez Av	Mednik Av	LA County	1.165	F	0.024	***YES***
Cesar Chavez Av	Atlantic Bl	Monterey Park	1.113	F	0.048	***YES***
Commercial St	Alameda St	LADOT	0.924	E	0.331	***YES***
Commercial St	Vignes St	LADOT	[2]	F	[2]	***YES***
Temple St	Alameda St	LADOT	0.790	C	-0.053	NO
1st St	Alameda St	LADOT	1.009	F	-0.078	NO
1st St	Vignes St	LADOT	1.055	F	0.460	***YES***
1st St	Mission Rd	LADOT	1.048	F	0.150	***YES***
1st St	101 SB Ramps	LADOT	58.8	F	22.4	***YES***
1st St	101 NB Ramps	LADOT	0.408	A	-0.029	NO
1st St	Boyle Av	LADOT	0.541	A	-0.072	NO
1st St	Soto St	LADOT	0.785	C	-0.050	NO
1st St	Evergreen Av	LADOT	0.485	A	-0.053	NO
1st St	Lorena St	LADOT	1.092	F	0.641	***YES***
1st St	Indiana St	LADOT	1.215	F	0.543	***YES***
1st St	Alma Av	LA County	[2]	F	[2]	***YES***
1st St	Rowan Av	LA County	0.399	A	0.038	NO
1st St	Eastern Av	LA County	0.515	A	0.033	NO
1st St	Mednik Av	LA County	0.608	B	0.043	NO
1st St	Atlantic Bl	Monterey Park	1.120	F	0.100	***YES***
3rd St	Alameda St	LADOT	0.595	A	-0.030	NO
4th St	Alameda St	LADOT	0.789	C	-0.021	NO
4th St	101 SB Ramps	LADOT	12.8	B	0.3	NO
4th St	101 NB Ramps	LADOT	0.493	A	0.005	NO
4th St	Boyle Av	LADOT	0.450	A	-0.014	NO
4th St	I-5 SB Ramps	LADOT	[2]	F	[2]	***YES***
4th St	I-5 NB Ramps	LADOT	0.672	B	0.014	NO
4th St	Soto St	LADOT	0.665	B	0.001	NO
4th St	Evergreen Av	LADOT	0.479	A	0.018	NO
4th St	Euclid Av	LADOT	0.478	A	0.003	NO
3rd St	Indiana St	LADOT	1.309	F	0.285	***YES***
3rd St	Alma Av	LA County	9.5	A	-14.0	NO
3rd St	Rowan Av	LA County	1.000	E	0.299	***YES***
3rd St	Eastern Av	LA County	1.345	F	0.406	***YES***
3rd St	Ford Bl	LA County	1.132	F	0.565	***YES***
3rd St	Mednik Av	LA County	1.244	F	0.522	***YES***
3rd St	Pomona Bl/Beverly Bl/Woods Av	LA County	1.016	F	0.143	***YES***
Pomona Bl	Atlantic Bl	LA County	0.977	E	-0.004	NO
Beverly Bl	Atlantic Bl	LA County	1.894	F	0.743	***YES***
Beverly Bl	Hillview Av	LA County	0.497	A	-0.134	NO
SR 60 EB Ramp	Atlantic Bl	LA County	0.779	C	0.088	***YES***
4th St	Atlantic Bl	LA County	0.686	B	0.037	NO

[1] over 2020 No Build results, Table 3-12
[2] LRT intersection delay is estimated to exceed 999.9 sec/veh.
Source: Parsons Brinckerhoff, 2001.

TABLE 3-15 LADOT INTERSECTION CRITERIA	
Intersection V/C Ratio with Project Traffic	**Significant Increase in V/C ratio**
0.000 – 0.700	< 0.060
0.701 – 0.800	< 0.040
0.801 – 0.900	< 0.020
0.901 or greater	< 0.010
Source: City of Los Angeles, Department of Transportation, 2000.	

TABLE 3-16 LOS ANGELES COUNTY INTERSECTION CRITERIA	
Intersection V/C Ratio with Project Traffic	**Significant Increase in V/C ratio**
0.701 – 0.800	< 0.040
0.801 – 0.900	< 0.020
0.901 or greater	< 0.010
Source: County of Los Angeles, Traffic Impact Analysis Guidelines, 1997.	

3.2.3.3 LRT Build Alternative – Option B

The impacts of Option B are similar to Option A with the exceptions noted below.

Traffic Lane Reductions

Commercial, Alameda, and 3rd Streets maintain the same layout as previously described in Option A in Section 3.2.3.2. The differences for 1st and Indiana Streets and Pomona Boulevard are described below.

1st Street

1st Street is very similar for both Options A and B. The only difference is at the 1st /Lorena Station, which is moved to 3rd/Indiana under Option B. The portal will come up in the middle of 1st Street just east of Concord Street and the alignment will remain in the center of the street. From the tunnel portal to Indiana Street, one lane in each direction (11-foot traffic lanes) and 8-foot curb parking lanes will be provided.

Indiana Street

Option B involves an off-street at-grade alignment between 1st and 3rd Streets. The alignment will be located on the eastern side of Indiana Street outside the current street right-of-way, and Ramona High School will be either relocated or rebuilt based on an agreement between LAUSD and MTA. The station at 1st/Lorena in Option A will be moved to 3rd/Indiana. This configuration will allow one traffic lane and one parking lane in each direction. Figure 3-8 illustrates the typical Indiana Street cross-section.

Pomona Boulevard

Because the eastern terminal station has been moved from Beverly/Atlantic to Pomona/Atlantic, the alignment for Option B does not travel along Beverly Boulevard from 3rd Street to just east of Atlantic. Instead, the alignment continues east on 3rd Street and a short distance on Pomona Boulevard to the

terminal station just west of Atlantic Boulevard. However, the revised station is within walking distance of the former site. Under Option B, Pomona Boulevard will have one traffic lane removed in each direction because the LRT system will be located in a trench slightly below street level. The median will be removed on Pomona where the LRT will occupy the center of the street between 3rd Street/Woods Avenue and Hillview Avenue. One 10.5-foot traffic lane in each direction will be provided at the station. Curb parking will be maintained with existing regulations that stipulate that 2-hour parking is permitted between 7 a.m. and 6 p.m. Sidewalks will not be modified along Pomona Boulevard. Figure 3-12 illustrates the typical Pomona Boulevard cross-section.

Summary of Traffic Lane Reductions along the LRT Alignment

A summary of lane reductions for Option B is provided in Table 3-13 and Figure 3-11. Refer to Section 3.2.3.2 for more information.

Traffic Circulation and Neighborhood Accessibility

Same as Option A.

Shifts in Traffic Patterns along the LRT Alignment

Same as Option A.

Intersection Traffic Service

As with Option A, the future peak hour traffic volumes at the study intersections were determined based upon the anticipated shifts in traffic and accounting for localized station related traffic. The future traffic operations were then analyzed utilizing the projected peak hour traffic volumes and accounting for modifications to the roadway geometrics and signal operations along the proposed alignment. The resulting intersection operations and LOS under Option B are provided in Table 3-17.

TABLE 3-17
SUMMARY OF 2020 INTERSECTION IMPACTS – OPTION B

E/W Street	N/S Street	Jurisdiction	LRT		V/C or Delay Increase[1]	Significant Impact
			V/C	LOS		
Cesar Chavez Av	Vignes St	LADOT	0.851	D	0.015	NO
Cesar Chavez Av	Mission Rd	LADOT	0.769	C	0.005	NO
Cesar Chavez Av	Boyle Av	LADOT	0.608	B	0.006	NO
Cesar Chavez Av	State St	LADOT	0.733	C	0.008	NO
Cesar Chavez Av	I-5 SB Ramps	LADOT	13.2	B	0.7	NO
Cesar Chavez Av	I-5 NB Ramps	LADOT	0.467	A	0.013	NO
Cesar Chavez Av	Soto St	LADOT	0.697	B	0.017	NO
Cesar Chavez Av	Evergreen Av	LADOT	0.657	B	0.020	NO
Cesar Chavez Av	Lorena St	LADOT	0.636	B	0.018	NO
Cesar Chavez Av	Indiana St	LA County	48.2	E	-28.3	NO
Cesar Chavez Av	Rowan Av	LA County	0.676	B	0.013	NO
Cesar Chavez Av	Eastern Av	LA County	0.693	B	0.020	NO
Cesar Chavez Av	Mednik Av	LA County	1.165	F	0.024	***YES***
Cesar Chavez Av	Atlantic Bl	Monterey Park	1.113	F	0.048	***YES***
Commercial St	Alameda St	LADOT	0.924	E	0.331	***YES***
Commercial St	Vignes St	LADOT	[2]	F	[2]	***YES***
Temple St	Alameda St	LADOT	0.790	C	-0.053	NO

TABLE 3-17
SUMMARY OF 2020 INTERSECTION IMPACTS – OPTION B

E/W Street	N/S Street	Jurisdiction	LRT		V/C or Delay Increase[1]	Significant Impact
			V/C	LOS		
1st St	Alameda St	LADOT	1.009	F	-0.078	NO
1st St	Vignes St	LADOT	1.055	F	0.460	***YES***
1st St	Mission Rd	LADOT	1.048	F	0.150	***YES***
1st St	101 SB Ramps	LADOT	58.8	F	22.4	***YES***
1st St	101 NB Ramps	LADOT	0.408	A	-0.029	NO
1st St	Boyle Av	LADOT	0.541	A	-0.072	NO
1st St	Soto St	LADOT	0.785	C	-0.050	NO
1st St	Evergreen Av	LADOT	0.485	A	-0.053	NO
1st St	Lorena St	LADOT	1.131	F	0.680	***YES***
1st St	Indiana St	LADOT	1.232	F	0.560	***YES***
1st St	Alma Av	LA County	[2]	F	[2]	***YES***
1st St	Rowan Av	LA County	0.399	A	0.038	NO
1st St	Eastern Av	LA County	0.515	A	0.033	NO
1st St	Mednik Av	LA County	0.608	B	0.043	NO
1st St	Atlantic Bl	Monterey Park	1.120	F	0.100	***YES***
3rd St	Alameda St	LADOT	0.595	A	-0.030	NO
4th St	Alameda St	LADOT	0.789	C	-0.021	NO
4th St	101 SB Ramps	LADOT	12.8	B	0.3	NO
4th St	101 NB Ramps	LADOT	0.493	A	0.005	NO
4th St	Boyle Av	LADOT	0.450	A	-0.014	NO
4th St	I-5 SB Ramps	LADOT	[2]	F	[2]	***YES***
4th St	I-5 NB Ramps	LADOT	0.672	B	0.014	NO
4th St	Soto St	LADOT	0.665	B	0.001	NO
4th St	Evergreen Av	LADOT	0.479	A	0.018	NO
4th St	Euclid Av	LADOT	0.478	A	0.003	NO
3rd St	Indiana St	LADOT	1.110	F	0.086	***YES***
3rd St	Alma Av	LA County	9.5	A	-14.0	NO
3rd St	Rowan Av	LA County	1.000	E	0.299	***YES***
3rd St	Eastern Av	LA County	1.345	F	0.406	***YES***
3rd St	Ford Bl	LA County	1.110	F	0.543	***YES***
3rd St	Mednik Av	LA County	1.244	F	0.522	***YES***
3rd St	Pomona Bl/Beverly Bl/Woods Av	LA County	0.895	D	0.022	***YES***
Pomona Bl	Atlantic Bl	LA County	1.247	F	0.266	***YES***
Beverly Bl	Atlantic Bl	LA County	1.082	F	-0.069	NO
Beverly Bl	Hillview Av	LA County	0.497	A	-0.134	NO
SR 60 EB Ramp	Atlantic Bl	LA County	0.779	C	0.088	***YES***
4th St	Atlantic Bl	LA County	0.686	B	0.037	NO

[1] over 2020 No Build results, Table 3-12
[2] LRT intersection delay is estimated to exceed 999.9 sec/veh.
Source: Parsons Brinckerhoff, 2001.

Summary of Impacts

Table 3-17 indicates which locations are impacted per LADOT and County of Los Angeles guidelines by Option B. A total of 20 intersections are anticipated to be significantly impacted prior to mitigation. The major difference between the options is that the Pomona/Atlantic intersection is significantly impacted under Option B. However, the Beverly/Atlantic intersection is not significantly impacted.

Figure 3-12: Pomona Boulevard Cross-Section

3.2.4 Mitigation – Option A

3.2.4.1 Intersection Traffic Service

The intersections where significant traffic impacts are anticipated were evaluated to determine potential mitigation measures. The following modifications were considered:

- Modifications to intersection geometrics. This improvement was primarily limited to within the existing pavement width. If proposed traffic mitigation requires the narrowing of a sidewalk to provide additional roadway width, it will only be considered feasible if a minimum standard sidewalk width can be maintained.
- Changes to signal operations to improve efficiency.
- Signalization of selected intersections that are currently stop-controlled.
- The City of Los Angeles signal network system, referred to as the ATSAC system, coordinates signals for optimal operations. This is referred to as signal priority. The ATSAC system is currently in place in East Los Angeles, but will require the installation of additional software to coordinate with both car and train traffic.
- Prohibition of left turns at intersections along the alignment. This potential prohibition will allow for the LRT to operate concurrently with adjacent traffic and eliminate the need for split-phasing. Intersections with left turn prohibitions recommended as mitigation are listed in Table 3-18. This mitigation measure will also consider the potential impacts on adjacent locations where the left turn prohibitions will shift traffic volumes.

TABLE 3-18
LEFT HAND TURN PROHIBITIONS

Street Name	Option A	Option B
1st Street / Lorena Street	EB & WB	EB & WB
1st Street / Indiana Street	EB	EB
3rd Street / Indiana Street	WB	WB
3rd Street / Pomona / Beverly / Woods	-	WB (Beverly to Woods)
Beverly Blvd. / Atlantic Blvd.	EB	-

Source: Parsons Brinckerhoff, 2001

It should be noted that along the alignment, several intersections were considered for left turn prohibitions as mitigation. However, if the prohibition resulted in increased impacts to adjacent intersections that were already projected to operate at poor levels of service, this type of mitigation measure was not considered effective. For example, on Alameda Street, there are significant impacts at both Temple Street and 1st Street. The prohibition of left-turns at one of these locations will shift the impacts to the other location. Additionally, along 3rd Street, between Indiana Street and Beverly Boulevard, there are several locations where left-turns can be prohibited. However, the study intersections along 3rd Street are all projected to operate at level of service E or F. A shift of left-turns to an adjacent intersection will impact other locations that are already expected to operate with long delays. In addition, the potential shift of traffic onto adjacent residential streets was not considered a feasible mitigation measure.

The following list covers the planned improvements based on the mitigation measures considered to be feasible.

- Cesar Chavez Avenue and Mednik Avenue – Restripe the westbound and eastbound Cesar Chavez approaches to provide the following: one left-turn lane, one through lane, and one shared through/right-turn lane.

- Cesar Chavez Avenue and Atlantic Boulevard – Restripe the westbound and eastbound Cesar Chavez approaches to provide the following: one left-turn lane, two through lanes, and an exclusive right-turn lane.
- Commercial Street and Alameda Street – Augment existing ATSAC with additional software necessary for the efficient handling of both car and train traffic.
- 1st Street and Alameda Street – Augment existing ATSAC with additional software necessary for the efficient handling of both car and train traffic.
- 1st Street and Vignes Street – Augment existing ATSAC with additional software necessary for the efficient handling of both car and train traffic.
- 1st Street and Mission Road – Augment existing ATSAC with additional software necessary for the efficient handling of both car and train traffic.
- 1st Street and 101 SB Ramps – Signalization of this intersection is proposed.
- 1st Street and Lorena Street – Prohibit the eastbound and westbound left-turns. This will result in permissive east/west signal phasing and accommodate the LRT during the permissive phase.
- 1st Street and Indiana Street – Prohibit the eastbound left-turns. The signal phasing in the westbound direction will accommodate a protected only left-turn phase. The north/south phasing will be split and the LRT will be accommodated during the northbound signal phase.
- 1st Street and Alma Avenue – Signalization of this intersection is proposed.
- 1st Street and Atlantic Boulevard – Restripe the westbound approach from SR 60 WB Ramp to provide the following: one left-turn lane, one through lane, and an exclusive right-turn lane. Restripe the eastbound approach on 1st Street to provide the following: one left-turn lane and two exclusive right-turn lanes.
- 4th Street and I-5 SB Ramps – Signalization of this intersection is proposed.
- 3rd Street and Indiana Street – Prohibit the westbound left-turn. The eastbound phase will accommodate a protected only left-turn. The westbound direction will have permissive phasing. The northbound and southbound directions will be split phase. The LRT will operate during the southbound signal phase.
- 3rd Street and Rowan Avenue – Impose peak hour parking restrictions in the westbound direction. The westbound approach on 3rd Street will accommodate: one shared left-turn/through lane and one shared through/right-turn lane.
- 3rd Street and Eastern Avenue – Impose peak hour parking restrictions in the westbound direction. The westbound approach on 3rd Street will accommodate: one shared left-turn/through lane and one shared through/right-turn lane.
- 3rd Street and Ford Boulevard – Impose peak hour parking restrictions in the westbound direction. The westbound approach on 3rd Street will accommodate: one shared left-turn/through lane and one shared through/right-turn lane.
- 3rd Street and Mednik Avenue – Impose peak hour parking restrictions in the westbound direction. The westbound approach on 3rd Street will accommodate one shared left-turn/through lane and one shared through/right-turn lane.
- 3rd Street and Pomona Bl/Beverly Bl/Woods Av – Impose peak hour parking restrictions on Beverly Boulevard. The northbound approach on Beverly Boulevard will accommodate: one lane from Beverly to 3rd Street and one shared lane from Beverly to both 3rd Street and Woods Avenue.
- Beverly Boulevard and Atlantic Boulevard – Prohibit the eastbound left-turn on Beverly Boulevard. Impose peak hour parking restrictions on Beverly Boulevard. The westbound approach on Beverly will provide the following: one shared left-turn/through lane and one shared through/right-turn lane. The eastbound approach on Beverly will provide the following: one through lane and one shared through/right-turn lane.
- SR 60 EB Ramp and Atlantic Boulevard – No mitigation measures are considered feasible at this location.

3.2.4.2 Access to Businesses

Access to businesses along the Eastside Corridor right-of-way will be maintained. Delivery trucks will be able to access businesses via right-hand turns. If there is not enough room to accommodate a right-hand turn, the MTA will provide an alternative access point.

3.2.4.3 Other Access Issues

The MTA will continue to work closely with LADOT, the Housing Authority, and the CRA on identifying possible access improvements adjacent to the section of the LRT between Mission Road and just east of Gless Street, as well as possible operational enhancements to the section between Mission Road and Vignes Street on the 1st Street Bridge. The MTA is funding a Community Linkages Study to enhance the Eastside LRT project. As part of this study, MTA will work with the community to identify access improvements to the LRT project that may include additional pedestrian linkages, urban design enhancements, way-finding methods, bicycle enhancements, traffic management tools, park-and-ride, and other facilities that will enhance access and interface of the LRT project beyond the immediate station areas. The recommendations of the Study will be implemented through coordination between the MTA, the City of Los Angeles, and the County of Los Angeles.

3.2.4.4 Impacts After Mitigation

The results of the intersection level of traffic service analysis with the mitigation measures are provided in Table 3-19. The table indicates those locations where residual significant impacts will occur. The following 12 intersections will continue to be impacted to significant levels with the planned mitigation measures:

- Commercial Street and Alameda Street
- 1st Street and Vignes Street
- 1st Street and Mission Road
- 1st Street and Indiana Street
- 3rd Street and Indiana Street
- 3rd Street and Rowan Avenue
- 3rd Street and Eastern Avenue
- 3rd Street and Ford Boulevard
- 3rd Street and Mednik Street
- 3rd Street and Pomona Bl/Beverly Bl/Woods Av
- Beverly Boulevard and Atlantic Boulevard
- SR 60 EB Ramp and Atlantic Boulevard

There are several locations where left-turn prohibitions are part of the mitigation measures. These prohibitions result in a re-routing of traffic within the study area. Five intersections, shown in Table 3-20, will be affected by this re-routed traffic. As indicated in the table, the re-routed traffic is not anticipated to significantly impact these five locations.

TABLE 3-19
2020 LRT WITH MITIGATION INTERSECTION LOS ANALYSIS – OPTION A

E/W Street	N/S Street	Jurisdiction	LRT w/ Mitigation		V/C Increase[1]	Residual Impact
			V/C	LOS		
Cesar Chavez Av	Mednik Av	LA County	1.027	F	-0.114	NO
Cesar Chavez Av	Atlantic Bl	Monterey Park	0.980	E	-0.085	NO
Commercial St	Alameda St	LADOT	0.897	D	0.304	***YES***
Commercial St	Vignes St	LADOT	0.796	C	N/A	NO
1st St	Vignes St	LADOT	1.024	F	0.429	***YES***
1st St	Mission Rd	LADOT	1.017	F	0.119	***YES***
1st St	101 SB Ramps	LADOT	0.605	B	N/A	NO
1st St	Lorena St	LADOT	0.551	A	0.100	NO
1st St	Indiana St	LADOT	1.071	F	0.399	***YES***
1st St	Alma Av	LA County	0.550	A	N/A	NO
1st St	Atlantic Bl	Monterey Park	0.995	E	-0.025	NO
4th St	I-5 SB Ramps	LADOT	0.679	B	N/A	NO
3rd St	Indiana St	LADOT	1.104	F	0.08	***YES***
3rd St	Rowan Av	LA County	0.901	E	0.200	***YES***
3rd St	Eastern Av	LA County	1.289	F	0.350	***YES***
3rd St	Ford Bl	LA County	0.988	E	0.421	***YES***
3rd St	Mednik Av	LA County	1.153	F	0.431	***YES***
3rd St	Pomona/Beverly/ Woods	LA County	0.929	E	0.056	***YES***
Beverly Bl	Atlantic Bl	LA County	1.397	F	0.246	***YES***
SR 60 EB Ramp	Atlantic Bl	LA County	0.779	C	0.088	***YES***

[1] over 2020 No Build results, Table 3-12
Source: Parsons Brinckerhoff, 2001

TABLE 3-20
LRT WITH ADJACENT MITIGATIONS INTERSECTION LOS ANALYSIS – OPTION A

E/W Street	N/S Street	Jurisdiction	LRT w/Adjacent Mitigation		V/C Increase[1]	Significant Impact
			V/C or Delay	LOS		
Cesar Chavez Av	Evergreen Av	LADOT	0.657	B	0.020	NO
Cesar Chavez Av	Lorena St	LADOT	0.667	B	0.049	NO
Cesar Chavez Av	Indiana St	LA County	45.4	E	-31.1	NO
1st St	Evergreen Av	LADOT	0.577	A	0.039	NO
Pomona Bl	Atlantic Bl	LA County	0.983	E	0.002	NO

[1] over 2020 No Build results, Table 3-12
Source: Parsons Brinckerhoff, 2001

3.2.5 Mitigation – Option B

3.2.5.1 Intersection Traffic Service

The mitigations for all intersections except those listed here remain the same as in Option A. The intersections affected by mitigation involving the prohibition of left turns were listed previously in Table 3-18.

- 1st Street and Indiana Street – Prohibit the eastbound left-turns. The signal phasing in the westbound direction will accommodate a protected only left-turn phase. The north/south phasing will be permitted and the LRT will be accommodated during a separate signal phase.
- 3rd Street and Indiana Street – Prohibit the westbound left-turn. The eastbound phase will accommodate a protected only left-turn. The westbound direction will have permissive phasing. The northbound and southbound directions will be permitted phase. The LRT will operate during the north/south signal phase.
- 3rd Street and Rowan Avenue – Impose peak hour parking restrictions in the westbound direction. The westbound approach on 3rd Street will accommodate one shared left-turn/through lane and one shared through/right-turn lane.
- 3rd Street and Ford Boulevard – Impose peak hour parking restrictions in the westbound direction. The westbound approach on 3rd Street will accommodate one left, one through lane and one shared through/right-turn lane.
- 3rd Street and Pomona Bl/Beverly Bl/Woods Av – Prohibit the westbound left-turn from Beverly to Woods.
- Pomona Boulevard and Atlantic Boulevard – The eastbound phase will accommodate a protected only left-turn, and provide the following: one left-turn lane, one through lane, and one right-turn lane. The westbound direction will have permitted phasing.

3.2.5.2 Access to Businesses

The business access described for Option A will also be implemented for Option B

3.2.5.3 Other Access Issues

The cooperation between agencies and the Community Linkages Study discussed in Option A will also be utilized for Option B.

3.2.5.4 Impacts After Mitigation

The results of the intersection level of traffic service analysis for Option B with the mitigation measures are provided in Table 3-21. The table indicates those locations where residual significant impacts will occur. Unlike Option A, Option B has no residual impacts at 3rd/Indiana and 3rd/Pomona/Beverly/Woods. The following ten intersections will continue to be impacted to significant levels with the proposed mitigation measures:

- Commercial Street and Alameda Street
- 1st Street and Vignes Street
- 1st Street and Mission Road
- 1st Street and Indiana Street
- 3rd Street and Rowan Avenue
- 3rd Street and Eastern Avenue

- 3rd Street and Ford Boulevard
- 3rd Street and Mednik Street
- Pomona Boulevard and Atlantic Boulevard
- SR 60 EB Ramp and Atlantic Boulevard

TABLE 3-21
2020 LRT WITH MITIGATION INTERSECTION LOS ANALYSIS – OPTION B

E/W Street	N/S Street	Jurisdiction	LRT w/ Mitigation		V/C Increase[1]	Residual Impact
			V/C	LOS		
Cesar Chavez	Mednik Av	LA County	1.027	F	-0.114	NO
Cesar Chavez	Atlantic Bl	Monterey Park	0.980	E	-0.085	NO
Commercial St	Alameda St	LADOT	0.897	D	0.304	***YES***
Commercial St	Vignes St	LADOT	0.796	C	N/A	NO
1st St	Vignes St	LADOT	1.024	F	0.429	***YES***
1st St	Mission Rd	LADOT	1.017	F	0.119	***YES***
1st St	101 SB Ramps	LADOT	0.605	B	N/A	NO
1st St	Lorena St	LADOT	0.551	A	0.100	NO
1st St	Indiana St	LADOT	1.094	F	0.422	***YES***
1st St	Alma Av	LA County	0.550	A	N/A	NO
1st St	Atlantic Bl	Monterey Park	0.995	E	-0.025	NO
4th St	I-5 SB Ramps	LADOT	0.679	B	N/A	NO
3rd St	Indiana St	LADOT	0.843	D	-0.181	NO
3rd St	Rowan Av	LA County	0.901	E	0.200	***YES***
3rd St	Eastern Av	LA County	1.289	F	0.350	***YES***
3rd St	Ford Bl	LA County	0.943	E	0.376	***YES***
3rd St	Mednik Av	LA County	1.153	F	0.431	***YES***
3rd St	Pomona/Beverly/ Woods	LA County	0.860	D	-0.013	NO
Pomona Bl	Atlantic Bl	LA County	1.107	F	0.126	***YES***
SR 60EB Ramp	Atlantic Bl	LA County	0.779	C	0.088	***YES***

[1] over 2020 No Build results, Table 3-12
Source: Parsons Brinckerhoff, 2001

As in Option A, there are several locations in Option B where left-turn prohibitions are mitigation measures. These prohibitions result in a re-routing of traffic within the study area. Option B resulted in a change to one intersection, shown in Table 3-22. As indicated in the table, the re-routed traffic is not anticipated to significantly impact this location.

TABLE 3-22
LRT WITH ADJACENT MITIGATIONS INTERSECTION LOS ANALYSIS – OPTION B

E/W Street	N/S Street	Jurisdiction	LRT w/Adjacent Mitigation		V/C Increase[1]	Significant Impact
			V/C or Delay	LOS		
Cesar Chavez Av	Evergreen Av	LADOT	0.657	B	0.020	NO
Cesar Chavez Av	Lorena St	LADOT	0.667	B	0.049	NO
Cesar Chavez Av	Indiana St	LA County	45.4	E	-31.1	NO
1st St	Evergreen Av	LADOT	0.577	A	0.039	NO
Beverly Bl	Atlantic Bl	LA County	1.075	F	-0.076	NO

[1] over 2020 No Build results, Table 3-12
Source: Parsons Brinckerhoff, 2001

3.3 PARKING

3.3.1 Affected Environment

A comprehensive data collection effort was undertaken to develop a detailed description of the street characteristics along the LRT alignment, including the availability of on-street parking. The collected data provides the number of travel lanes by direction, type of median, speed limit, and the presence of on-street parking and associated parking restrictions, if any. Along most of the alignment, parking regulations permit on-street parking in one or both directions during peak hours and in both directions during off-peak hours. Table 3-23 provides a summary of this information.

3.3.2 Impacts

3.3.2.1 No-Build Alternative

The No-Build Alternative has no impact on the number of on-street parking spaces in the Eastside Corridor.

3.3.2.2 LRT Build Alternative – Option A

Parking supply was based on 1999 and 2000 field surveys to inventory the number of parking spaces available. Every street segment was surveyed along the alignment where it has an at-grade profile. The survey also yielded parking restriction information on each of the street segments to determine whether parking is permitted in each block. For example, the presence of a 24-hour parking prohibition on a block where the LRT is running would yield no potential parking impact because there was no parking available in the No-Build condition.

The number of parking spaces removed was estimated based on the characteristics of each street segment and the proposed LRT street cross-sections. As the typical cross-sections illustrate in Figures 3-6 and 3-9, 1st Street has a curb-to-curb width of 56 feet and 3rd Street has a curb-to-curb width of 82 feet. Parking impacts are different on 1st Street under both options than on 3rd Street because of the differing curb-to-curb street widths. The anticipated impacts along each of the street segments that the alignment would traverse are discussed below.

TABLE 3-23
EXISTING ROADWAY CHARACTERISTICS

Segment	From	To	No. Lanes		Median Type	Parking Restrictions		Speed Limit
			NB/ EB	SB/ WB		NB/EB	SB/WB	
Alameda St	Commercial St	Temple St	3	3	2LT	NSAT	NSAT	35
	Temple St	1st St	2	2	2LT	NSAT	NSAT	35
1st St	Alameda St	Rose St	2	2	DY	NSAT	NSAT	30
	Rose St	Vignes St	2	2	DY	2HR (m)PA 8a-4p (NS 4-6p)	2HR (m)PA 9a-6p (NS 7a-9p)	30
	Vignes St	Mission Rd	2	2	DY	NSAT	NSAT	30
	Mission Rd	Anderson St	2	2	DY	NSAT	NSAT	30
	Anderson St	Clarence St	2	2	DY	1HR PA 8a-4p (NS 4-7p)	1HR PA 9a-6p (NS 7a-9p)	30
	Clarence St	Gless St	2	2	DY	1HR PA 8a-4p (NS 4-7p)	PA (NS 7-9a)	30
	Gless St	Boyle Av	2	2	DY	NSAT	NSAT	30
	Boyle Av	Mathews St	2	2	DY	1HR (m)PA 8a-6p	1HR (m)PA 8a-6p	30
	Mathews St	Fickett St	2	2	DY	1HR (m)PA 8a-6p	1HR (m)PA 8a-6p	30
	Fickett St	Mott St	2	2	DY	PA	1HR (m)PA 8a-6p	30
	Mott St	Saratoga St	2	2	2LT	NPAT 8a-6p	PA	30
	Saratoga St	Savannah St	2	2	DY	NPAT 7a-5p	PA	30
	Savannah St	Lorena St	2	2	DY	PA	PA	30
	Lorena St	Cheesbroughs Ln	2	2	DY	1HR PA 8a-6p	PA	30
	Cheesbroughs Ln	Indiana St	2	2	DY	1HR PA 8a-6p	NSAT	30
Indiana St	1st St	3rd St	1	1	SDY	PA	PA	30
3rd St	Indiana St	Gage St	2(3)	2(3)	2LT	PA (NS 4-6p)	PA (NS 6:30-9a)	35
	Gage St	Herbert Av	2(3)	2(3)	RM	PA (NS 4-6p)	PA (NS 6:30-9a)	35
	Herbert Av	Downey Rd	3	3	RM	NSAT	NSAT	35
	Downey Rd	Sunol Dr	3	3	RM	NSAT	NSAT	35
	Sunol Dr	Eastern Av	2(3)	2(3)	2LT	PA (NS 4-6p)	PA (NS 6:30-9a)	35
	Eastern Av	Humphreys Av	2(3)	2(3)	2LT	PA (NS 4-6p)	PA (NS 6:30-9a)	35
	Humphreys Av	Ford Bl	2(3)	2(3)	DY	PA (NS 4-6p)	PA (NS 6:30-9a)	35
	Ford Bl	Mednik Av	2(3)	2(3)	2LT	PA (NS 4-6p)	PA (NS 6:30-9a)	35
	Mednik Av	Fetterly Av	2(3)	2(3)	2LT	PA (NS 4-6p)	2HR PA 9a-6p (NS 6:30-9a)	35
	Fetterly Av	Beverly Bl	2(3)	2(3)	2LT	PA (NS 4-6p)	PA (NS 6:30-9a)	35
Beverly Bl	3rd St	Atlantic Bl	2	2	RM	PA	2HR PA 8a-5p	35
	Atlantic Bl	Margaret St	2	2	RM	2HR PA 7a-6p	2HR PA 7a-6p	35
Pomona Bl	3rd St/Woods Av	Atlantic Bl	2	2	RM	PA	2HR PA 8a-5p	35
	Atlantic Bl	Hillview Ave.	2	2	RM	2HR PA 7a-6p	2HR PA 7a-6p	35

Notes:
Lanes: #(#)= Number of Lanes (Lanes during Peak Hours)
Parking: (m) = Metered Parking
PA = Parking Allowed with No Restrictions except for Street Sweeping
NSAT = No Stopping Anytime NPAT = No Parking Anytime
Source: Field Survey, Jenkins/Gales & Martinez, 1999.

Median Type:
DY = Double Yellow Centerline
RM = Raised Median
2LT = Dual Left Turn Centerline
SDY = Single Dashed Yellow Centerline

Commercial Street

In the section of Commercial Street that will be affected by the LRT alignment aerial structure and at-grade section, curb parking is currently prohibited. There will be no parking impacts along Commercial Street.

Alameda Street

In the section of Alameda Street that will be affected by the LRT alignment between Commercial Street and 1st Street, curb parking is currently prohibited. There will be no parking impacts along Alameda Street.

1st Street

Figure 3-6 in Section 3.2 shows the typical cross-section dimensions and lane configurations for the existing conditions and the LRT Build Alternative scenario both at a station and between stations at-grade. There are no parking impacts at locations where the LRT is in a tunnel profile except near the portals at each end of the tunnel. There will be parking spaces removed on 1st Street in the vicinity of at-grade LRT stations. The curb-to-curb street width on 1st Street (56 feet) is not sufficient to accommodate the light rail system in the center of the street and maintain two traffic lanes plus parking in each direction in the vicinity of at-grade stations or near tunnel portals located near Utah Street and Lorena Street. On other areas of 1st Street with at-grade rail, existing curb parking will be retained and sidewalks narrowed from 12 feet to 8 feet in order to provide sufficient space for traffic lanes and parking.

On-street parking on 1st Street is impacted in three areas: from Alameda Street to Vignes Street, from Anderson Street to the 101 Freeway, and from 200 feet west of Concord Street to Cheesbroughs Street. There will be no parking impacts on 1st Street in the areas where the LRT is in a tunnel profile, except in the vicinity of the portals near Utah Street and Lorena Street. There will also be no parking impacts between Cheesbroughs and Indiana Streets. In these blocks, sidewalks will be narrowed from 12 to 8 feet and parking will be retained. Parking is currently prohibited on the 1st Street Bridge over the Los Angeles River between Vignes Street and Mission Road.

During the AM Peak period, 100 on-street parking spaces will be removed under Option A. During the Midday period, 162 spaces will be removed, and 113 parking spaces will be removed during the PM Peak period. More parking spaces are removed during the midday period because there are fewer parking restrictions already in place at that time. In the morning and evening, peak hour parking restrictions limit the amount of available parking, so there is less parking affected by the LRT.

The spaces removed between Alameda Street and the Los Angeles River are metered, 1-hour only spaces. The remainder of the spaces removed are unmetered spaces. The impacted spaces located between the Los Angeles River and the 101 Freeway and between Lorena and Indiana Streets have a 1-hour time limit, but are not metered. Between Fresno and Lorena Streets, on-street parking is unrestricted. In the area where there are peak hour parking prohibitions (between Alameda Street and the 101 Freeway), spaces will be removed on the south side of the street (eastbound travel direction) in the AM Peak period (7-9 a.m.) and on the north side of the street (westbound travel direction) in the PM Peak period (4-6 p.m.). Parking on both sides of the street will be removed in the Midday period in this section. Refer to Table 3-24.

TABLE 3-24
PARKING IMPACTS ON 1ST STREET NEAR STATIONS AND TUNNEL PORTALS

Block		Side of Street	Spaces Available	Spaces Removed AM Peak	Spaces Removed Off-Peak	Spaces Removed PM Peak
From	To					
Alameda	Rose	North	4	0	4	4
		South	0	0	0	0
Rose	Hewitt	North	6	0	6	6
		South	6	6	6	0
Hewitt	Garey	North	9	0	9	9
		South	5	5	5	0
Garey	Vignes	North	1	0	1	1
		South	1	1	1	0
Vignes	Mission	North	0	0	0	0
		South	0	0	0	0
Mission	Anderson	North	0	0	0	0
		South	0	0	0	0
Anderson	Utah	North	12	0	12	12
		South	12	12	12	0
Utah	Clarence	North	12	0	12	12
		South	10	10	10	0
Clarence	Gless	North	10	0	10	10
		South	9	9	9	0
Gless	Pecan	North	8	0	8	8
		South	6	6	6	0
Pecan	US-101 SB Ramp	North	0	0	0	0
		South	0	0	0	0
Fresno	Concord	North	20	8[1]	8[1]	8[1]
		South	27	0	0	0
Concord	Lorena	North	14	14[1]	14[1]	14[1]
		South	14	0	0	0
Lorena	Cheesbroughs	North	9	7[1]	7[1]	7[1]
		South	7	0	0	0
Cheesbroughs	Velasco	North	8	0	0	0
		South	6	0	0	0
Velasco	Indiana	North	4	0	0	0
		South	1	0	0	0
	TOTALS	Option A	221	78	140	91
		Option B	221	49	111	62

[1] Parking on the North side of these blocks is maintained in Option B.
Source: Parsons Brinckerhoff, 2000-2001.

Indiana Street

Table 3-25 shows the number of parking spaces that would be removed in each block along Indiana Street. Parking data on the table is disaggregated for each roadway segment along Indiana Street by side of the street, spaces available, and by time period (AM peak, off-peak, and PM peak). Because Indiana Street has no peak-hour parking prohibitions, parking impacts are the same for each time period during the day. Option A removes all parking on Indiana Street along the LRT alignment (between 1st and 3rd

Streets). The number of on-street parking spaces removed under Option A is 48 for all time periods during the day. No on-street parking spaces have time restrictions or meters except for weekly street-sweeping operations.

TABLE 3-25
PARKING IMPACTS ON INDIANA STREET – OPTION A

Block		Side of Street	Spaces Available	Spaces Removed AM Peak	Spaces Removed Off-Peak	Spaces Removed PM Peak
From	**To**					
1st Street	Gleason	East	6	6	6	6
		West	8	8	8	8
Gleason	2nd Street	East	14	14	14	14
		West	10	10	10	10
2nd Street	3rd Street	East	6	6	6	6
		West	4	4	4	4
	Total		**48**	**48**	**48**	**48**

Source: Parsons Brinckerhoff, 2000.

Parking Utilization Analysis

A parking utilization analysis study was conducted in order to assess the demand for parking on Indiana Street. The study was conducted in the Midday and PM Peak periods, and one parking count was performed at 10:00 p.m. in order to assess nightly parking utilization. Parking counts were performed on Thursday, June 15, 2000 between 12:00 p.m. and 6:00 p.m. The number of cars parked on the street was tallied at half-hour intervals with one count being performed at 10:00 p.m.

The results of the utilization study are found in Tables 3-26 and 3-27. Overall parking utilization rates tend to be clustered in the 45%-60% range for both sides of Indiana Street between 1st and 3rd Streets. There are several hours where parking utilization is over 65% with one hour showing a utilization of 100% on the west side of the street between Gleason and 2nd Street. Although the northern block between 1st and Gleason Streets has some commercial uses, there is a substantial amount of residential uses on the west side of Indiana. The east side of the street contains Ramona High School. Table 3-27 shows a summary of parking utilization rates combining the three blocks between 1st and 3rd Streets on Indiana Street.

TABLE 3-26
INDIANA STREET PARKING UTILIZATION SUMMARY BY TIME OF DAY

Time Period	Side of Street	Spaces Available	Utilization Rate
Midday	East	26	53%
	West	22	45%
PM Peak	East	26	45%
	West	22	61%
Night	East	26	46%
	West	22	32%

Source: Parsons Brinckerhoff, 2000.

TABLE 3-27
PARKING UTILIZATION ANALYSIS ON INDIANA STREET

Block	Side	Capacity	Number of Occupied Spaces							
			Midday				PM Peak			Night
			12:00pm	1:00pm	2:00pm	3:00pm	4:00pm	5:00pm	6:00pm	10:00pm
1st to Gleason	East	6	1 17%	2 33%	3 50%	1 17%	3 50%	2 33%	3 50%	1 17%
	West	8	3 38%	5 63%	3 38%	3 38%	4 50%	3 38%	1 13%	0 0%
Gleason to 2nd	East	14	8 57%	7 50%	8 57%	8 57%	6 43%	9 64%	5 36%	10 71%
	West	10	5 50%	7 70%	5 50%	5 50%	9 90%	9 90%	10 100%	6 60%
2nd to 3rd	East	6	4 67%	4 67%	4 67%	5 83%	3 50%	3 50%	1 17%	1 17%
	West	4	2 50%	0 0%	0 0%	2 50%	2 50%	1 25%	1 25%	1 25%
Total by Hour	**East**	**26**	**50%**	**50%**	**58%**	**54%**	**46%**	**54%**	**35%**	**46%**
	West	**22**	**45%**	**55%**	**36%**	**45%**	**68%**	**59%**	**55%**	**32%**

Source: Parsons Brinckerhoff, 2000.

3rd Street and Beverly Boulevard

In the sections of 3rd Street and Beverly Boulevard that will be affected by the LRT alignment, all existing parking regulations will be retained. There will be no parking impacts along 3rd Street or Beverly Boulevard.

Summary of Parking Impacts

The width of the streets along the LRT alignment largely determine whether curb parking spaces will be removed and during which time period during the day. Indiana Street will have parking removals during all periods of the day under Option A. There will be no parking impacts on Commercial Street, Alameda Street, 3rd Street, or Beverly Boulevard. Table 3-28 summarizes the total number of curb parking spaces removed by time period during the day by alignment option. Option A has the greatest number of spaces removed, which is due to the removal of parking on Indiana Street during all three time periods. In addition, parking losses and mitigation for losses due to the M&SF yard lead on Ducommon Street are discussed in Section 4.20. Figure 3-13 illustrates the parking impacts for both options. Section 3.3.2.3 provides additional information about the impacts of Option B.

TABLE 3-28
SUMMARY OF TOTAL PARKING IMPACTS

Option	Spaces Removed AM Peak	Spaces Removed Off-Peak	Spaces Removed PM Peak
Option A	126	188	139
Option B	49	111	62

Source: Parsons Brinckerhoff, 2001.

Figure 3-13: Summary of Parking Impacts

Criteria for Determination of Impacts under CEQA

Based on the previous AA/DEIS/DEIR for which this is a supplement/subsequent document, the impact of the removal of parking spaces related to the project is potentially significant. The MTA is committed to implementing a parking replacement plan, as discussed in the mitigation section.

3.3.2.3 LRT Build Alternative – Option B

The parking impacts due to Option B are very similar to those of Option A. The number of parking spaces removed was estimated based on the characteristics of each street segment and the proposed LRT street cross-sections. The parking impacts on Commercial Street, Ducommun Street, Alameda Street, and 3rd Street remain the same as previously identified in Option A. 1st Street, Indiana Street, and Pomona Boulevard all have changes due to Option B.

1st Street

Parking impacts on 1st Street are virtually the same for both Option A and B. The slight difference is due to the lack of a station at 1st/Lorena, which allows parking to be retained. Refer to the previous section for information on Option A. During the AM Peak period, 86 on-street parking spaces will be removed under Option B. During the Midday period, 148 spaces will be removed, and 99 parking spaces will be removed during the PM Peak period. Refer to Table 3-24 for a block-by-block breakdown of parking removals along 1st Street.

Indiana Street

Option B has no portion of the LRT alignment on Indiana Street, which results in no parking impacts to this street. No on-street parking spaces have time restrictions or meters except for weekly street-sweeping operations.

Pomona Boulevard

In the section of Pomona Boulevard that will be affected by the LRT alignment Option B, all existing parking regulations will be retained. There will be no parking impacts along Pomona Boulevard.

Summary of Parking Impacts

The width of the streets along the LRT alignment largely determine whether curb parking spaces will be removed and during which time period during the day. There will be no parking impacts on Commercial Street, Alameda Street, Indiana Street, 3rd Street, or Beverly Boulevard in Option B. Refer to Table 3-25 in the previous section for a summary of parking impacts. In addition, parking losses and mitigation for losses on Ducommun Street due to the M&SF yard lead are discussed in Section 4.20. Figure 3-13 illustrates the parking impacts for both options.

3.3.3 Mitigation

3.3.3.1 LRT Build Alternative – Option A

There are three areas along the alignment where replacement parking will be required. These are (1) on 1st Street between Anderson and Utah Streets, (2) on 1st Street between Fresno and Indiana Streets, and (3) along Indiana Street between 1st and 3rd Streets.

Along 1st Street between Anderson and Utah Streets, there are a total of 24 peak-period restricted parking spaces. This section, when compared to other blocks on 1st Street between Mission Road to US-101, has comparatively high parking utilization. Coordination with the City Housing Authority will provide replacement parking north of 1st Street where there are plans to redevelop the Pico Aliso housing tract. A parking utilization study was conducted for this area, and the results indicate relatively low parking demand in this area. Table 3-29 illustrates the typical parking utilization for the different periods of the day. During the highest utilization period, the midday, there were 16 cars parked in this section between Mission Road and the 101 Freeway out of a total of 79 total spaces available. The highest utilization was in the block between Anderson and Utah Streets near the location of a convenience store. With the active redevelopment of the Pico-Aliso complexes by the City, the parking requirement of development, redevelopment, and new uses will be taken care of as part of the development approval process of the City. MTA will contribute an appropriate parking space replacement fee (to be negotiated) to the City for the 24 spaces removed between Anderson and Utah. The remaining 55 spaces are not utilized and removal by the City will have no impact on the area and the adjacent uses.

On-street parking will be removed on 1st Street between Fresno Street and Cheesbroughs Street. Nine spaces of replacement parking will be provided at 1st/Lorena on property currently owned by MTA.

On Indiana Street under Option A, development of an off-street parking lot will be utilized for replacement parking. The relatively high utilization of on-street parking spaces on Indiana Street precludes the possibility of demand being sufficiently transferred to side streets, such as 2nd or Gleason Streets. Three parcels on the eastern side of Indiana north of Ramona High School will be purchased to provide replacement parking for Option A. Mitigation for parking losses on Ducommun Street due to the M&SF yard lead is discussed in Section 4.20.

Impacts Remaining after Mitigation

The aforementioned parking replacement plan will reduce parking impacts to a less than significant level.

3.3.3.2 LRT Build Alternative – Option B

Parking mitigation for Option B is the same as for Option A, with the exception of Indiana Street. Mitigation is not required for Indiana Street as no parking will be lost.

Impacts Remaining after Mitigation

The aforementioned parking replacement plan will reduce parking impacts to a less than significant level.

TABLE 3-29
PARKING UTILIZATION ANALYSIS ON 1st STREET

Block	Side	Capacity	Number of Occupied Spaces				
			AM Peak		Midday	PM Peak	
			7:30am	8:30am	12:30pm	4:30pm	5:30pm
Alameda to Rose	North	2	NS 7-9pm	NS 7-9pm	2 **100%**	0 **0%**	0 **0%**
	South	0	NPAT	NPAT	NPAT	NPAT	NPAT
Rose to Hewitt	North	6	NS 7-9pm	NS 7-9pm	3 **50%**	0 **0%**	0 **0%**
	South	6	0 **0%**	0 **0%**	2 **33%**	NS 4-6pm	NS 4-6pm

TABLE 3-29
PARKING UTILIZATION ANALYSIS ON 1st STREET

Block	Side	Capacity	Number of Occupied Spaces				
			AM Peak		Midday	PM Peak	
			7:30am	8:30am	12:30pm	4:30pm	5:30pm
Hewitt to Garey	North	9	NS 7-9pm	NS 7-9pm	0 **0%**	0 **0%**	0 **0%**
	South	5	1 **20%**	1 **20%**	1 **20%**	NS 4-6pm	NS 4-6pm
Garey to Vignes	North	1	NS 7-9pm	NS 7-9pm	0 **0%**	0 **0%**	0 **0%**
	South	1	0 **0%**	0 **0%**	0 **0%**	NS 4-6pm	NS 4-6pm
Anderson to Utah	North	12	NS 7-9pm	NS 7-9pm	8 **66%**	6 **50%**	7 **58%**
	South	12	2 **17%**	2 **17%**	3 **25%**	NS 4-6pm	NS 4-6pm
Utah to Clarence	North	12	NS 7-9pm	NS 7-9pm	0 **0%**	0 **0%**	0 **0%**
	South	10	0 **0%**	0 **0%**	0 **0%**	NS 4-6pm	NS 4-6pm
Clarence to Gless	North	10	NS 7-9pm	NS 7-9pm	4 **40%**	3 **30%**	3 **30%**
	South	9	0 **0%**	1 **11%**	1 **11%**	NS 4-6pm	NS 4-6pm
Gless to Pecan	North	8	NS 7-9pm	NS 7-9pm	0 **0%**	0 **0%**	0 **0%**
	South	6	0 **0%**	0 **0%**	0 **0%**	NS 4-6pm	NS 4-6pm
Fresno to Concord	North	20	1 **5%**	0 **0%**	1 **5%**	0 **0%**	2 **10%**
	South	27	20 **74%**	21 **78%**	17 **63%**	20 **74%**	23 **85%**
Concord to Lorena	North	14	1 **7%**	2 **14%**	2 **14%**	2 **14%**	2 **14%**
	South	14	9 **64%**	11 **79%**	10 **71%**	9 **64%**	10 **71%**
Lorena to Cheesbroughs	North	9	3 **33%**	4 **44%**	8 **89%**	7 **78%**	5 **56%**
	South	7	0 **0%**	0 **0%**	4 **57%**	4 **57%**	3 **43%**
Cheesbroughs to Velasco	North	8	5 **63%**	5 **63%**	6 **75%**	2 **25%**	6 **75%**
	South	6	2 **33%**	4 **66%**	5 **83%**	5 **83%**	5 **83%**
Velasco to Indiana	North	4	3 **75%**	3 **75%**	4 **100%**	0 **0%**	0 **0%**
	South	3	3 **100%**	1 **33%**	0 **0%**	0 **0%**	0 **0%**

Source: Parsons Brinckerhoff, 2000. NS = No Stopping. NPAT = No Parking Any Time.

3.4 OTHER MODES

3.4.1 Affected Environment

The areas that may have potential impacts on pedestrians and bicyclists include the streets and intersections where the LRT has an at-grade profile. This area includes Alameda Street between Commercial and 1st Streets, 1st Street between Alameda Street and the 101 Freeway and between Fresno and Indiana Streets, Indiana Street between 1st and 3rd Streets, 3rd Street between Indiana Street and Beverly Boulevard, and either Beverly Boulevard between 3rd Street and Hillview Avenue or Pomona Boulevard between Beverly Boulevard and Hillview Avenue.

3.4.2 Impacts

3.4.2.1 No-Build Alternative

There will be no impacts on bicycle or pedestrian facilities under the No-Build Alternative.

3.4.2.2 LRT Build Alternative – Option A

Pedestrians

According to the 1990 census, approximately 6.7% of residents within the MTA Central Area (census designation), which includes communities along the LRT alignment, walk to work. This is significantly higher than the percent of Los Angeles County and the City of Los Angeles residents that walk to work (3.3% and 3.9% respectively). This indicates that walking is a significant commuting mode within the study area.

The 1994 AASHTO "Green Book" provides guidelines for the width of sidewalks for both urban and residential areas. Sidewalks with a planted strip separating the pedestrian from the curb are recommended to be between 8 and 14 feet wide. The planted strip should be no less than two feet in width to allow for maintenance access. Where planted strips are not an option, such as in urban settings, sidewalks are recommended to be 6 to 9.8 feet wide. This space closest to the curb allows for a buffer against moving traffic as well as space for street hardware, including light poles, meters, and street signs. The City of Los Angeles' guidelines indicate secondary arterial sidewalk widths of between 9 and 10.7 feet.

Alameda Street

Between Commercial and 1st Streets on Alameda where the LRT system would operate at-grade, sidewalk widths would not change. The street would be widened to the east and landscaped in order to maintain the current number of traffic lanes and preserve existing sidewalk widths. Sidewalks are currently 10 feet wide north of Temple Street and 8 feet wide south of Temple. There would be no impact on sidewalks along Alameda Street under the LRT Build Alternative.

1st Street

Two lanes of traffic in each direction will be provided between Alameda and Vignes Streets. The easements owned by LADOT between the Mangrove Estates property and Vignes Street will be used to maintain the existing number of lanes as well as existing 12-foot sidewalk width on the south side and provide for a 10-foot sidewalk width on the north side. Between Mission Street and the tunnel, 1st Street will have one lane in each direction.

The station at 1st/Lorena in Option A will be located at the mouth of the tunnel on the north side of 1st Street. A traffic signal and pedestrian crosswalk will be installed at Cheesbroughs Lane (east of Lorena) to accommodate traffic on 1st Street and the transition of the LRT alignment from the north side to the middle of 1st Street. The northern sidewalk will be reduced to 4 feet in order to provide as much space as possible for traffic and the southern sidewalk. The sidewalk on the south side of 1st Street will be approximately 6 feet wide. Signage will be used to direct pedestrians to the southern sidewalk as an alternate route. No significant pedestrian impacts are anticipated under Option A due to these reduced sidewalk widths.

Indiana Street

The existing western sidewalk between 1st Street and 3rd Street, currently 8 feet wide, will be reduced to 6 feet and curb parking will be removed under Option A. No significant pedestrian impacts are anticipated under Option A due to a change in sidewalk widths.

3rd Street

Sidewalks will not be narrowed as part of the LRT street design on 3rd Street. They will remain at the current width of 9 feet.

Crossing Issues

LRT stations would be located near major signalized intersections, where pedestrian crosswalks are currently in place. The station layouts are designed for pedestrians' convenience and safety. As is the design of the existing Metro Blue Line along Washington Boulevard, LRT passengers would enter and exit stations via a ramp that would lead to the crosswalk at signalized intersections. There would be a holding area at this location where pedestrians would wait for a walk signal in order to cross the street to the sidewalk areas.

All of the signalized intersections along the LRT alignment currently have pedestrian call buttons. All intersections that become signalized because of the introduction of the LRT system would be equipped with pedestrian call buttons. Although it may be legal for pedestrians to cross at unsignalized intersections in the existing condition, these movements would be prohibited across the LRT tracks in order to minimize potential conflicts. Signs would be placed at these unsignalized locations indicating that crossing is prohibited and that the nearest safe crossing is nearby at a signalized crosswalk.

The possibility of conflicts between trains and pedestrians may occur at the tunnel portal locations along the LRT alignment if pedestrians attempt to enter the tunnel during daytime operations or at night. The portals are located on 1st Street east of the 1st/Utah station and just west of the 1st/Lorena Station. Signing and surveillance will be utilized at the tunnel portals to reduce the possibility of unauthorized tunnel entry.

Unauthorized crossings occur specifically on 3rd Street at or near the intersection of Mariana Street. This occurs primarily on weekends as people attend the nearby Sanctuario Church. Potentially significant pedestrian safety issues associated with unauthorized pedestrian crossings of the tracks will be addressed during design and utilize MTA standards to minimize possible conflicts. Mitigation measures are discussed in Section 3.4.3.

The travel demand model indicates that the weekday peak period (seven hours) boardings (and same amount of alightings) at Union Station are 2,577 passengers under Option A and 2,700 passengers under Option B that are attributable to the Eastside LRT extension project. This represents approximately ten

percent of the total weekday peak period boardings at Union Station for Metrolink (6,900), Metro Red Line (11,300), and the Pasadena-Eastside LRT Line (8,500) combined. There have been previous analyses done at Union Station for the subject transit services that would allow for accommodating this small increase (approximately ten percent) in activity due to the Eastside LRT project.

Bicyclists

Bicycle use for the commute to work in the MTA Central Area (census designation) of Los Angeles is consistent with the City and County averages. The 1990 Census of Population and Housing counted 0.63% of the County of Los Angeles and 0.59% of the City of Los Angeles as bicycle commuters, compared to 0.57% of the MTA Central Area, which includes the Eastside Corridor. Eastside LRT station designs will include facilities such as bike racks and bicycle lockers.

Bicycle Routes

The MTA Central Area Bicycle Master Plan, which incorporates the bicycle plans of the City and County of Los Angeles, has designated 1st Street a future Commuter Bikeway. This is defined as a hybrid of a Class II and Class III bikeway. Class II bikeways are designated striped lanes on surface streets, and Class III bikeways are unstriped bike routes that are designated by green "bike route" signage. Commuter Bikeways are unstriped routes that utilize a wide curb lane where parking is prohibited during peak hours. On 1st Street, the Commuter Bikeway would utilize the curb lane during peak periods when parking is prohibited. During off-peak hours, bicyclists ride in the traffic stream to avoid the opening of car doors. Figure 3-14 shows the existing and proposed bicycle facilities in the Eastside Corridor.

If parking is prohibited during peak periods west of the 101 Freeway, as would be the case in the No-Build Alternative, then the proposed 1st Street Commuter Bikeway designation could be retained because there would be an 18-foot lane during peak periods that could be utilized by both cars and bicycles. Currently, 1st Street has two traffic lanes in each direction and carries a volume of more than 10,000 vehicles per day, and according to intersection traffic data presented in Section 3.2, curb lane volumes would be above the threshold (10,000 vpd) for a commuter bikeway with implementation of the LRT Build Alternative. Under the criteria set forth, these volumes would be too high for the street to be considered a Commuter Bikeway along 1st Street between Alameda and Indiana Streets.

In the 1997 MTA Central Area Bicycle Master Plan, 1st Street between Glendale Boulevard and Eastern Avenue is included as part of the Proposed Regional Bikeway system. This is consistent with the 1996 City of Los Angeles General Plan Transportation Element Bicycle Plan Inventory. The MTA is currently re-evaluating the Central Area Bicycle Master Plan, which will take into consideration recent changes in the area, including the Eastside Corridor LRT project. Figure 3-15 shows the proposed regional bikeway system network in the Eastside Corridor according to the Central Area Bicycle Master Plan. Some routes in Figure 3-14 do not appear in Figure 3-15 because not all bicycle facilities are included in the regional bikeway system. A regional bikeway is a route that connects different regions of the county for longer distance, inter-regional travel.

The Commuter Bikeway along Soto Street from the Los Angeles River to Huntington Drive is not affected by the LRT alignment because the LRT is in a tunnel where it crosses Soto Street. There are also no impacts on the Lorena Street Bike Route that crosses the LRT at-grade at 1st and Lorena Streets.

Figure 3-14 Existing and Proposed Bicycle Facilities

Figure 3-15 Proposed Regional Bikeway System

Street Bikeway Design

The City of Los Angeles 1996 Transportation Element Bicycle Plan design standards recommend that the minimum curb lane width for streets designated as Commuter Bikeways should be 14 feet. This wider lane creates flexibility for all users of the facility, including automobile drivers, parked cars, buses, and bicyclists.

1st Street

Currently, 1st Street is a four-lane street that connects East Los Angeles and Boyle Heights with downtown Los Angeles. Under Option A, lane widths on 1st Street will vary between 11 and 15 feet. These are non-standard Commuter Bikeway designs, as the curb lanes will not meet the recommended minimum width of 14 feet in some areas. Option A calls for the station at 1st/Lorena to be located at the mouth of the tunnel on the north side of 1st Street. This station will be located in an open cut on the north side of the street. Cyclists must cross the tracks at an angle in order to continue on 1st Street, which creates a hazard. This is a less than ideal situation for cyclists, as traffic will utilize one lane in each direction at this location.

This situation will make 1st Street less attractive to bicyclists. As such, the commuter bikeway designation will be difficult to maintain with the introduction of the LRT system at-grade. It is unlikely that 1st Street will be designated a commuter bikeway, which will create a gap in the regional bikeway system. The resultant gap in the commuter bikeway and regional bikeway network will constitute a significant impact under CEQA.

Indiana Street

Indiana Street is not designated a bikeway. Option A removes the curb parking lane and narrows the traffic lanes to 11 feet. This is not enough space for a vehicle and bicyclist to share the same roadway space side by side. Bicyclists will typically either utilize the traffic lane, potentially slowing traffic, or utilize the sidewalks. This will be considered a less than significant impact under CEQA.

3rd Street

There are no existing or proposed bikeways on 3rd Street. Although there are no designated bike routes on this street, the potential impacts on bicyclists that may use the street should be taken into account. The LRT alignment would operate in the center of 3rd Street at-grade and would require the removal of one traffic lane in each direction. The curb lane width would be 15 feet between stations and 12 feet near station locations. The curb lane would be utilized for traffic during peak periods and for parking during off-peak periods. During peak periods, bicyclists would travel near the curb in the 15-foot lane that meets the criterion for width for commuter bikeway width between stations. However, near stations the curb lane is not wide enough to comfortably accommodate traffic and bicyclists. It would be typical for bicyclists to utilize the 12-foot traffic lane for travel near stations. During off-peak hours when there would be parked cars occupying the curb lane, there would be enough space between parked cars and moving vehicles for the comfortable provision of bicycle traffic when the curb lane is 15 feet wide.

During peak periods between stations, the 15-foot wide curb lane would provide enough space to accommodate both moving vehicles and bicyclists. The impacts between stations are beneficial because there would be more space available for bicycle traffic, and at stations, there would be a less than significant impact.

3.4.2.3 LRT Build Alternative – Option B

Pedestrians

The issues previously described in Option A remain the same for Option B. Commercial Street, Alameda Street, Indiana Street, 3rd Street, and Pomona Boulevard do not have changes in sidewalk widths due to the Option B LRT alignment. The sidewalk widths for 1st Street are detailed below.

1st Street

Two lanes of traffic in each direction will be provided between Alameda and Vignes Streets. The easements owned by LADOT between the Mangrove Estates property and Vignes Street will be used to maintain the existing number of lanes as well as existing 12-foot sidewalk width on the south side and provide for a 10-foot sidewalk width on the north side. Under Option B current sidewalk widths will be maintained because there will be no station at 1st/Lorena under this option. No significant pedestrian impacts are anticipated under Option B due to reduced sidewalk widths.

Crossing Issues

The issues are the same as Option A.

Bicyclists

The issues previously described in Option A remain the same for Option B. 1st Street and Indiana Street differ in layout and thus have different impacts on bicyclists.

1st Street

Currently, 1st Street is a four-lane street that connects East Los Angeles and Boyle Heights with downtown Los Angeles. Under Option B, lane widths on 1st Street will vary between 11 and 15 feet. These are non-standard Commuter Bikeway designs, as the curb lanes will not meet the recommended minimum width of 14 feet in some areas. This situation will make 1st Street less attractive to bicyclists. As such, the commuter bikeway designation will be difficult to maintain with the introduction of the LRT system at-grade. It is unlikely that 1st Street will be designated a commuter bikeway, which will create a gap in the regional bikeway system. The resultant gap in the commuter bikeway and regional bikeway network will constitute a significant impact under CEQA.

Indiana Street

Indiana Street is not designated a bikeway. However, if cyclists use this street, Option B will maintain the existing street alignment by locating the LRT off-street. No significant bicycle impacts are anticipated under Option B, as there will be one traffic lane and one curb parking lane in each direction. No significant impacts are anticipated under Option B due to the LRT alignment.

3.4.3 Mitigation

3.4.3.1 LRT Build Alternative – Option A

Pedestrians

The development of rail facilities in an already "built out" urban environment does require the modification of the existing roadway and sidewalk conditions in such a way as to preserve the character and structures already in place. The project will be designed or modified to insure the following in the areas directly adjacent to the rail stations:

- Sidewalk widths will be designed with the widest dimensions feasible in conformance with the LA City/MTA's adopted "Land Use/Transportation Policy", and with widths up to and exceeding 10 feet;
- Where existing building lines or landscape areas periodically preclude these preferred widths, minimum widths will not be less than those allowed by the State of California Title 24 access requirements, or the Americans with Disability Act (ADA) design recommendations;
- Where physical conditions present potential restrictions in pedestrian access, compliance with ADA or Title 24 minimum requirements accommodating pedestrian movements and flows will take priority over other transportation improvements including automobile access;
- At a minimum, MTA will implement physical improvements to insure that all stations are fully accessible as defined in the Americans with Disabilities Act; and
- Alternative routing for pedestrians that allow completion of access to the station and to destinations in the immediate vicinity of the station will be identified through the Community Linkages Study.

The Community Linkages Study will include the identification of preferred pedestrian access to each station, general pedestrian circulation within the immediate vicinity of the station, and potential sites for improvements in pedestrian queuing areas. The report will also include identification of preferred connections to bus services in the immediate vicinity of the rail station. The purpose of the report includes ensuring adequate circulation, access, and information important to potential users of the rail and bus systems. The results of the study will be implemented through coordination between the MTA, the City of Los Angeles, and the County of Los Angeles.

In redevelopment areas along 1st Street, coordinated development planning is expected to mitigate the impact of narrowed sidewalks along 1st Street. In any event, the project will comply with the State of California Title 24 access requirements and ADA design recommendations. No significant pedestrian impacts are anticipated due to the reduction of the west sidewalk width from 8 feet to 6 feet wide along Indiana Street in Option A.

The alternative of removing or significantly altering existing building frontages facing the track or stations will create a more significant impact on the integrity and uniqueness of the surrounding community than periodic reductions in the adjacent sidewalk widths. In lieu of altering the building frontages or further reductions in the roadway width, alternative routing of pedestrian travel and improvements to the surrounding pedestrian network will be studied as part of the Community Linkages Study. The results of the study will be implemented through coordination between the MTA, the City of Los Angeles, and the County of Los Angeles, including enhancements to pedestrian access to adjacent destinations beyond potential inconveniences resulting in periodic sidewalk narrowing.

Other mitigation measures to reduce the potential for unsafe LRT track crossings by pedestrians include the use of well-defined pedestrian paths, signage, and barriers, where appropriate. Distinctive crosswalk treatments such as textured paving and eye-catching designs can capture the attention of pedestrians and

encourage the use of crosswalks. The use of pedestrian-oriented signal phasing will decrease crossing wait times and reduce the chances of impatient pedestrians crossing against the light. LRT train operations will be coordinated with traffic signal phasing to address safety issues and minimize delays. In addition, other techniques to increase pedestrian safety, including marketing and advertisement campaigns, crossing guards, and cohesive signage may be used. A signalized pedestrian crosswalk will be installed near the intersection of Mariana and 3rd Streets, where there are currently a high number of unauthorized crossings. Additionally, a crossing guard will be utilized on the weekends to create a safe crossing area for area residents.

Presentations and information will be made available at local schools, community groups, and social services locations to educate residents about safety related to the track crossing issue. Maps of the crossing opportunities will be made available to the community once the LRT project is in place to encourage the safe crossing of the tracks. Enforcement will also be provided to raise awareness of the crossing prohibitions and direct people to legally cross the tracks at designated locations. Additional safety measures are addressed in Section 4.14 of the Final SEIS/SEIR. The Long Beach Blue Line operation on Washington Boulevard and on Long Beach Boulevard will serve as examples of how to address pedestrian safety issues associated with the at-grade portions of the LRT system. The project will be required to meet MTA Rail Transit Design Criteria and Standards, Fire/Life Safety Criteria, Volume IX.

Impacts after Mitigation

Under Option A, no significant pedestrian impacts will remain after application of the mitigation measures discussed above.

Bicycle Routes

To address the issue of bicycle use on 1st Street, removal of the designation of 1st Street as a future commuter bicycle facility between Alameda and Indiana Streets is recommended. It is also recommended that the commuter bikeway designation be eliminated between the 101 Freeway and Fresno Street because this section will be discontinuous with other segments of the bikeway. In order to maintain network continuity for the regional bikeway plan, a parallel street will be designated as a bikeway, such as Cesar Chavez Avenue. Cesar Chavez Avenue is proposed to be part of the regional bikeway system east of Eastern Avenue. The extension of this designation should be considered between Alameda Street and Eastern Avenue as a way to maintain continuity with the bikeway network. Bicycle Commuter Route alternatives will be studied as part of the Community Linkages Study, funded by the MTA. LADOT and the Bureau of Street Services Bikeway Design Group will be included in the study of the bicycle commuter route alternatives.

No bicycle route mitigation is required on Alameda Street, 3rd Street, Indiana Street, or Beverly Boulevard because these streets are not designated bikeway facilities. Refer to Figure 3-14 for a map of existing and proposed bicycle facilities and Figure 3-15 for a view of the proposed regional bikeway system.

Impacts after Mitigation

After implementation of the aforementioned mitigation measures, no significant bicycle impacts will remain under CEQA.

3.4.3.2 LRT Build Alternative – Option B

Pedestrians

The mitigation measures applied to Option A will be used for Option B as well.

Impacts after Mitigation

No significant impacts will remain after application of the mitigation measures.

Bicycle Routes

Mitigation measures described in the previous section also apply to Option B. No bicycle route mitigation is required on Alameda Street, 3rd Street, Indiana Street, or Pomona Boulevard because these streets are not designated bikeway facilities. Refer to Figure 3-14 for a map of existing and proposed bicycle facilities and Figure 3-15 for a view of the proposed regional bikeway system.

Impacts after Mitigation

After implementation of the aforementioned mitigation measures, no significant bicycle impacts will remain under CEQA.

3.5 SUMMARY OF IMPACTS

3.5.1 Unavoidable Significant Adverse Impacts

3.5.1.1 Impacts Found to be Significant After Mitigation

Transit

No unavoidable significant adverse impacts under CEQA have been identified after mitigation measures have been implemented.

Traffic

After the proposed mitigation measures have been implemented, 12 of the 20 impacted intersections will continue to be impacted to significant levels under Option A. After the proposed mitigation measures have been implemented, 10 of the 20 impacted intersections will continue to be impacted to significant levels under Option B.

Parking

No unavoidable significant adverse impacts under CEQA have been identified after mitigation measures have been implemented.

Other Modes

No unavoidable significant adverse impacts under CEQA have been identified after mitigation measures have been implemented.

3.5.1.2 Impacts Found Not to be Significant after Mitigation

Transit

Any potential impacts resulting from the displacement of bus stops due to street design changes will be mitigated to a level that is less than significant under CEQA.

Traffic

In Option A, of the 20 impacted intersections, 8 were mitigated to a level less than significant under CEQA. In Option B, of the 20 impacted intersections, 10 were mitigated to a level less than significant under CEQA.

Parking

The MTA is committed to implementing a feasible parking replacement plan, which will reduce parking impacts to a less than significant level.

Other Modes

A parallel street such as Cesar Chavez Avenue will be designated as a bikeway facility to mitigate the removal of the Commuter Bikeway classification on 1st Street between Alameda Street and Indiana Street due to the increased curb lane traffic volumes in both options. The alternate route will be identified during MTA-funded Community Linkages studies.

3.5.2 Impacts Found Not to be Significant

Transit

The re-routing of bus lines to connect with the LRT system at certain stations does not create any significant impacts.

Traffic

Traffic impacts found not to be significant or beneficial were identified at 34 intersection locations for both Options A and B.

Parking

No impacts found not to be significant have been identified under CEQA.

Other Modes

A number of impacts were found to be less than or not significant under CEQA.

3.5.3 Cumulative Impacts

Transit

There are a number of small-to-medium scale development projects either under construction or planned in the Eastside Corridor that will benefit from increased transit service with a light rail system. The

transit trips generated by these new development projects will contribute to the operational success of the LRT system. These impacts will be considered beneficial because they will benefit the transit system as a whole by increasing ridership.

Traffic

Cumulative impacts due to overall growth in the Eastside Corridor are reflected in the No-Build and LRT Build traffic forecasts and level of service estimates.

Parking

There are no cumulative parking impacts to be addressed.

Other Modes

A number of developments are either under construction or planned along 1st Street between the Los Angeles River and the 101 Freeway, where existing sidewalks may be narrowed for the LRT Build Alternative. Through coordination with the City it is proposed that future full-width sidewalks be provided when these new developments are approved. This will constitute a beneficial cumulative impact under CEQA for pedestrians.