MID-CITY/WESTSIDE TRANSIT CORRIDOR DRAFT EIS/EIR

EXECUTIVE SUMMARY

S-1 Draft EIS/EIR Purpose & Intended Uses

This Draft Environmental Impact Statement/Environmental Impact Report (DEIS/EIR or Draft EIS/EIR) has been prepared under the requirements of the National Environmental Quality Act (NEPA) and the California Environmental Quality Act (CEQA) to describe the environmental setting and consequences of the construction and operation of the Mid-City/Westside Transit Corridor Project to the public and involved local, State, and Federal agencies. The report also identifies and evaluates alternatives, and proposes mitigation measures to reduce potentially significant environmental impacts. The environmental review process also provides an opportunity for public participation to further inform the environmental analysis. The Los Angeles County Metropolitan Transportation Authority (MTA) and the U.S. Department of Transportation, Federal Transit Administration (FTA) are the lead agencies for compliance with CEQA and NEPA, respectively, and will take separate actions on this EIS/EIR and the project.

This DEIS/EIR does not make recommendations regarding the approval or denial of the project..

An EIS is an informational document, which will inform public agency decision makers, and the public of the significant environmental effect of a project, identify possible ways to minimize the significant effects, and describe

Illustrative View of Wilshire BRT Concept.

TABLE OF CONTENTS FOR THE DRAFT EIS/EIR

The document is divided into nine chapters as outlined below:

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reasonable alternatives. The MTA and the FTA shall consider the information in the EIS along with other information, which may be presented to the agency, prior to the adoption of the project. Other agencies, such as the California Department of Transportation (Caltrans), the cities of Los Angeles, Beverly Hills, Culver City and Santa Monica will also be involved in reviewing and approving the project. On the Federal level, agencies with potential reviewing/permitting authorities include the Advisory Council on Historic Preservation, the Occupational Safety and Health Administration, and the Environmental Protection Agency.

S-2 Environmental Review Process

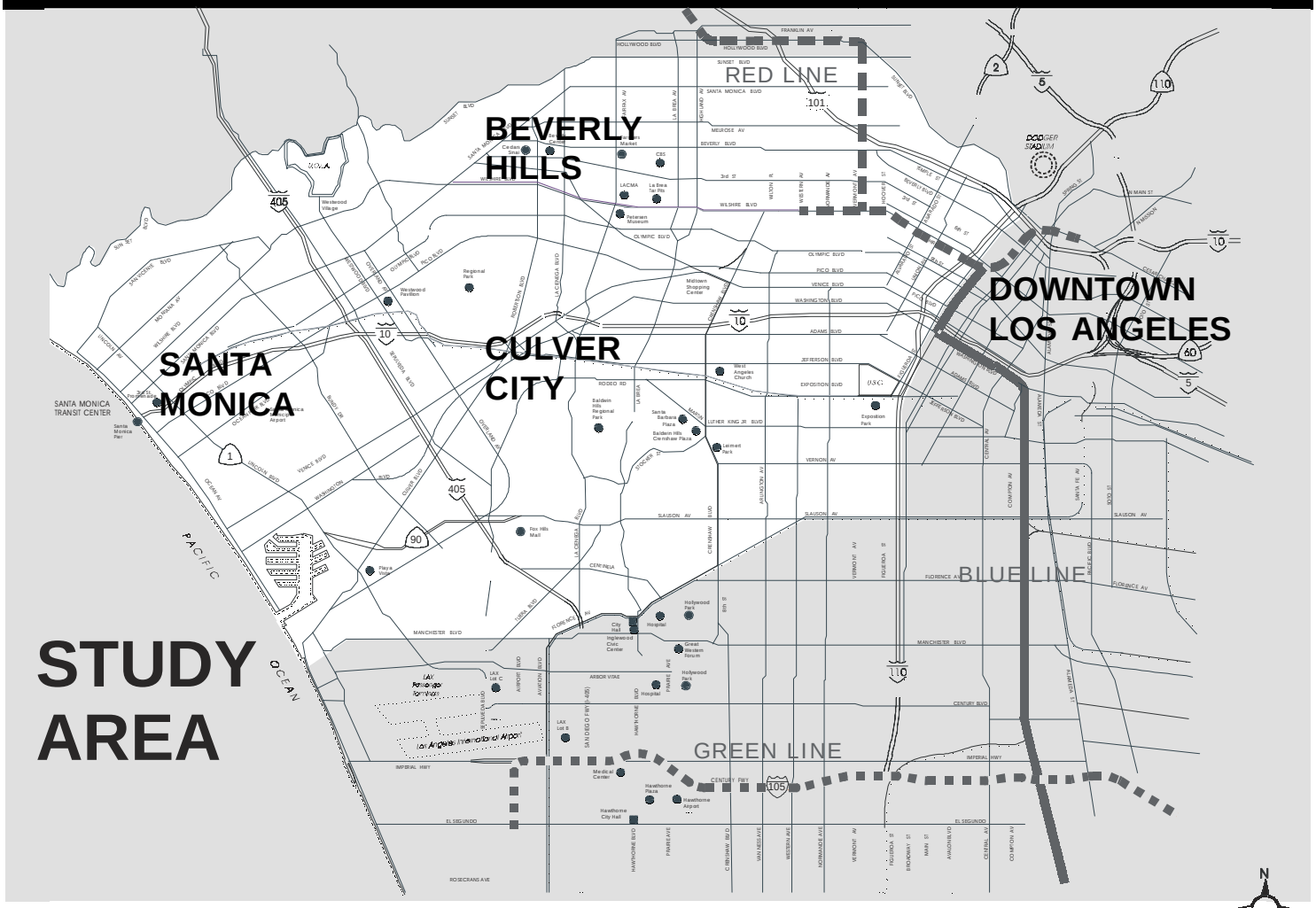
Compliance with the requirements of NEPA and CEQA must be achieved before the proposed project can be approved. The goal of both legislative acts is to ensure that local and federal decision-makers are aware of the environmental consequences of a decision before it is made.

One of the first steps in the environmental review process was to publish a Notice of Intent (NOI) to prepare an EIS in the Federal Register. The notice was published on May 19, 2000 (Vol 65, No 98) and provided a brief description of the proposed project and invited comment on issues that would be addressed in the environmental document. A Notice of Preparation (NOP) of an EIR, the CEQA equivalent of the NOI, was also prepared and circulated by the State of California on May 8, 2000.

In addition, various means were used to invite public comment about the project. Six public scoping workshops were held between May 23rd and June 8th, 2000 that were attended by more than 380 persons. Letters of invitation were mailed to over 12,000 addresses along the Wilshire and Exposition alignments. In addition, articles and advertisements were run in a number of Westside newspapers including the Los Angeles Times, Jewish Journal, Korea Times, The Sentinel, La Opinion as well as numerous community publications. The 30-day public scoping comment period extended through June 23, 2000, and all comments received about the project were documented and reviewed as a part of the preparation of the DEIS/EIR. Additionally, MTA staff have attended more that 42 community meetings with business, civic and homeowners associations during the scooping period and subsequent preparation of the Draft EIS/EIR.

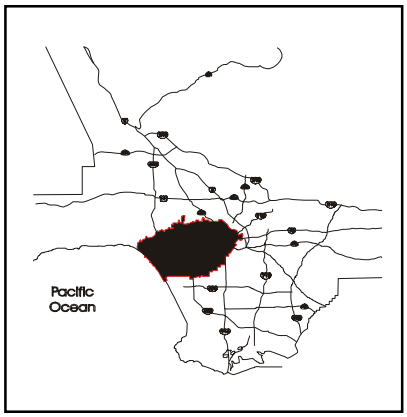
During the public review period for the Draft EIS/EIR, the Draft EIS/EIR is placed in public libraries and other repository sites as an effective way of providing ongoing information about the project. The document is available on the MTA website (www.mta.net) and information about public hearings and other ongoing project activities is available via the project telephone line (310-366-6443). Public hearings are held to receive oral and written testimony on the Draft EIS/EIR from the general public. The MTA provides notice of these public involvement meetings in compliance with CEQA and NEPA. For a detailed description of the environmental review process, and project-related public involvement opportunities, please refer to Section 6.0 (Community Participation) of this EIS/EIR.

Responses and letters on the DEIS/EIR will be compiled during public review and incorporated into the Final EIS/EIR. In May or June 2001, the MTA Board of Directors is expected to select a Locally Preferred Alternative for the project, based on the analysis and comments received to date. At the time, work on the Final EIS/EIR will commence with an expected completion date of late 2001. The MTA and the FTA cannot construct the project until the



The Mid-City/Westide Corridor Study Area encompasses 112 square miles. It includes the City of Los Angeles, Beverly Hills, Santa Monica, Culver City and unicorporated portions of Los Angeles County (Veterans West Los Angeles, and Baldwin Hills). Approximately 16 percent of the population and 24 percent of the jobs in Los Angeles County are concentrated in the area. The area encompasses the most well known employment, entertainment, educational/cultural activity centers in the region, including USC, UCLA, Santa Monica college, Los Angeles Trade Tech College, Rodeo Drive (Beverly Hills), Westwood Village, Hollywood Boulevard, Sunset Strip, Century City, Westside Pavilion, Paramount and Sony Studios, Third Street Promenade (Santa Monica), Wilshire Boulevard Miracle Mile, Los Angeles County Museum of Art, Page Museum, Petersen Automobile Museum, Afro-American Museum, Museum of Science and Industry, Los Angeles County Museum of Natural History, Los Angeles Memorial Coliseum and Sports Arena, Los Angeles Convention Center and the newly-opened Staples Center.

Final EIS/EIR is certified with all necessary mitigation measures and an adopted Mitigation Monitoring Program. Following certification of the EIS/EIR by the MTA Board, the FTA will consider the Final EIS/EIR and issue a public "Record of Decision" (ROD) for the project. Only at that time will the project become eligible for state and federal construction funding.



S-3 History, Purpose & Need for the Project

The need for high-capacity transit service improvements has been long recognized in the Mid-City/Westside area of Los Angeles. Since the 1970's, the MTA and its predecessors the Southern California Rapid Transit District (SCRTD) and the Los Angeles County Transportation Commission (LACTC) have conducted numerous transportation planning and environmental impact studies that have established the need for, and environmental impacts resulting from, improved east-west oriented transit service in various parts of the Study Area. Several planning and environmental studies prepared in the late 1980's and early 1990's identified the potential for the westward extension of the Metro Red Line system, which currently terminates at Wilshire Boulevard and Western Avenue.

These efforts led to the adoption of a Locally Preferred Alternative (LPA) for the Metro Red Line Segment 3 (Mid-City Area) in 1994. A Full Funding Grant Agreement was executed with the Federal Government and the project was carried into the construction phase. However, in January 1998, the MTA suspended work on extensions of the Metro Red Line heavy rail subway extension to the Mid-City area due to funding shortfalls. The Federal Government had committed to fund $245 million, or approximately 50% of the cost of the project. However, state and local funds that were needed to match this grant were not available. The project would have provided two stations further west along the Metro Red Line from its current terminus at Wilshire/Western to the Mid-City Shopping Center near the intersection of Pico & San Vicente boulevards. The Metro Red Line Subway was envisioned to ultimately extend as far west as Century City, Westwood and the I-405 Freeway.

Also, in November 1998, Los Angeles County voters passed an initiative prohibiting further use of local sales tax dollars to build subways, although these funds can be used for above/ground bus and rail transit improvements. Significant portions of the funds necessary to build the subway extension to Pico-San Vicente were anticipated to have come from local sales tax revenues.

MTA is now looking at alternatives to the previously approved subway extension that can provide above/ground transit mobility for this area in a more cost-effective manner. The need for these improvements is most critical. The Westside of Los Angeles has the highest population and employment density in the Southern California region, as well as the highest proportion of transit ridership. The Los Angeles Westside has a current population of 1.5 million persons, expected to grow by 300,000 over 20 years. The number of jobs is also projected to increase by over 200,000. No significant expansion of existing freeway and street networks is planned to accommodate this growth. The enhancement of public transit provides an opportunity to move more people in a way that is more energy-efficient, and does not require the building of more freeways or widening of streets.

Why Transit Improvements?

Study Area Contains A Major Concentration of Activity Centers and Destinations. The area contains the largest concentration of major activity centers and destinations within the Los Angeles metropolitan region. Many of these centers are located within the most congested portion of the Study Area.

The "Centers Concept" Land Use Policy is Transit Based. Land use policies in the Los Angeles metropolitan region have traditionally been founded upon the framework that access to major activity centers would be facilitated through a network of transit connections.

There is an Existing Concentration of Transit Supporting Land Uses. The existing activity centers in the Study Area are central part of a large concentration of land uses that are considered to be transit supporting (high density housing, commercial and retail). Roughly 30 percent of the land area within the Study Area falls into this category.

High Study Area Population and Employment Densities Support Transit. Population and employment densities in the Study Area are the highest within the metropolitan region, averaging approximately 13,883 persons per square mile and 9,167 employees per square mile.

There is a History of Transit Usage in the Study Area. Existing transit usage within the Study Area is proportionally higher than any other area in Los Angeles County (13.64 percent for the Study Area versus 6.8 % for the County).

There is a Significant Transit Dependent Population in the Study Area. Part of the underlying reason for high transit usage in the Study Area is that a significant number of households are autoless and have low incomes. According to the 1990 Census there are approximately 18.3% of households did not have a vehicle compared to 10.9% for the County.

The Study Area Is Expected to Continue to Capture a Large Share of Regional Population and Employment Growth. Population and employment forecasts to the year 2020 adopted by the Southern California Association of Governments clearly suggest that the Study Area will capture a disproportionate share of growth over the next 20 years, growth that will place further demands on transit service and is expected to result in increasing congestion on local roadways and regional highways serving the Study Area.

Continued Growth in the Business Services Sector (Entertainment and Media Related) Underlies the Future Development Potential in the Study Area. Growth in the Study Area will continue to be fueled by entertainment and media related businesses concentrating in the western part of the corridor. Currently, the Study Area is the center of approximately 1/3 of all new office construction underway in LA County, which makes it the largest office market in Los Angeles.

There are Substantial East-West Travel Patterns that are Not Currently Served by a High Capacity Transit System. Travel patterns currently indicate that the Study Area is a primary attraction for work trips with origins in the San Gabriel Valley, San Fernando Valley and Southbay areas. These trips are represented by very high traffic volumes on the I-10 and I-405 Freeways.

Peak Hour Congestion on Study Area Roadways Underlies Need for Transit Improvements. There is Substantial Peak Hour Congestion in the Northern Portion of the Study Area. Vehicular travel to the East and West San Fernando Valleys must ultimately by-pass through the Sepulveda or Cahuenga passes. Access patterns in to these routes are congested during the peak travel hours as motorist attempt to pass northward at either the western or eastern ends of the Study Area.

Local Policies are Oriented Toward Demand Management and Transit Solutions rather than on Physical Roadway Improvements. Because of the level of build out and density within the Study Area, local jurisdictions have generally determined through their local policies that congestion relief improvements should focus on travel demand management rather than on physical improvements such as widening and new roadways. In a number of cases, local communities desire to eliminate cut through and neighborhood traffic or to support more livable downtown or commercial areas, are supporting initiatives to limit roadway capacity or slow even further traffic flow. Thus, leaving transit improvements as one and only viable remaining alternatives to reduce traffic volumes and congestion-related delays.

New red "Rapid Buses" were introduced along the Wilshire/ Whittier route in June 2000. These buses run on compressed natural gas and are low-floor design, meaning that no steps are required to enter and exit the buses.

S-4 Options to Subway: Bus Rapid Transit & Light Rail Transit

Because of the high costs of rail construction and the limited availability of funding resources, there has been a strong movement in recent years to find lower cost but effective transit solutions. A model that has been attractive to many cities in this regard has been the exclusive lane bus system that has been developed in Curitiba, Brazil. U.S. cities that are currently developing Bus Rapid Transit systems based on the Curitiba model include Boston, Charlotte, Cleveland, Eugene Oregon, Hartford, Honolulu, Miami, Santa Clara California and San Juan, Puerto Rico.

New Metro Rapid bus stations are being installed along Ventura & Wilshire/ Whittier routes. Such stations feature variable message signs that identify "Next bus in __ minutes" to transit riders waiting for their bus.

Buses in Curitiba, Brazil are "double-articulated" meaning that they are longer than conventional 40-foot MTA buses by incorporating articulated joints that allow the length of the vehicle to be expanded to 60 feet or 76 feet. Longer vehicles effectively double the capacity of the bus line and provide more seats to relieve overcrowding.

Los Angeles became one of the first U.S. cities to implement a BRT based bus system when the MTA initiated the Metro Rapid Bus program on Wilshire Boulevard and Ventura Boulevard on June 24, 2000. BRT features that have been implemented to date include:

1. Simple Route Layout
2. Frequent Headways
3. Less Frequent Stops
4. Level Boarding & Alighting
5. Color-coded Buses & Stations
6. Enhanced Station Stops
7. Traffic Signal Prioritization

Since the implementation of service, the Wilshire line has seen an increase in ridership of 27%. A total of 82,000 boardings now occur each day on the Wilshire/Whittier route (Lines 20,21,720), making it the heaviest used bus line in Southern California. This apparent success is offset, however, by heavy traffic congestion during rush hour periods that slows bus speeds to below 5 mph on many segments of the route. Buses are also very crowded, even though a number of additional buses have been added to service. Larger sized vehicles would help to reduce overcrowding and in-

crease the comfort of the transit riders.

The additional features of a full Bus Rapid Transit system, if added to the current Metro Rapid lines, could continue to expand ridership and provide attractive alternatives to the private automobile. These features include:

·Bus Lanes- Similar to diamond lanes on freeways, dedicated bus lanes on city streets provide 4-5 times more people moving capacity than existing automobile lanes. When buses move faster than "gridlocked" cars, people are encouraged to leave their cars home and try public transit. New concrete bus lanes further provide a smoother and safer running surface for the buses;

·Higher Capacity Buses- Existing 40' long MTA buses can be replaced with "articulated" 60' or 80' long vehicles that have the capacity to double the number of passengers carried per vehicle. This will reduce overcrowding, provide more seats for transit users and carry more people without increasing the number of buses on the street;

·Multiple Door Boarding & Alighting- Up to 5 sets of doors can be provided on newer buses, allowing faster boarding and alighting at stations. Station stops that often exceed one minute can be reduced to as little 20 seconds, thereby reducing travel time;

·Fare Prepayment- Ticket vending machines at station stops reduce bus boarding times by replacing fareboxes onboard the buses. Transit riders board and alight from buses at the closest available door, rather than at a line at the front of the bus;

·Bus Feeder & Circulator Lines- Buses are necessary to bring people to and from the Metro Rapid line. People often must rely on transfers to reach their ultimate destination, and convenient shuttle buses and feeder lines help to integrate service;

·Coordinated Land Use Planning- The most successful transit systems are located in cities that develop strong linkages between land use and transit. As shown on the previous page, approximately 30% of the existing land uses in the Mid-City/Westside Transit Corridor are "transit supportive", i.e., higher density business, multi-family and institutional uses that generate high demands for transit service.

Light Rail Transit – As a lower cost alternative to heavy rail, light rail transit is currently being implemented in most large American cities. California cities, in addition to Los Angeles, with light rail systems include San Diego, San Jose, San Francisco and Sacramento. Most other western cities now have, or are developing such systems, including Portland, Seattle, Vancouver, Salt Lake Phoenix, Denver, Dallas, St Louis and Minneapolis/St Paul.

Advantages of light rail over traditional heavy rail include the fact that trains can run in both exclusive guideways or in mixed-traffic as traditional "streetcars" with other traffic. LRT trains run on electric propulsion so they are non-polluting.

The Metro Blue Line between Downtown Los Angeles and Downtown Long Beach (shown below) was the first modern light rail system built locally. Opened in 1990, the line today carries more than 62,000 daily boardings making it the most heavily used light rail line in the country. The Metro Green Line was opened in 1995 and now carries more than 27,000 daily boardings. In 2003, the Pasadena Light Rail Line will open. More recently, light rail was adopted as the preferred alternative for the Eastside Corridor, as a replacement for the suspended heavy rail subway.

A light rail transit option is evaluated in the DEIS/EIR for the Exposition right-of-way as a lower-cost, above-ground option to the suspended Mid-City/Westside subway project.

S-5 Alternatives

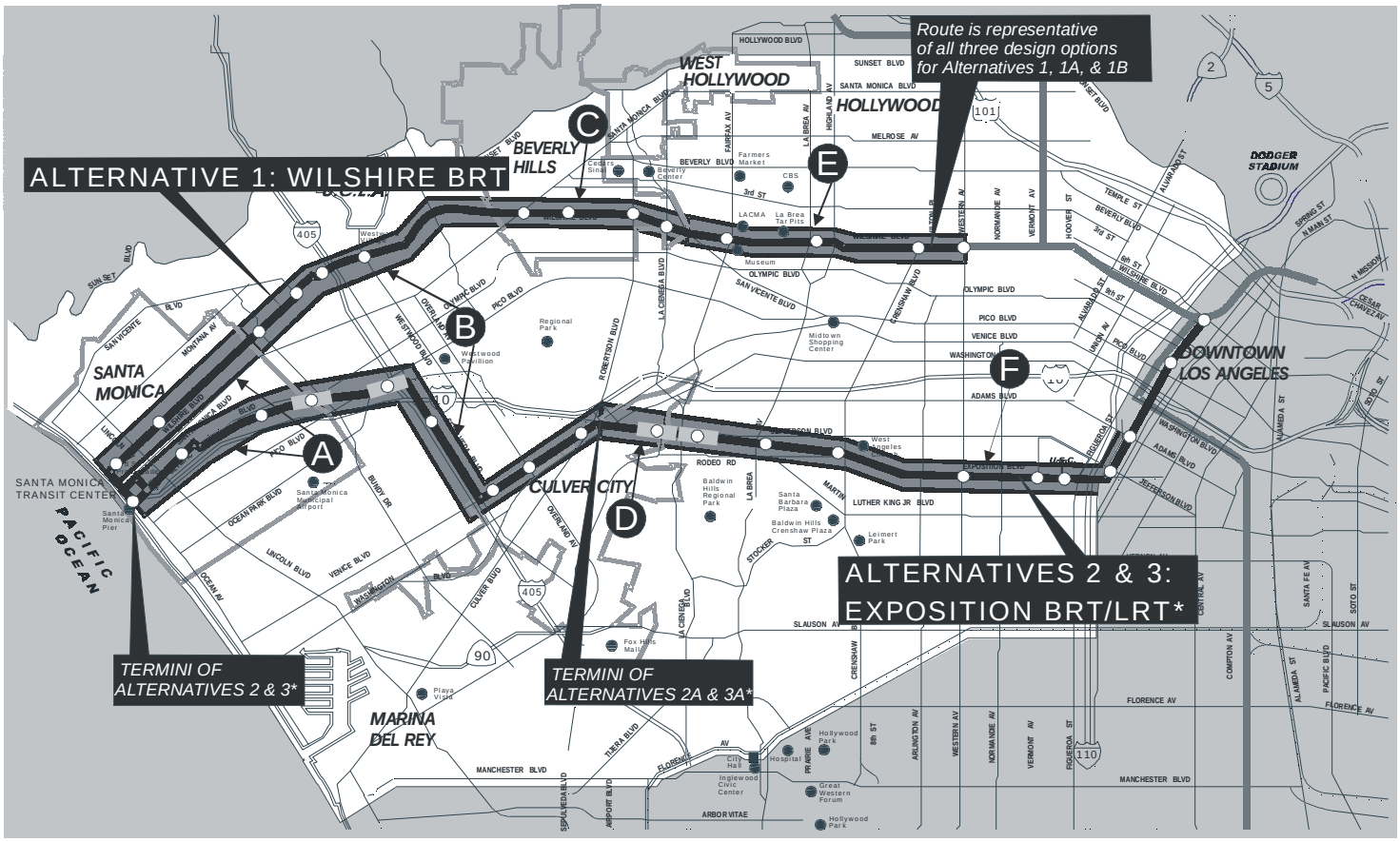
In February and March 2000, following their review of the findings of the Major Investment Study, the MTA Board of Directors considered and provided specific direction on alternatives to be evaluated in the Draft EIS/EIR. The primary direction was to evaluate an exclusive lane for Bus Rapid Transit along Wilshire Boulevard from Wilshire/ Western to downtown Santa Monica. Additionally, the Board directed that Bus Rapid Transit and Light Rail Transit be evaluated along the MTA-owned Exposition (Expo) Right-of-Way.

While allowing further consideration of Exposition BRT and LRT, the MTA Board was explicit in their direction that the Exposition route be considered as a supporting corridor only, such that Exposition would not supplant Wilshire Boulevard as the primary Westside transit route. Thus, the Exposition BRT and LRT alternatives considered in the EIS/EIR document are always considered in combination with the Wilshire BRT Alternative. The MTA Board further directed that the Exposition route not use the former railroad right-of-way in the Cheviot Hills/Rancho Park area between Venice Boulevard and Sepulveda Boulevard, and rather use these streets themselves for the BRT and LRT options.

The DEIS/EIR considers the following full project alternatives:

- No Project
- TSM - Transportation Systems Management
- Alternative 1 - Wilshire BRT
- Alternative 2 - Wilshire BRT and Exposition BRT
- Alternative 3 - Wilshire BRT and Exposition LRT

Also evaluated are Minimum Operable Segments (MOS) for each of the Expo combination alternatives. For the purposes of analysis, the Venice/Robertson intersection was identified as the interim terminus for purposes of environmental analysis. Alternative #2A and #3a end their respective Expo projects near the intersection of Venice and Robertson Boulevards.



LEGEND: A Santa Monica; B West Los Angeles; C Beverly Hills; D Culver City; E Los Angeles; F South Los Angeles

* Alternatives 2, 2A, 3, 3A, also include the Wilshire BRT route

The Wilshire Boulevard Route extends through the most dense areas of the region, linking Downtown Los Angeles with Santa Monica. The view to the right is looking east along Wilshie from Beverly Hills.

ALTERNATIVES CONSIDERED

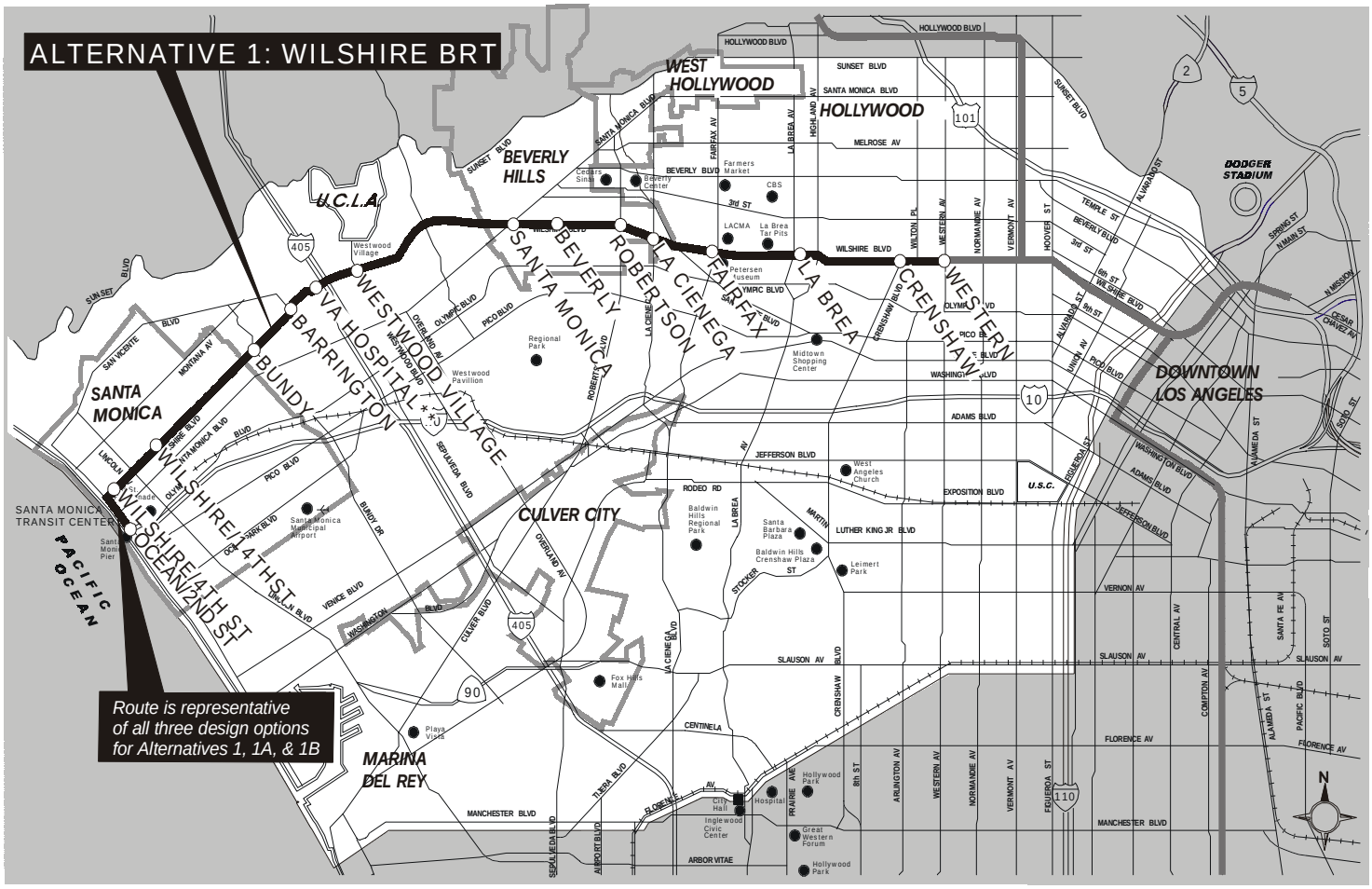
ALTERNATIVE #1 - WILSHIRE BRT

The Wilshire BRT Alterntive would build on the success of the Wilshire/Whittier Metro Rapid Bus to enhance service between Wilshire/Western and Downtown Santa Monica.

Metro Rapid Bus service would continue to be provided over the 26-mile length of the present service from Whittier to downtown Santa Monica. In the 13.2-mile segment between Wilshire/Western and downtown Santa Monica, a dedicated bus lane would be provided in each direction along Wilshire Boulevard. This alternative includes three design options: 1) the baseline center lane concept; 1a) the median adjacent lane concept; and 1b) the curb lane concept.

Station locations would be at the same intersections as the present Metro Rapid Bus service, although they may be shifted in some locations depending upon the design option that is developed.

New "articulated" bus transit vehicles would be used which could double the passenger carrying capacity of the line. Additionally, dedicated lanes could move 4 to 5 times the number of people as one of the existing automobile lanes on new, repaved, concrete roadways. A smoother ride with more speed and schedule reliability for transit users would significantly enhance the benefits of public transit along Wilshire Boulevard.



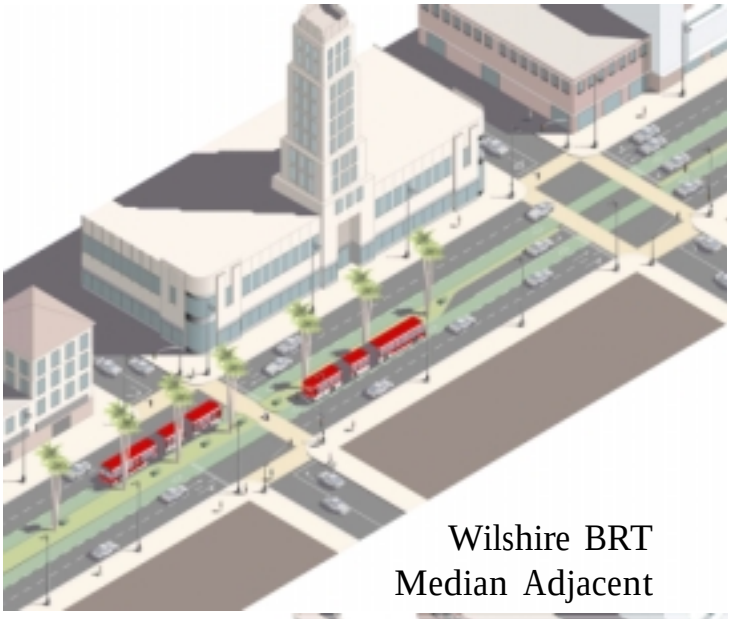
LEGEND:

- Existing Metro Rail Lines
- Alternative 1: Wilshire BRT
- ○ Station Location (General
- ** Optional Station

Wilshire BRT
Baseline

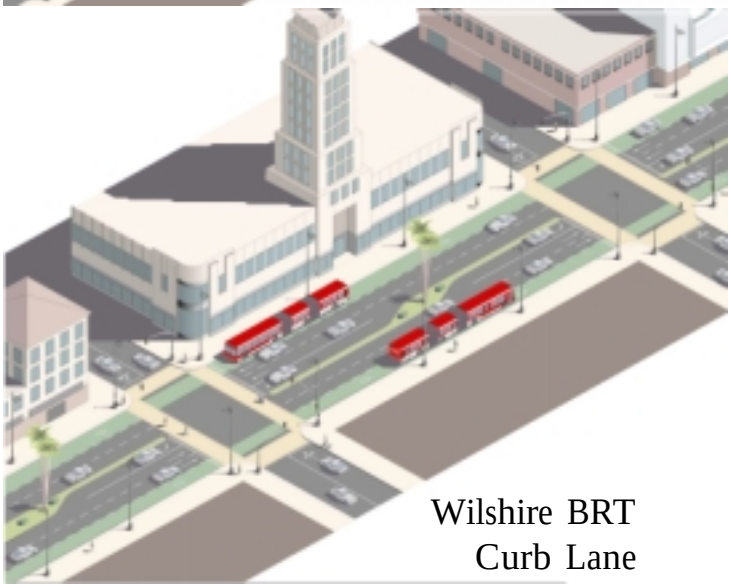
Alternative 1: The baseline BRT design is taken literally from the busway in Curitiba, Brazil, in which the middle portion of the street is dedicated to an exclusive busway. This design would require the removal of existing landscaped medians and on-street parking on Wilshire Boulevard, and for this reason, was opposed by many Wilshire Boulevard stakeholders during the Scoping Workshops.

As a result of these community comments, design options 1a and 1b were developed to eliminate impacts to the medians, as well as to provide greater design flexibility to deal with other environmental impacts such as loss of left turn pockets and loss of on-street parking. These features can be retained under design options 1a and 1b.



Wilshire BRT
Median Adjacent

Alternative 1a: The Median Adjacent design option would preserve the existing medians along Wilshire Boulevard. The exclusive bus lane would be located in the lane next to the median. Where medians currently do not exist along Wilshire, new medians could be constructed. This concept could also preserve all existing left turn lanes. It would require, however, that vehicles would have to transition across the exclusive bus lane to enter the left turn pockets. This alternative would relocate on-street parking to new, off-street locations. On-street parking could be retained in most areas, however, if a peak period busway concept were developed instead of a 24-hour facility.



Wilshire BRT
Curb Lane

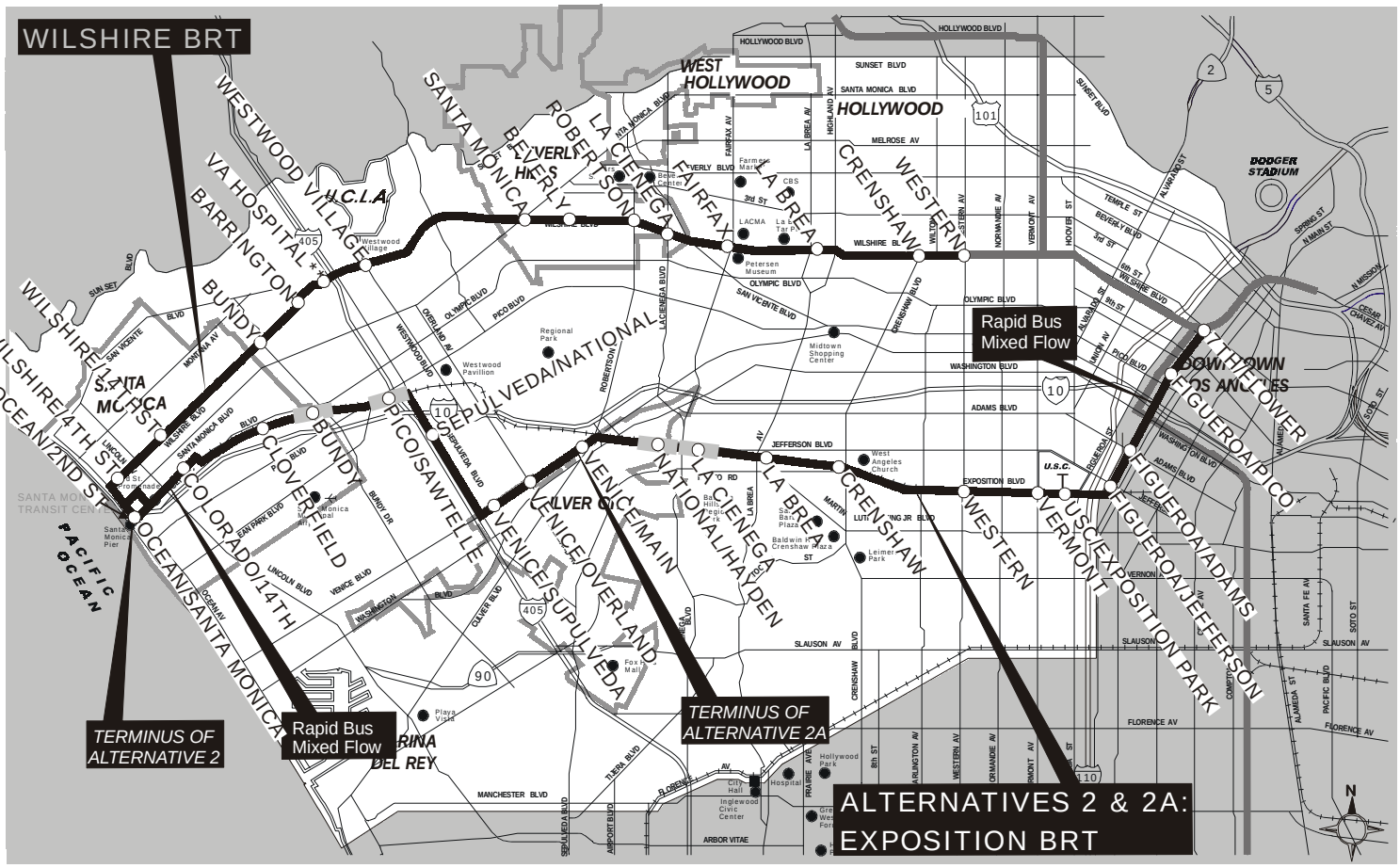
Alternative 1b: The Curb Lane design option would also preserve the existing medians along Wilshire Boulevard. This option would require the reconstruction of the outside curb lane to create a flat driving surface to remove the dips and cross street crowns. This option would result in reduced travel speeds for BRT, when compared to the previous two alternatives, because the BRT would be in the same lane with local buses and right-turning vehicles. This alternative would relocate on-street parking to new, off-street locations. On-street parking could be retained in most areas, however, if a peak period busway concept were developed instead of a 24-hour facility. A curbside bus lane is currently in operation in Downtown Los Angeles on Figueroa Street (AM peak period) and Spring Street (24-hour).

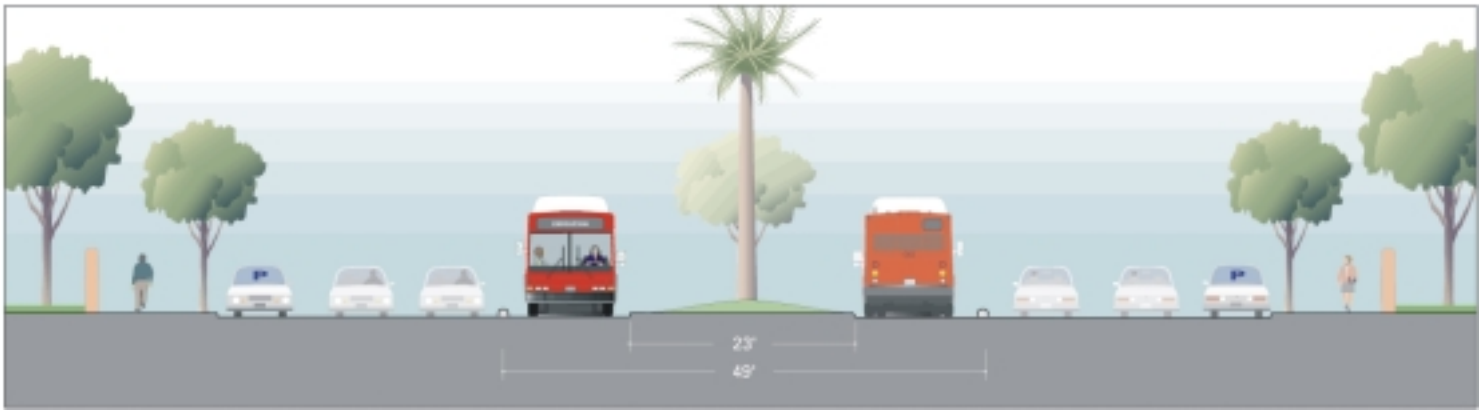
ALTERNATIVE #2 - WILSHIRE BRT AND EXPO BRT

This alternative would include Alternative 1, 1a or 1b as discussed previously along Wilshire Boulevard. The incremental addition for this alternative would be the construction of an exclusive busway using the Exposition right-of-way owned by MTA. The bus service would originate in downtown Los Angeles and the articulated buses would operate in the curb lane along Figueroa and Flower Streets to join the Exposition right-of-way near USC and Exposition Park. The busway would then proceed westbound along the Exposition right-of-way to Venice Boulevard. At that point, the exclusive busway would be leave the right-of-way and proceed in the center of Venice and Sepulveda Boulevards until it would rejoin the right-of-way at the intersection of Sepulveda/Exposition. West of Sepulveda the busway would again use the railroad right-of-way, until it intersects with Olympic Boulevard in Santa Monica.

From this point the bus service would operate in mixed flow along Olympic Boulevard, 17th Street, and Colorado Boulevard until its terminus at the Santa Monica Transit Mall west of Lincoln Boulevard. Elevated grade separations would be constructed at La Cienega/Jefferson, Pico/Sawtelle and Bundy, due to high traffic volumes on these cross streets. Parking lots for up to 2,800 cars would be provided at seven stations along the Exposition alignment including Crenshaw, LaBrea, La Cienega, Venice/Washington, Pico/Sawtelle, Bundy and Cloverfield.

Alternative #2 would provide a full-length Exposition busway from Downtown Los Angeles to Downtown Santa Monica. Alternative #2A would provide the Expo Busway only between Downtown Los Angeles and Venice/Robertson Station.





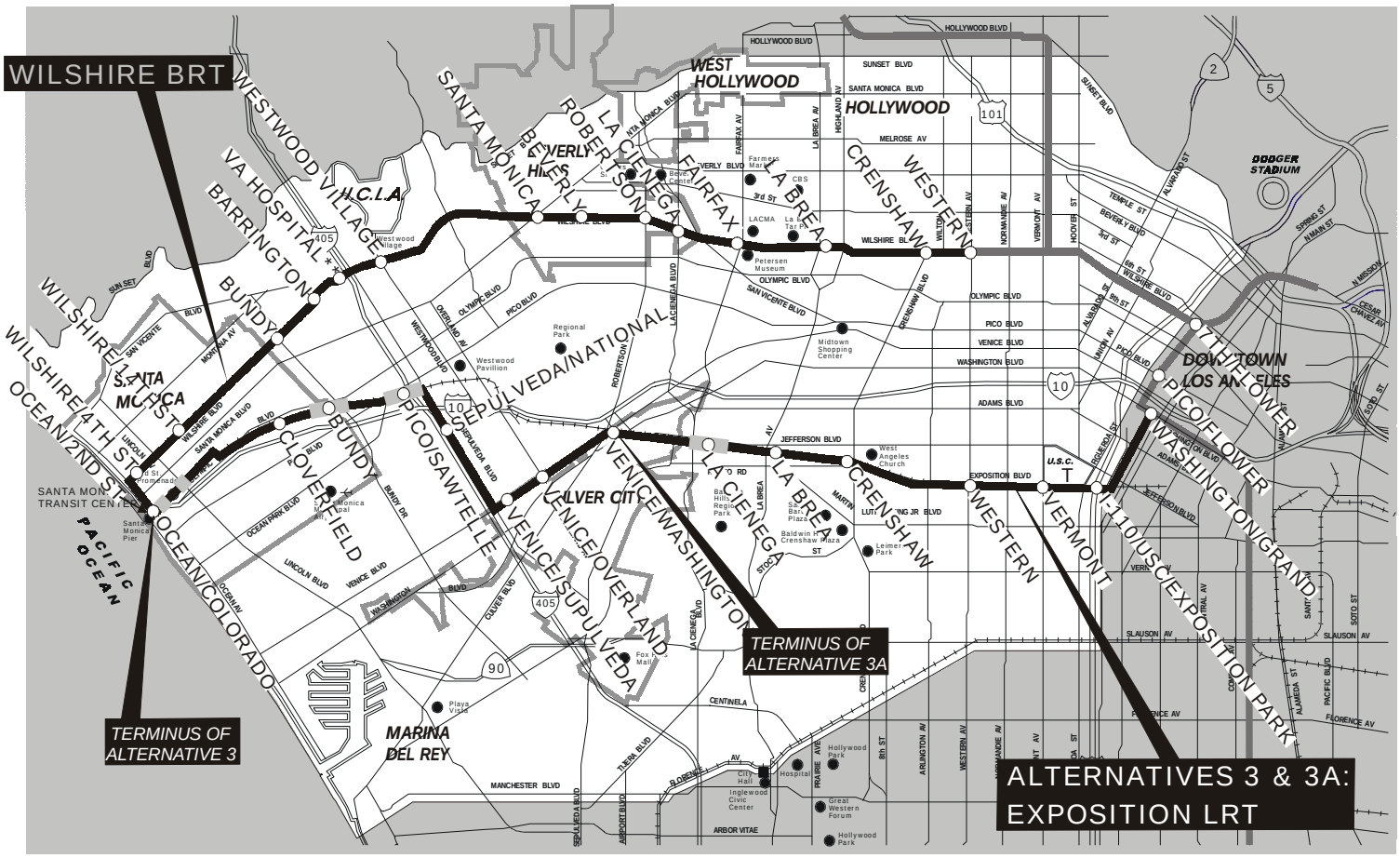
The illustration above and to the left shows a typical conditions for the Expo BRT route when the busway is located in the center of the street. The busway could either run in the median area itself or in the lane adjacent to the median.. This condition would occur along Venice, Olympic and Exposition Boulevard just west of Vermont. The illustration to the left shows a busway that is being developed in Eugene, Oregon, adjacent to the University of Oregon.

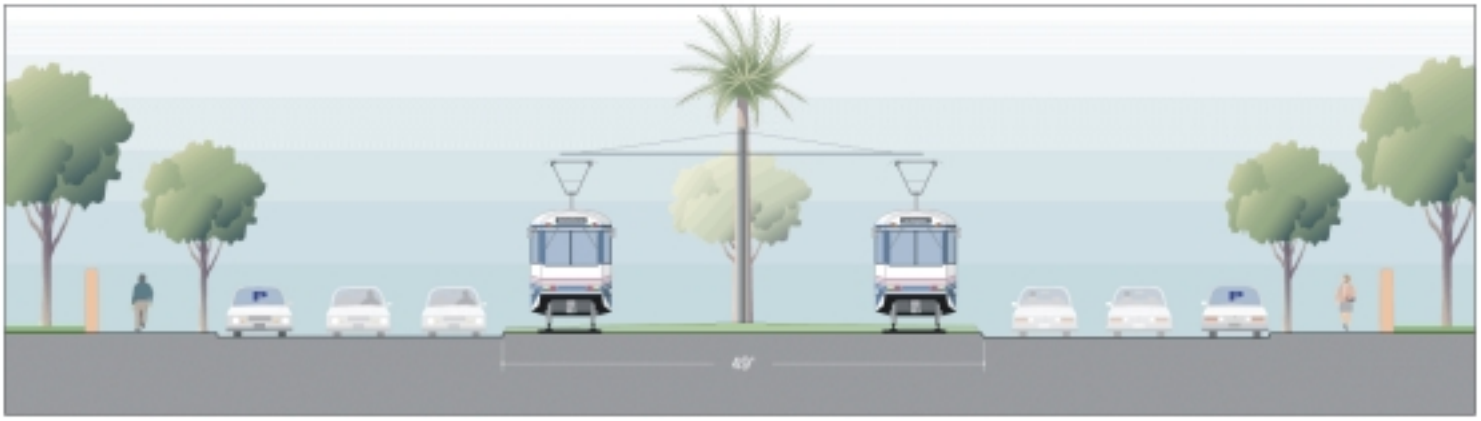
The illustration above and to the right show a typical condition along the Exposition right-of-way where the busway would run along the side of the existing street. Sound walls, landscaping, pedestrian crosswalks and a bike path would be incorporated into the design to beffer adjacent land uses and protect pedestrians.median running busway along the Exposition right-of-way. The illustration to the right shows the Eugene, Oregon project in a similar condition. Similar to the Expo project, a bikepath has been incorporated into the design along with new lighting and landscaping.

ALTERNATIVE #3 – WILSHIRE BRT AND EXPOSITION LRT

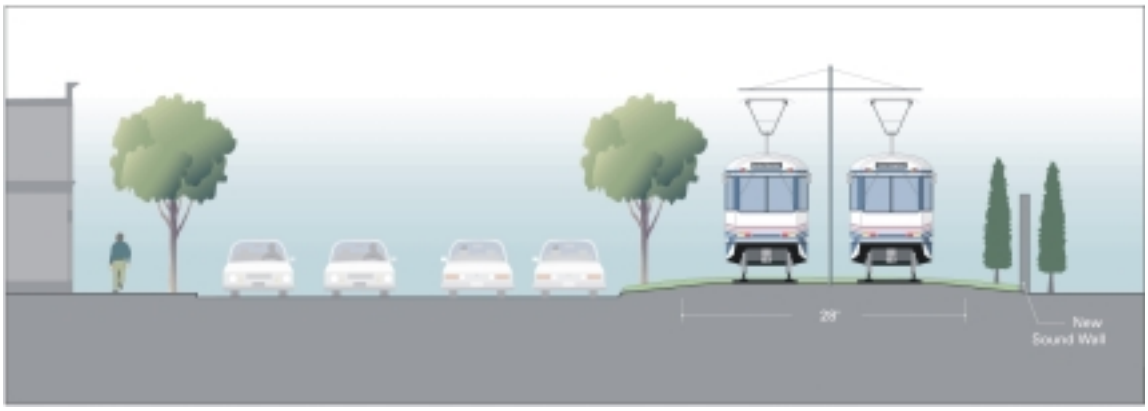
This alternative would include Alternative 1, 1a or 1b as discussed above along Wilshire Boulevard. The incremental addition of this alternative would be the construction of an exclusive light rail guideway using the Exposition right-of-way owned by MTA. The LRT service would originate in downtown Los Angeles and the LRT vehicles would operate in mixed flow along Hill Street until reaching the Exposition right-of-way. The LRT guideway tracks would be located within the Expo railroad right-of-way until reaching Venice Boulevard. At that point, a guideway would be constructed in the center of Venice and Sepulveda Boulevards until the railroad right-of-way is rejoined at Sepulveda and Exposition. West of Sepulveda, the LRT vehicles would use the Exposition right-of-way, until it intersects with Olympic Boulevard in Santa Monica. From this point the LRT service would operate in the center traffic lane adjacent to the landscaped median of Olympic Boulevard. The guideway would cross over Lincoln Boulevard and the Santa Monica Freeway and terminate in the Santa

Monica Civic Center area west of Main Street. Elevated grade separations would be constructed at La Cienega/Jefferson, Pico/Sawtelle and Bundy, due to high traffic volumes on these cross streets. An aerial segment would also be constructed to cross the Santa Monica Freeway near Lincoln in Santa Monica. Parking lots for up to 2,900 cars would be provided at eight stations along the Exposition alignment including Crenshaw, LaBrea, La Cienega, Venice/Washington, Pico/Sawtelle, Bundy, Cloverfield and Ocean.





The illustration above shows a typical operation of the Light Rail Systems when the trains operate in the median of Exposition, Venice, Sepulveda & Olympic Boulevards. The illustration to the right shows a typical condition where the trains would operate along the side of the existing street.
Soundwalls and new landscaping would be provided under both conditions.



The photo below shows the highly successful Portand, Oregon light rail system. The line extend from Downtown Portland to the eastern and western suburbs of the city. Light rail speeds have been reduced in pedestrian areas to encourage the development of transit freindly zones supported by new landscaping, paving materials, streetlights and other ammenities.

USC/EXPOSITION PARK TUNNEL DESIGN OPTION

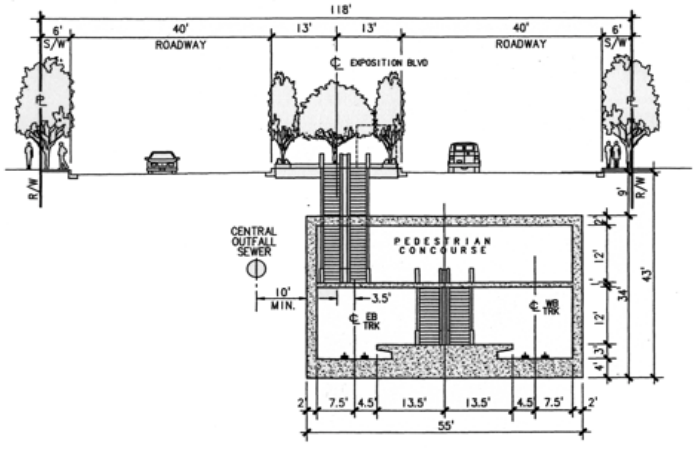
When the MTA Board authorized additional environmental evaluation of the Exposition Right-of-Way Alternatives, they also directed that a subway tunnel be considered along Exposition Boulevard between Figueroa Street and Vermont Avenue as a possible mitigation measure for project traffic impacts.

During the course of the environmental evaluation, it was determined that the at-grade alignments of LRT as well as a BRT alignment running in mixed traffic flow along this segment of Exposition Boulevard would not result in impacts that would require a tunnel during normal peak period or mid-day conditions.

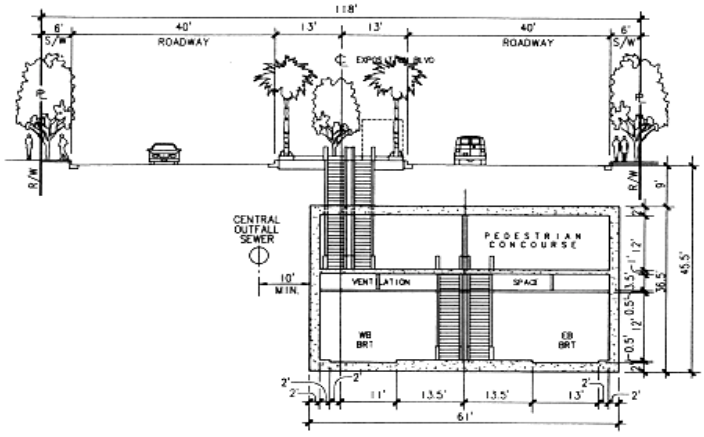
During times of special events at Exposition Park, however, this segment of Exposition Boulevard is often closed to through traffic. Instances of this occur during the LA Marathon and other running or bicycling events. USC football games, Coliseum soccer matches and events at the Sports Arena or Exposition Park Museums/Cultural Facilities also result in occasional closure of the boulevard to traffic. Extremely heavy pedestrian traffic crossing Exposition Boulevard occurs during these events. In instances where these special events cause street closure of Exposition Boulevard, the Expo LRT project could be required to cease operating on this segment of Exposition Boulevard during the hours of such events. The BRT operation could be rerouted to follow alternative streets.

The cost of the subway segment adds approximately $120 million to the LRT alternative and $150 million to the BRT alternative. The tunnel is approximately 3,200 feet long and 45 feet deep. The higher cost of the BRT tunnel over LRT is attributable to the wider tunnel required for buses and the forced ventilation requirements of buses' internal combustion engines.

Illustrative view (looking north) of the proposed subway station location considered as part of the Exposition BRT and LRT tunnel design option located at Watt Way between the University of Southern California and Exposition Park.



55 -Ft LRT Subway Cross Section



61-Ft BRT Subway Cross Section

The BRT at-grade option (Alterntive #2) operates in a curbside lane in the USC/Exposition Park segment of the route in order to preserve the landscaped median that was installed by USC above the existing MTA owned railroad tracks. On street parking could be preserved and a similar protected pedestrian crosswalk installed to provide a safe crossing of Exposition Boulevard.

The LRT at-grade option (Alternative #3) would be located in an enlarged median area with grass cover between the railroad tracks. A signalized pedestrian crossing would be installed to protect pedestrians from the LRT vehicle and automobiles. This option provides room for a Class II bikeway on Exposition Boulevard that could be constructed at the same time as the project

S-6 COMPARISON OF ALTERNATIVES

The summary table below compares the alternatives in terms of overall length, number of stations, projected daily boardings, incremental new daily transit trips and number of park and ride spaces provided. The phrase "Incremental New Daily Transit Trips" used in the table is a measure to predict the number of new transit riders that would be attracted to the project who do not presently use public transit. The measure does not count existing bus or rail riders who would move from an existing transit line to the proposed new service. The measure counts complete one-way trips from origin to destination and does not include transfers. By contrast, daily boardings includes both former bus and automobile users who opt to take the new service.

Alternative 1 (Wilshire BRT) - This alternative is 13.2 miles in length from Wilshire/Western to Ocean/Colorado in Santa Monica. The fourteen stations are located at the same intersections as the present Metro Rapid Bus service. This alternative assumes that the existing Whittier/Wilshire Metro Rapid Bus service would continue to operate over the total distance of 26 miles, but that it would operate in a dedicated lane for the western half of its route between Wilshire/Western Station and Ocean/Colorado in Santa Monica. The 14 stations are projected to attract 39,600 daily boardings and 12,200 incremental new daily transit trips[1]. Because of the densely developed nature of the Wilshire Corridor, no new park and ride spaces are provided for this alternative. It should be noted that there is no difference between the three design options in terms of ridership or other overall performance indicators.

Alternative 2 (Wilshire BRT + Expo BRT) – In addition to the Wilshire BRT alignment described above, this alternative adds the Exposition BRT project to create a combination alternative comprised of both the Wilshire BRT and the Expo BRT projects. The combined project length of the Wilshire BRT and Expo BRT is 29.9 miles, with 13.2 miles on Wilshire BRT and 16.7 miles on Expo BRT. A total of 34 stations are provided on both routes, including 14 stations on Wilshire BRT and 20 stations on Expo BRT. The combination project would attract 65,300 daily boardings and 19,500 incremental new daily transit trips. A total of 2,800 parking spaces are provided in new lots located along the Expo right-of-way.

SUMMARY PROFILE OF MID-CITY / WESTSIDE ALTERNATIVES.

Alternative		Length (miles)	Stations	Daily Transit Boardings	Incremental New Daily Transit Trips	Park and Ride**
1	Wilsire BRT (Center Median)	13.2	14	**39,600**	12,200	None
1A	Wilshire BRT (Median Adjacent)	13.2	14	**39,600**	12,200	None
1B	Wilshire BRT (Curb Lane)	13.2	14	**39,600**	12,200	None
2	Wilshire BRT & Expo BRT (Full Length) +	29.9 (13.2 + 16.7)	34(14+20)	**65,300** (36,300 Wilshire + 29,000 Expo)	19,500	2,800 spaces (6 lots)
2A	Wilshire BRT & Expo BRT (MOS) +	22 (13.2 + 8.8)	26 (14+12)	**56,900** (36,400 Wilshire +20,500 Expo)	18,500	796 spaces (3 lots)
3	Wilshire BRT & Expo LRT (Full Length) +	30.5 (13.2 +17.3)	31(14+17)	**83,900** (32,500 Wilshire + 51,400 Expo)	27,200	8 lots with 3,600 spaces
3A	Wilshire BRT & Expo LRT (MOS) +	22.8 (13.2 + 9.8)	24 (14 + 10)	**65,500** (38,300 Wilshire + 27,200 Expo)	15,600	4 lots with 796 spaces

Source: Korve and Manuel Padron Associates, 2000.

KEY COST FEATURES OF THE ALTERNATIVES

Alternative		Project Cost (in 1999 Millions of Dollars)				Incremental New Daily Transit Trips	Annualized Capital and O&M Cost per New Daily Transit Trip
		Capital	Bus Vehicles	LRT Vehicles	Total Project		
1	Wilshire BRT (Center Median)	$304.6	$49.4	na	$354.0	12,200	$9.00
1a	Wilshire BRT (Median adjacent)	$304.6	$49.4	na	$354.4	12,200	$9.00
1b	Wilshire BRT (Curb Lane)	$313.7	$49.4	na	$363.1	12,200	$9.20
2	Wilshire BRT and Exposition BRT	$304.6 + $290.9	$58.4	na	$653.9	19,500	$11.90
2a	Wilshire BRT and Exposition BRT (MOS)	$304.6+ $128.9	$47.4	na	$480.9	18,500	$9.10
3	Wilshire BRT and Exposition LRT	$304.6+ $554.9	$26.6	$117.8	$1,003.9	27,200	$12.80
3a	Wilshire BRT and Exposition LRT (MOS)	$304.6 + $252.8	$35.6	$55.8	$648.8	15,600	$15.30

Alternative 2A (Wilshire BRT + Expo BRT MOS) - This alternative is identical to Alternative 2 except that the Expo BRT project would only extend from Downtown Los Angeles to Venice/Washington Station in Culver City over a distance of 8.8 miles. Buses would operate in mixed traffic conditions west of Venice/Washington Station, instead of using a dedicated busway facility. A total of 26 stations are provided on both routes, including 14 stations on Wilshire BRT and 12 stations on Expo BRT. The combination project would attract 56,900 daily boardings and 18,500 incremental new daily transit trips. A total of 796 parking spaces are provided in new lots located along the Expo right-of-way.

Alternative 3 (Wilshire BRT + Expo LRT) – In addition to the Wilshire BRT project described above, the alternative adds the Exposition LRT project to create a combination alternative comprised of both the Wilshire BRT and the Expo LRT projects. The combined project length of the Wilshire BRT and Expo LRT is 30.5 miles, with 13.2 miles on Wilshire BRT and 17.3 miles on Expo LRT. A total of 31 stations are provided on both routes, including 14 stations on Wilshire BRT and 17 stations on Expo LRT. The combination project would attract 83,900 daily boardings and 27,200 incremental new daily transit trips. A total of 3,600 parking spaces are provided in new lots located along the Expo right-of-way.

Alternative 3A (Wilshire BRT + Expo LRT MOS) - This alternative is identical to Alternative 3 except that the Expo LRT project would only extend from Downtown Los Angeles to Venice/Washington Station in Culver City over a distance of 9.8 miles. Light Rail trains would terminate approximately midway between Downtown Los Angeles and Santa Monica and feeder bus service would operate in mixed traffic conditions west of Venice/Washington Station. A total of 24 stations are provided on both routes, including 14 stations on Wilshire BRT and 10 stations on Expo LRT. The combination project would attract 65,500 daily boardings and 15,600 incremental new daily transit trips. A total of 796 parking spaces are provided in new lots located along the Expo right-of-way.

TOTAL COST

The capital construction and vehicle costs associated with each alternative are shown above. The overall costs range from just over $354 million for Alternative 1 (Wilshire BRT) to about $1.0 billion for Alternative 3 (Wilshire BRT + Expo LRT). The total cost for Alternative 2 (Wilshire BRT+ Expo BRT) is about $654 million.

The Minimum Operable Segment (MOS) from Downtown Los Angeles to Venice/Robertson is shown for Alternative 2A (Wilshire BRT + Expo BRT) at $480 million and for Alternative 3A (Wilshire BRT + Expo LRT) at $649 million.

COST PER NEW TRANSIT RIDER

One of the most important factors in the federal evaluation of project worthiness is a factor called the Cost per New Transit Rider. This calculation compares the annualized cost to build and operate the project in comparison to the projected number of new transit riders. A new transit rider is defined as a person who is attracted to ride public transit as a result of the project instead of driving a car. The table above shows both the incremental cost compared to No Project, as well as to the Transportation Systems Management Alternative (TSM).

Alternative 1 (Wilshire BRT) is projected to cost about $9.00 per rider to attract 12,200 new daily transit riders. In comparison, Alternative 3 (Wilshire BRT + Expo LRT) is projected to cost $12.80 per rider to attract 27,200 new daily transit riders. In this particular comparison a 42% increase in cost per rider results in a 113% increase in transit ridership for Alternative 3.

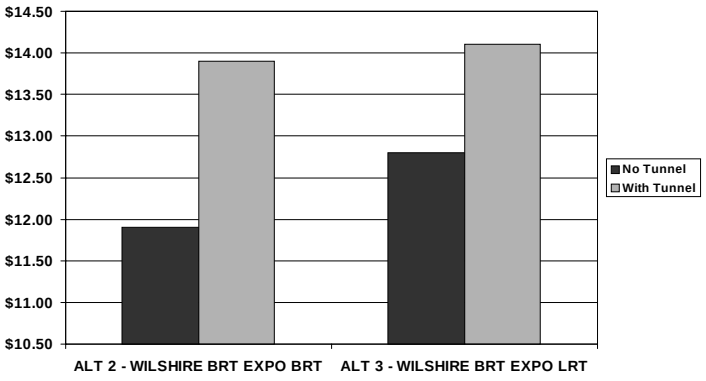
Alternative 2 (Wilshire BRT + Expo BRT) occupies the middle ground with a cost per new transit rider of $11.90.

Based on this comparison, all of the alternatives appear to be competitive under FTA rating criteria with projects from other cities. More detailed financial analysis will be required prior to the approval of funding grants for the any one of the project alternatives.

Cost Implications of Subway Tunnel Design Option

As discussed above, the MTA Board requested that the environmental document evaluate a subway tunnel segment extending along Exposition Boulevard from approximately Figueroa Street to Vermont Avenue. This segment bisects the University of Southern California (USC) and Exposition Park, which include a number of museums and the Los Angeles Memorial Coliseum. This design option would increase the cost of Alternative 2 (Wilshire BRT + Expo BRT) from approximately $654 million to $802 million. Likewise, this design option would increase Alternative 3 (Wilshire BRT + Expo LRT) from $1 billion to $1.12 billion. The cost per new transit rider for the inclusion of the subway design option would increase the cost by 17% ($11.90 to $13.90) for Alternative 2, and increase the cost per rider for Alternative 3 from $12.80 to $14.10, a 10% increase.

COST PER NEW TRANSIT RIDER WITH AND WITHOUT TUNNEL DESIGN OPTION



S-7 AREAS OF CONTROVERSY & ISSUES TO BE RESOLVED

The California Environmental Quality Act requires that areas of controversy or issues to be resolved be identified as part of the public environmental record. The public outreach program has revealed that there are a variety of such issues for various communities, civic organizations and agencies within the corridor. As highlighted below many of these issues will need to be addressed by the MTA Board as part

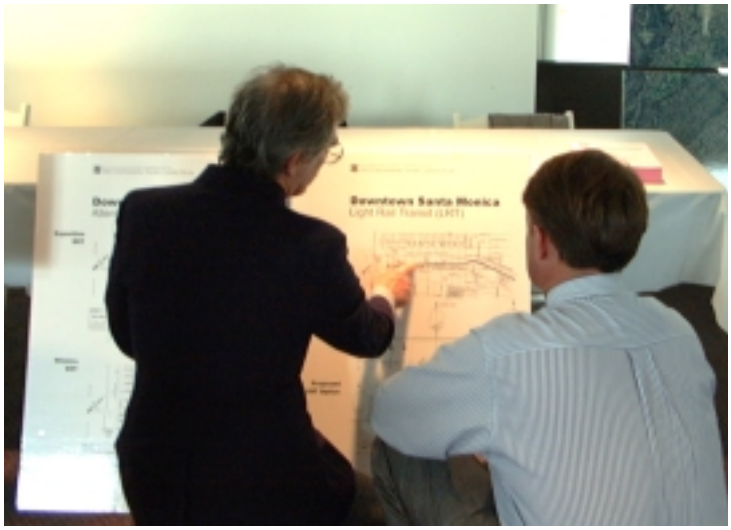
of their deliberations on the Locally Preferred Alternative. Others will require further study as a part of the next phase of the project. In many cases there are solutions, but these options and potential mitigations are presented to inform policy actions.

Issue #1 - Wilshire BRT: Conversion of two mixed flow traffic lanes

The Wilshire BRT project would require the conversion of two mixed-flow traffic lanes into exclusive bus lanes. Although this would increase the people moving capacity of Wilshire Boulevard, it would also reduce the capacity of the Boulevard for automobiles and divert cars onto other streets. Over a period of time following the opening of the Wilshire BRT project, general automotive traffic would redistribute to streets other than Wilshire Boulevard to re-establish a balance between the many alternative routes. Mitigation measures have therefore been identified in the DEIS to improve traffic signals at more than 500 intersections throughout the Westside to handle this increased traffic flow on other streets, thereby increasing the traffic handling capacity on these other streets and thereby mitigating much of the impact of diverted traffic from Wilshire Boulevard. Although traffic signal improvements would mitigate a significant amount of the traffic impacts of the project, they would not completely mitigate all impacts in all locations.

Issue #2 - Wilshire BRT: Removal of Landscaped Medians

The Wilshire BRT Alternative 1 baseline alternative would require removal and reconstruction of landscaped medians that have been recently installed in the center medians in Wilshire Center, Miracle Mile and Beverly Hills. Business leaders in these areas have expressed strong opposition to the removal of these medians and, as a result, Alternatives 1a and 1b have been developed that do not require removal of the landscaped medians. These new design options, in fact, provide the opportunity to add new medians in segments of Wilshire Boulevard that do not presently have landscaped medians.



Issue #3 - Wilshire BRT: Removal of On-Street Parking in Los Angeles & Beverly Hills

Exclusive bus lanes on Wilshire Boulevard would require relocation of 1211 of the 1321 on-street parking spaces (92%) along Wilshire Boulevard to new off-street locations. Business and community leaders along Wilshire Boulevard have expressed opposition to the relocation of these spaces, because it would locate the parking farther away from homes and businesses than the existing spaces. Since parking is prohibited in 702 of the 1211 spaces during rush-hour periods (58% - or everywhere except Santa Monica), an alternative peak-hour only bus lane has been proposed between Wilshire/Western and the Santa Monica city boundary which could be implemented without displacing on-street parking. Although the implementation of a peak-period only lane would eliminate one of the major project impacts, it would also reduce the effectiveness of the bus lanes to only a portion of the day. There would be no benefits for bus transit during non-peak periods, particularly during the midday, when segments of the boulevard experience high congestion levels.

An example of a successful peak-hour only bus lane was identified in Nagoya, Japan, and such a lane would offer significant benefits over the present Rapid Bus Service. Retention of the 702 on-street parking spaces in the cities of Los Angeles and Beverly Hills would reduce the project expenses for replacement parking mitigation by approximately $35 million.

Issue #4 - Wilshire BRT: Removal of On-Street Parking in Santa Monica

Community meetings in Santa Monica have indicated a strong objection to the relocation of the 509 on-street parking spaces to new, off-street locations for an exclusive bus lane. Furthermore, the proposed mitigation measure of implementing a peak period only lane would not save these spaces, since parking is permitted in Santa Monica on a 24-hour basis extending throughout the peak periods. Existing Metro Rapid Bus speeds are relatively good in Santa Monica, where congestion levels are not as severe as other segments of the boulevard east of the city. Therefore, the Wilshire BRT could continue to operate as a Rapid Bus in Santa Monica (no exclusive lane), with relatively modest impacts on overall travel times or ridership. This would allow the retention of all on-street parking in that city and thereby eliminate one of the significant project impacts. Retention of the 509 on-street parking spaces in the city of Santa Monica would reduce the projected project costs for replacement parking by approximately $25 million.

Please join us for Community Open Houses
regarding
The Mid-City/Westside Transit Corridor Study

The Los Angeles County Metropolitan Transportation Authority (MTA) is evaluating several new transit alternatives along Wilshire and Exposition Boulevards than can provide improved transit mobility for this area. Learn about the proposed *Wilshire Boulevard Bus Rapid Transit*, the *Exposition Right-of-Way Bus Rapid Transit* and *Exposition Right-of-Way Light Rail* possibilities.

Interested individuals, organizations and public agencies are invited to attend to hear and comment on the alternatives at any of the community open houses listed below, between 5:00 and 8:00 pm.

- **TUES, May 23,2000,5:00-8:00 PM**
  Petersen Automotive Museum
  6060 Wilshire Boulevard, Los Angeles
- **WED, May 31,2000,5:00-8:00 PMV**
  Veterans Administration Hospital of West Los Angeles
  11301 Wilshire Bouelvard, Los Angeles
- **TUES, June 6,2000,5:00-8:00 PM**
  Ken Edwards Center
  1527 Fourth Street, Santa Monica
- **WED, June 7,2000,5:00-8:00 PM**
  California African-American Museum
  600 State Street, Exposition Park, Los Angeles
- **THURS, June 8,2000,5:00-8:00 PM**
  Veterans Memorial Complex
  4117 Overland Aveune, Culver CIty

For further information, to be placed on the project mailing list or to leave verbal comments please call:

Project Hotline: 310.366.6443

Please send written comments to: (Due by June 23, 2000)

David Mieger, Project Manager
Los Angeles County MTA
One Gateway Plaza
Mail Stop 99-22-5
Los Angeles, CA 90012
FAX: 213-922-3060
E-mail: miegerd@mta.net

METRO

Issue #5 - Wilshire BRT: Removal of Left Turn Pockets

The Wilshire BRT Baseline Alternative 1 would require that left turns from Wilshire Boulevard cross both the eastbound

and westbound exclusive busway lanes. Such turns require left turn arrows and special traffic signal phases to insure safe operation. These left turn signals, however, remove green time that is needed to provide signal priority for buses on Wilshire Boulevard, and would effectively eliminate any signal priority for buses, thereby eliminating one of the major benefits of the proposed project. An optional design (Option 1a) would provide a permissive left-turn pocket, where vehicles would cross one direction of the bus lane prior to reaching the intersection, thereby not requiring a dedicated left-turn signal phase. This would allow the retention of bus signal priority for transit buses on Wilshire Boulevard. The City of Los Angeles Department of Transportation (LADOT) has indicated that such permissive left-turn pockets may not be acceptable. If a design solution cannot be found for this issue, the Wilshire BRT Alternatives 1 and 1a would be required to remove all left turn pockets as a part of their basic design, thereby significantly increasing the traffic impacts of the project (Alternative 1b would not require the removal of any left-turn pockets). This potential impact would require more detailed engineering review before a definitive definition of this impact can be defined, and would be evaluated as a part of the Final EIS/Preliminary Engineering.

Issue #6 - Wilshire BRT: Possible Street Widening

Segments of Wilshire Boulevard that have curb to curb dimensions of only 70' (Wilshire Center, Park Mile, Beverly Hills) may need to be widened if lane width requirements presently requested by LADOT are to be met. Although no property takings are anticipated, this would reduce sidewalk widths and introduce secondary impacts to the utilities and businesses in these areas. The non-standard lane widths included in the present Wilshire BRT proposed design would require widening only in very limited instances at intersections at station areas. This potential impact would require more detailed engineering before a definitive definition of this impact can be defined, and would be evaluated as a part of the Final EIS/Preliminary Engineering.

Issue #7 - Exposition BRT/LRT: USC/Exposition Park Subway

The University of Southern California and other Exposition Park stakeholders have requested consideration of a subway segment for both the BRT and LRT alternatives between Figueroa and Vermont. Earlier studies had indicated the need for a grade separation at Exposition/Figueroa to mitigate traffic impacts. The present study does not indicate that the need for such a grade separation, based on the reduced traffic impacts of the present downtown connector route which follows Hill Street, rather than Flower Street. Nonetheless, the impacts of the above-ground BRT or LRT projects are considered by many community representatives in the area to be too severe to be supportable as an at-grade system on Exposition Boulevard. In particular, advocates for a tunnel solution at Exposition Park cite special events such as the Los Angeles Marathon and other major Coliseum sporting events as situations where at-grade transit service (particularly light rail) would have to be curtailed.

Closure of Exposition Boulevard occurs approximately 12-15 times per year and duing such periods, BRT service could be re-routed around the area (as is currently done during special events like the marathon), and light rail service could continue at reduced speeds or but with transfers to buses linking separated parts of the LRT route. If LRT were not allowed to operate on Exposition Boulevard during special events, the LRT could continue to operate in from downtown to north of Exposition Park and from west of Vermont to Santa Monica. The two segments would be linked during special events by bus service.

The estimated additional project expense of building a subway for BRT is $150 million. The estimated additional project expense of building a subway for LRT is $120 million. The cost differential is primarily related to the wider tunnel needed for buses as well as the need for an extensive ventilation system for the buses combustion engines. As the project financial plan does not presently include a sub-

way segment, additional funding would be required if the subway design option were to be incorporated into the Expo BRT or LRT project.

Issue #8 - Expo BRT/LRT: Sepulveda Boulevard Shared Lane

A dedicated bus or LRT facility on Sepulveda Boulevard would require widening of the street curb-to-curb dimension to approximately 84 feet. The community has expressed strong opposition to any such widening, as it would require the narrowing of sidewalks and landscaped parkway areas to 8 feet and the removal of 157 on-street parking spaces (approximately 30% of the total of 526 on-street parking spaces located along this segment of Sepulveda Boulevard). Off-street parking would need to be developed as a mitigation measure for this impact.

Alternatively, this impact could be reduced or eliminated if the BRT were operated as a Rapid Bus (no dedicated lane) in this segment or the LRT were operated as a streetcar (no dedicated lane) in this segment. The implementation of Rapid Bus or Streetcar LRT service in this segment would reduce one of the significant project impacts, but would also reduce the effectiveness of the BRT/LRT, particularly during the rush hour periods, when significant traffic congestion levels would slow the transit running times. This potential impact would require more detailed engineering before a definitive definition of this impact can be defined, and would be evaluated as a part of the Final EIS/Preliminary Engineering.

Issue #9 - Exposition BRT/LRT: Equity of At-grade Alignment

A number of residential areas along the Exposition route have expressed concerns regarding the potential proximity effects of bus or light rail operations at-grade in residential areas. These concerns have been expressed in South Los Angeles, Baldwin Hills and East Culver City neighborhoods. The communities have placed strong emphasis on mitigation treatments in other residential areas and maintain that an equitable treatment would be place bus or LRT operations in a subway configuration adjacent to their areas. For LRT operations, placing the LRT in a shallow cut or trench with adjacent earth berms or low soundwalls could reduce these types of community concerns. Because of the 10-foot height of bus exhaust stacks (a primary noise source) the shallow cut would have to accompanied by a 7 to 8 foot wall or berm.

Other neighborhoods have been concerned about the overall alignment for Exposition and the MTA Board's explicit direction for the preferred Exposition alignment to depart from the MTA owned right-of-way between Venice and Sepulveda in order to avoid the neighborhoods in the Cheviot Hills section of the corridor. Both the cities of Los Angeles and Culver City have asked the MTA to revisit this decision because of the impacts to Venice and Sepulveda boulevards due to the LRT alignment using these city thoroughfares.

Issue #10 - Wilshire BRT/Exposition LRT: Pedestrian and Vehicular Safety

As noted in the description for Alternative 1 and 1a, station platforms would be constructed in the center median of Wilshire Boulevard. The safety of transit patrons getting to these center platforms as well as the size of platforms has been identified as an issue of concern. Within the City of Santa Monica segment, the large number of unsignalized pedestrian crosswalks has been a concern of the City. The Wilshire BRT proposal would provide signals at all crosswalks, however, the volume of pedestrian activity in Santa Monica remains a concern.

The conversion of the former Exposition railroad right-of-way for an exclusive bus or light rail facility has raised concerns regarding both cross street vehicular safety and pedestrian crossing safety. The proposed BRT or LRT project would include fencing along segments of the route, and special designs would be implemented to designate pedestrian crossings of the transitway. A parallel bikepath will be designed in such a way to provide continuous separation between the bikeway and the transitway. Near areas of pedestrian activity, signalized pedestrian crossings would be employed to protect pedestrians from both cars and transit vehicles.

At vehicular intersections, crossing gates would be utilized where transit speeds are greater than 35 mph. Such gates may not be possible in certain areas due to noise or traffic concerns, and in such cases, transit speeds would be slowed to less than 35 mph.

Issue #11 - Expo LRT: Non Revenue Connector

The Exposition light rail alternative will require a non-revenue connector track to connect the Expo line to the Long Beach Blue Line. This connector is necessary to get rail vehicles to storage and maintenance facilities that are located along the Long Beach Blue Line route. Residents and community organizations in the areas south of Downtown Los Angeles have expressed opposition to the use of the Exposition right-of-way that is east of the Harbor Freeway for such a connector. They have asked tht the MTA evaluate alternative routes.

Because this issue was only recently identified during the conceptual engineering of the Expo LRT project and was not known during the Scoping Comment Period, further engineering and planning will be necessary to determine if such alternatives are feasible. Full evaluation and environmental review of these alternatives will be included prior to completion of the Final EIS if the LRT project is advanced to the next phase of the study.

ENVIRONMENTAL EVALUATION

ENVIRONMENTAL ANALYSIS

To meet the requirements of Federal and State law, the environmental evaluation of the Mid-City/Westside Transit Corridor Alternatives addresses a variety of impact topics. The tables that follow provide a synopsis of the key findings within each topic area. The format of the tables first presents an overview of the topic. This is then followed by a description of the impact. The magnitude of the impact is identified, along with mitigation measures, and a conclusion is reached regarding the level of significance of the effect after the implementation of the mitigation measure or measures. A summary for each general environmental topic is shown below. The summary should be viewed as guide to more detailed information in the attached topics or in the body of the environmental document as a whole.

SIGNIFICANT ENVIRONMENTAL ISSUES

Of the environmental topics addressed, several of these topics stand out and warrant specific consideration in the overall assessment of the transit options. Key impact attributes of the alternatives are shown in the table below. Attributes designated as "S" (remains significant after mitigation measures) and "LTSM" (less than significant after mitigation) should be noted.

Alternative #1: Wilshire BRT - For this alternative, four impact categories were identified with significant residual impacts after mitigation. These include traffic, parking, acquisition/displacement and construction impacts.

- Traffic- Most traffic impacts can be mitigated to levels than are less than significant, however, residual intersection impacts remain at a few locations for each of the alterntives and on the I-10 Freeway for Alternatives 1 and 2. Alternative 1 (Wilshire BRT) would require the conversion of two traffic lanes on Wilshire Boulevard and thereby divert automobile traffic onto other streets. Even with mitigation of these impacts

SUMMARY COMPARISON OF THE BUILD ALTERNATIVES

	ALT 1	ALT 2		ALT 3	
IMPACT TOPIC	WILSHIRE BRT	WILSHIRE BRT	EXPOSITION BRT	WILSHIRE BRT	EXPOSITION LRT
TRAFFIC	S	S	S	S	S
PARKING	S	S	S	S	S
SOCIOECONOMICS	LS	LS	LSM	LS	LSM
LAND USE/NEIGHBORHOODS	LS	LS	LSM	LS	LSM
ACQUISITION/DISPLACEMENT	S	S	LSM	S	LSM
VISUAL QUALITY	S(1), LS(1A,1B)	S(1), LS(1A,1B)	LSM	S(1), LS(1A,1B)	LSM
AIR QUALITY	LS	LS	LSM	LS	LS
NOISE AND VIBRATION	LS	LS	S	LS	LSM
GEOLOGY/SEISMICITY	LS	LS	LSM	LS	LSM
WATER RESOURCES	LS	LS	LSM	LS	LSM
BIOLOGY	N	N	N	N	N
ENERGY	B	B	B	B	B
SAFETY AND SECURITY	LS	LS	LSM	LS	LSM
COMMUNITY FACILITIES	LS	LS	LSM	LS	LSM
HAZARDS	LSM	LSM	LSM	LSM	LSM
CULTURAL RESOURCES	LSM	LSM	LSM	LSM	LSM
CONSTRUCTION IMPACTS	S	S	S	S	S

S= SIGNIFICANT AFTER MITIGATION

LS = LESS THAN SIGNIFICANT

LSM = LESS THAN SIGNIFICANT AFTER MITIGATION

N = NO IMPACT

B = BENEFICIAL

by the provision of improved traffic signals and other traffic management programs, the diversion itself will increase traffic on streets other than Wilshire Boulevard. The project would reduce the total number of cars on the road and would have a beneficial impact on the people-carrying capacity of Wilshire Boulevard, however, the adverse impact to automobile drivers cannot be reduced to levels of insignificance. Traffic level of service at intersections along with the loss of on-street curb parking is expected to remain significant at a number of locations even after the implementation of mitigation measures.

- Parking- The loss of on-street parking is considered a significant impact to residents and businesses along Wilshire Boulevard. A Replacement Parking Program has therefore been developed to replace these lost spaces with new, off-street facilities. As an alternative, the use a of peak period lane could reduce or eliminate these impacts in most areas of the boulevard, by allowing on-street parking to remain in non-peak periods, but the effectiveness of the project would be reduced if operation of the dedicated transit lane were restricted to peak periods only.
- Acquisition/Displacement- For the baseline Alternative #1, replacement parking would be developed to replace the on-street parking spaces lost on Wilshire Boulevard. The MTA would endeavor to provide such replacement parking through shared parking agreements in existing facilities. In the event that sufficient parking spaces could not be developed in existing facilities, it may become necessary to acquire property for off-street parking. This could cause adverse impacts in these areas in the event that appropriate relocation sites could not be found and properties needed to be acquired. The Replacement Parking Strategy, however, would not be needed if the MTA Board adopts a peak hour only approach for the BRT exclusive lane on Wilshire.
- Construction- Traffic and noise impacts during the construction period would remain as impacts after mitigation because of the likelihood that construction staging zones would close up to two of the three lanes of traffic in either direction on Wilshire Boulevard. Because of high traffic volumes during weekday periods, such lane closures could generally only occur at night or on weekends when traffic volumes are less. Nighttime construction work would impact the residential neighborhoods that are located directly on Wilshire Boulevard in the Hancock Park and Westwood communities.

Environmental impact attributes of the Wilshire BRT Alternative also indicate that there are several factors, including visual quality, safety/security and community faculties that require the effective implementation of mitigation measures to reduce impacts to acceptable levels. The DEIS/EIR identifies that there are techniques to successfully mitigate these impacts through community design and planning review during the design phase of the project.

Alternative #2: Wilshire BRT/Exposition BRT- For this combined alternative, impacts associated with the Wilshire BRT alternative would be supplemented by the incremental impacts associated with the Exposition BRT route. Along the Expo BRT route, four impact categories were identified with significant residual impacts after mitigation. These include traffic, parking, noise/vibration and construction impacts.

- Traffic- Significant impacts would remain at 5 intersections following mitigation along the Expo BRT route. These include 4 intersections along Venice and Sepulveda Boulevards where the dedicated bus lane would leave the railroad right-of-way and require the reconfiguration of traffic lanes on city streets. One additional intersection would be impacted at Pico/Sawtelle.
- Parking- Loss of parking along Sepulveda Boulevard would constitute a significant impact if off-street replacement parking locations cannot be found. The Bergamot Art Center in Santa Monica would also be a significant secondary impact of the construction of the park and ride lot that is planned to serve the proposed transit station at that location. The MTA would coordinate with the City of Santa Monica for a relocation site for Bergamot Station and/or develop a station plan for shared use of the site.
- Noise- Noise impacts of bus transit vehicles would require the construction of sound walls in many segments of the route where residential and other sensitive land uses are located adjacent to the route. Bus

transit vehicles are somewhat unique since the principal noise is generated from the exhaust pipe location at the top of the bus, rather than from the wheels. The need to construct noise walls of up to 12-feet in height to mitigate this high source of noise may not be feasible in all areas. Alternatively, newer bus technologies are being investigated such as hybrid electric propulsion which are much quieter than existing CNG powered engines. Such vehicles would significantly reduce the need for sound walls or other noise mitigation measures. Also, design specifications for existing bus transit vehicles could be developed to require quieter running engines. Design treatments such as earth berms and partially depressed sections can help to reduce the height of required soundwalls. In cases where residual noise impacts remain after mitigation, property-specific pre-construction surveys would be necessary to identify supplemental mitigation measures such as soundproofing of windows, walls and/or doors, to reduce noise levels to acceptable levels.

- Construction- The construction of the bus transit lane on Venice and Sepulveda Boulevards would require the closure of general-purpose lanes during periods of construction. This may require that some of the construction work occur during nighttime and weekend periods when noise impacts would be generated at adjacent residential and other sensitive receptors.

Alternative #3: Wilshire BRT/Exposition LRT. For this combined alternative, impacts associated with the Wilshire BRT would be supplemented by the incremental impacts associated with the Exposition LRT route. Along the Expo LRT route, four impact categories were identified with significant residual impacts after mitigation. These include traffic, parking, noise/vibration and construction impacts.

- Traffic- Significant impacts would remain at 3 intersections following mitigation along the Expo LRT route. These are all located along Sepulveda Boulevards where the light rail transitway would leave the railroad right-of-way and require the reconfiguration of traffic lanes on city streets. The operation of the light rail line as a streetcar in this area could eliminate this impact, but would significantly reduce the speed of the transit line.
- Parking- This impact is the same as the Expo BRT alternative. Loss of parking along Sepulveda Boulevard would constitute a significant impact if off-street replacement parking locations cannot be found. Displacement of the Bergamot Art Center in Santa Monica would also be a significant secondary impact of the construction of the park and ride lot that is planned to serve the proposed transit station at that location.
- Noise/Vibration- Noise impacts of light rail transit vehicles would require the construction of sound walls in many segments of the route where residential and other sensitive land uses are located adjacent to the route. Light rail noise is less intrusive that bus transit noise. The principal source of light rail noise is from the wheels and the undercarriage. Sound walls that are 4-8 feet in height are very effective in mitigating this type of noise, as opposed to bus transit noise that is generated from the top of the exhaust, consequently requiting higher walls of up to 12 feet in height. Light rail is less favorable than bus in the case of vibration impacts, which are generated over a greater distance due to the heavier vehicles and the nature of steel wheels instead of rubber tires. Vibration impacts are a concern for light rail primarily in areas where homes are closer than 50 feet from the track. Mitigation measures can dampen this vibration considerably, but in cases where residual vibration impacts remain after mitigation, property specific pre-construction surveys would be necessary to identify supplemental mitigation measures such as soundproofing of foundation and other structural components of the affected structures. Design treatments such as earth berms and partially depressed sections can help to reduce the height of required soundwalls. With these additional mitigation measures, vibration impacts could be reduced to acceptable levels.
- Construction- The construction of the bus transit lane on Venice and Sepulveda Boulevards would require the closure of general-purpose lanes during periods of construction. This may require that some of the construction work occur during nighttime and weekend periods when noise impacts would be generated at adjacent residential and other sensitive receptors on a temporary basis during the

construction phase of the project.

ENVIRONMENTALLY SUPERIOR ALTERNATIVE

The guidelines to the California Environmental Quality Act require that environmental documents identify the environmentally superior alternative among the build options being considered by a Lead Agency. The assessments presented in the body of this report indicate that Alternative #3: Wilshire BRT/Exposition LRT Alternative would result in highest percentage of transit benefits to the traveling public with comparable environmental impacts to Alternative #2. Alternative #1, the Wilshire BRT stand-alone alternative, by definition, would have fewer impacts than the other alternatives with which it is combined, but it offers fewer transit benefits than Alternative #2 and #3.

TRAFFIC AND CIRCULATION - Transit System. **(Section 3.2)** - This category is the change in the number of transit trips compared to the No Action Alternative, as well as the overall change in the level of service for transit riders.

	Wilshire BRT	Wilshire BRT/ Exposition BRT	Wilshire BRT/ Exposition LRT
Impact	12,200 new daily transit trips	19,500 new daily transit trips	27,200 new daily transit trips
Degree	Beneficial effect	Beneficial effect	Beneficial effect
Mitigation	None required	None required	None required
Conclusion	Beneficial effect	Beneficial effect	Beneficial effect

TRAFFIC AND CIRCULATION - Highway Performance. **(Section 3.2)** - This impact category addresses changes in vehicle trips throughout Los Angeles County as well as characterizes changes in the average speed of vehicles on county streets.

	Wilshire BRT	Wilshire BRT/ Exposition BRT	Wilshire BRT/ Exposition LRT
Impact	Total daily vehicle trips decrease by about 8,500 countywide. Average vehicle speeds decrease slightly from 25.71 mph to 25.70 mph, due to the conversion of two general purpose lanes on Wilshire Boulevard to transit use.	Total daily vehicle trips decrease by about 13,500 countywide. Reduced vehicle speeds due to Wilshire BRT lane closure are offset by benefits of Expo BRT to result in an average vehicle speeds increase from 25.71 to 25.72 mph due to reduced number of cars.	Total daily vehicle trips decrease by about 20,500 countywide. Reduced vehicle speeds due to Wilshire BRT lane closure are offset by benefits of Expo LRT to result in an average vehicle speeds increase from 25.71 mph to 25.72 mph due to reduced number of cars.
Degree	Less than significant	Beneficial	Beneficial
Mitigation	None Required. See Arterial Street System Impacts.	None Required	None Required
Conclusion	Less than significant	Beneficial	Beneficial

ENVIRONMENTAL EVALUATION

TRAFFIC AND CIRCULATION - Freeway Impacts (Section 3.2) - This category addresses the impact on regional freeway traffic volumes with a particular focus on the Santa Monica Freeway (I-10) that traverses the study corridor.

	Wilshire BRT	Wilshire BRT/ Exposition BRT	Wilshire BRT/ Exposition LRT
Impact	Most freeways experience a slight drop in traffic volumes in both peak hours except for Increases in traffic volumes on Santa Monica Freeway (up to 1.25%) due to diversion of Wilshire Boulevard traffic.	Most freeways experience a slight drop in traffic volumes in both peak hours except for Increases in traffic volumes on Santa Monica Freeway (of up to 1.14%). Construction of the Exposition project helps to reduce the impact of diverted Wilshire Boulevard traffic.	Most freeways experience a slight drop in traffic volumes in both peak hours except for Increases in traffic volumes on Santa Monica Freeway (of up to 0.52%). Construction of the Exposition project helps to reduce the impact of diverted Wilshire Boulevard traffic.
Degree	Significant on I-10 only	Significant on I-10 only	Less than significant
Mitigation	None feasible on the freeway	None feasible on the freeway	None required
Conclusion	Significant Impact to I-10	Significant Impact to I-10	Less than significant

TRAFFIC AND CIRCULATION - Arterial Street System. **(Section 3.2)** - The removal of street lane capacity along Wilshire Boulevard would have the affect of diverting traffic to other streets in the study area. The amount of traffic diversion could constitute significant impacts in some cases. According to the transportation model output, the implementation of east-west transit improvements could also have the unintended affect of increasing north-south traffic on some blocks as traffic redistributes. These increases could constitute significant impacts in certain instances.

	Wilshire BRT	Wilshire BRT/ Exposition BRT	Wilshire BRT/ Exposition LRT
Impact	Loss of 2 lanes from Wilshire Blvd diverts up to approximately 1300 vehicles per day to other streets resulting in increased volumes of up to 8% on these streets.	Same impact as Wilshire due to conversion of two automobile lanes on Wilshire Boulevard and diversion of traffic onto other streets. Expo route would have a similar impact to segments of the route on Exposition Boulevard, Venice Boulevard and Sepulveda Boulevards, where the baseline project would convert one automobile lane to transit use.	Same impact as Wilshire due to conversion of two automobile lanes on Wilshire Boulevard and diversion of traffic onto other streets. Expo route would have a similar impact to segments of the route on Exposition Boulevard, Venice Boulevard and Sepulveda Boulevards, where the baseline project would convert one automobile lane to transit use.
Degree	Significant	Significant	Significant
Mitigation	Implement ATCS traffic signal improvement system to affected intersections in the study area (approx 450 in City of Los Angeles and approx 50 in Beverly Hills and Santa Monica).	Implement ATCS traffic signal improvement system . In addition to Wilshire BRT mitigation measure, implement ATCS traffic signal improvement system to affected intersections along to Exposition route.	Implement ATCS traffic signal improvement system . In addition to Wilshire BRT mitigation measure, implement ATCS traffic signal improvement system to affected intersections along to Exposition route.
Conclusion	Less than significant after diverted motorists redistribute themselves to new routes where intersections improvements have been implemented.	Less than significant after diverted motorists redistribute themselves to new routes where intersections improvements have been implemented	Less than significant after diverted motorists redistribute themselves to new routes where intersections improvements have been implemented

TRAFFIC AND CIRCULATION - Traffic Diversion. **(Section 3.2)** - The loss of left turns combined with the reduction in street capacity could divert traffic on to adjacent residential streets to either avoid points of congestion or to find a route the avoids a restricted left turn area. Some residential streets close to areas where left --turn pockets are maintained would experience increased traffic due to the diversion of traffic from left turn pockets that are closed. Increases in traffic along residential streets are anticipated in these circumstances. Because the modeling method used in this assessment does not include residential streets in the analysis network, it is recommended that a field monitoring program be implemented by affected local jurisdictions to determine the amount of diverted traffic in residential areas combined with a MTA- funded program of Neighborhood Traffic Management Measures.

	Wilshire BRT	**Wilshire BRT/ Exposition BRT**	**Wilshire BRT/ Exposition LRT**
Impact	Loss of 105 left turn pockets (48%) along Wilshire Boulevard reduces traffic on residential side streets where left-turns are eliminated, but increases traffic on other streets where left-turn pockets remain, or where traffic must make right-turn "around the block" movements in lieu of lefts.	Same as Wilshire Alts plus loss of 1 left turn pocket on Sepulveda diverts traffic to side streets.	Same as Wilshire Alts plus loss of 1 left turn pocket on Sepulveda diverts traffic to side streets.
Degree	Significant for Alt 1 Possibly Significant for Alt1A No impact for Alt 1B	Same as Alt 1, Less than Significant along Expo BRT	Same as Alt 1, Less than Significant along Expo LRT
Mitigation	Implement Residential Street Traffic Monitoring Program. Where warranted implement Neighborhood Traffic Management Measures (Alt 1 and 1A).	Implement Residential Street Traffic Monitoring Program. Where warranted implement Neighborhood Traffic Management Measures (Alt 1 and 1A). None Required for Exposition	Implement Residential Street Traffic Monitoring Program. Where warranted implement Neighborhood Traffic Management Measures (Alt 1 and 1A). None Required for Exposition
Conclusion	Less than significant	Less than significant	Less than significant

ENVIRONMENTAL EVALUATION

TRAFFIC AND CIRCULATION - Intersection Traffic. **(Section 3.2)** - This analysis focuses on the evening peak hour of travel. A significant impact is defined as a change of 0.02 in the volume to capacity ratio for an intersection operation level of service at E or F.

	Wilshire BRT	**Wilshire BRT/ Exposition BRT**	**Wilshire BRT/ Exposition LRT**
Impact	Alt 1 - 14 intersections along the Wilshire Corridor are impacted. 1A - 13 intersections along the Wilshire corridor are impacted. 1B - 11 intersections along the Wilshire corridor are impacted.	14 intersections along the Wilshire corridor are impacted. 22 intersections along the Exposition Corridor are impacted. 2A - 14 intersections along the Wilshire corridor are impacted. 19 intersections along the Exposition Corridor are impacted.	14 intersections along the Wilshire corridor are impacted. 17 intersections along the Exposition Corridor are impacted. 3A - 14 intersections along the Wilshire corridor are impacted. 16 intersections along the Exposition Corridor are impacted.
Degree	Significant	Significant	Significant
Mitigation	Signal timing modifications at 8 locations. Physical improvements at 4 locations. 1A - Signal timing modifications at 9 locations. Physical improvements at 2 locations. 1B - Signal timing modifications at 8 locations. Physical improvements at 1 locations.	Signal timing modifications at 15 locations. Physical improvements at 14 locations. 2A - Signal timing modifications at 9 locations. Physical improvements at 9 locations.	Signal timing modifications at 15 locations. Physical improvements at 12 locations. 3A - Signal timing modifications at 8 locations. Physical improvements at 8 locations.
Conclusion	Significant unavoidable impacts remain at Westwood/Wilshire and La Cienega/Wilshire after mitigation measures are implemented.	Some impacts as Wilshire BRT, plus significant impacts remain at 5 Expo intersections: * Venice/Overland * Venice/Sepulveda * Sepulveda/Palms * Sepulveda/National * Pico/Sawtelle In order to reduce or eliminate impacts of the BRT on Venice and Sepulveda Boulevards, Rapid Bus operation could be considered that would remove the dedicated lane for transit.	Significant impacts remain at one Wilshire intersection (Wilshire/Westwood) and at 3 Expo intersections: * Sepulveda/Pico * Sepulveda/Palms * Sepulveda/National In order to reduce or eliminate impacts of the LRT on Sepulveda Boulevard, a streetcar operation could be considered that would remove the dedicated lane for transit.

TRAFFIC AND CIRCULATION - Special Event Traffic (Section 3.2) - Periodically during the year streets such as Exposition Boulevard are closed to accomodate a special event such as the Los Angeles Marathon, Bike Tour, LA Street Race (vehicles), etc. These events would affect transit operations, particularly for fixed guideways such as Light Rail.

	Wilshire BRT	Wilshire BRT/ Exposition BRT	Wilshire BRT/ Exposition LRT
Impact	LA Marathon would require the curtailment of BRT service in affected areas.	Same as Wilshire BRT. Events in and around Exposition Park would require modifications, detours and transfers for bus transit riders.	Same as Wilshire BRT. Special events in and around Exposition Park could require curtailment of LRT service during periods when Expostion Boulevard is closed to traffic.
Degree	Less than significant to transit operations with re-routing of buses on event day(s).	Less than significant to transit operations with re-routing of buses on event day(s).	Significant to LRT operations
Mitigation	BRT service shall be temporarily re-routed to non-affected streets.	BRT service shall be temporarily re-routed to non-affected streets.	LRT operations could be truncated on either side of the closed segment with bus bridges. Or, slower operating speeds with flagmen could be utilized to keep trains operating during periods of special events. Alternatively, a LRT subway tunnel design option could eliminate this effect in Exposition Park area.
Conclusion	Less than significant	Less than significant	Less than significant if one of the above mitigation measures were adopted.

PARKING - On-Street Parking (Section 3.3) - To accommodate transit improvements within existing street rights-of-way in a number of instances will require the removal of on street parking. On-street parking is an important factor in local business accessibility to patrons. On-street parking in most business areas also serves as a buffer between street traffic and pedestrians on the sidewalk. In residential areas, any loss on on-street parking is a concern to residents.

	Wilshire BRT	Wilshire BRT/ Exposition BRT	Wilshire BRT/ Exposition LRT
Impact	Loss of 1,211parking spaces along Wilshire Blvd.	Loss of 1,211parking spaces along Wilshire Blvd. Loss of 157 parking spaces along Sepulveda Blvd (30% of the total Sepulveda on-street parking spaces).	Loss of 1,211parking spaces along Wilshire Blvd; Loss of 10-12 parking spaces on Hill Street Loss of 157 parking spaces on Sepulveda Blvd (30% of the total Sepulveda on-street parking spaces).
Degree	Significant	Significant	Significant for Wilshire Blvd and Sepulveda Blvd. Less than significant for Hill Street
Mitigation	Replacement Parking lots would be developed to provide 1,211 off-street parking spaces distributed along Wilshire Boulevard. or, Operate the BRT only during peak periods when on-street parking is prohibited in all areas except Santa Monica.. In Santa Monica, a peak period lane would not mitigate this impact since parking is not prohibited during the peak periods.	Same as Wilshire Boulevard plus additional Replacement parking lots would be developed to provide 157 off-street spaces along Sepulveda Blvd, or, Operate the BRT as a Rapid Bus on Sepulveda without a dedicated lane.	Same as Wilshire Boulevard plus additional Replacement Parking of 157 spaces along Sepulveda Blvd. or, Operate the LRT as a streetcar on Sepulveda without a dedicated lane.
Conclusion	Less than significant if parking replacement strategy is implemented or if BRT is implemented during peak period only in areas outside of Santa Monica.	Less than significant if parking replacement strategy is implemented or if BRT is implemented during peak period only, or if BRT is operated as a Rapid Bus on Sepulveda without a dedicated lane.	Less than significant if parking replacement strategy is implemented, or if BRT (Wilshire) is implemented during peak period only, or if LRT is operated as streetcar on Sepulveda.

PARKING - Station Area Spillover Parking (Section 3.3) - Spillover parking results from parking demand exceeding supply. For transit this potential is greatest at end-of-the-line stations in suburban areas or stations areas where high levels of vehicle access are anticipated. Wilshire Boulevard is not anticipated to attract a significant number of park and ride patrons because it is primarily a destination for home to work transit trips and access to stations will primarily be via walking or bus transfer. The commercial nature of the corridor has resulted over time in the institution of on-street parking restrictions in most areas, and therefore spillover parking is already prohibited or regulated in most areas.A greater amount of park and ride activity is anticipated along the Exposition route.

	Wilshire BRT	**Wilshire BRT/ Exposition BRT**	**Wilshire BRT/ Exposition LRT**
Impact	Limited park and ride activity anticipated at Wilshire stations.	Limited park and ride activity anticipated at Wilshire stationsPotential spillover parking on streets surrounding the following stations: Expo Venice/Main Expo National/Hayden	Limited park and ride activity anticipated at Wilshire stations Potential spillover parking on streets surrounding the following stations: Expo/La Brea Expo/Ocean
Degree	Less than significant	Less than significant	Less than significant
Mitigation	None required.	Local jurisdictions to monitor parking conditions on streets surrounding stationsImplement on-street parking controls (e.g., time limits, permit parking) as needed	Local jurisdictions to monitor parking conditions on streets surrounding stationsImplement on-street parking controls (e.g., time limits, permit parking) as needed
Conclusion	Less than significant	Less than significant	Less than significant

ENVIRONMENTAL EVALUATION

SOCIOECONOMICS - Effects on Local Businessess (Section 3.4) - Many neighborhood oriented and highway oriented commercial businesses throughout the corridor must depend on curb parking. The removal of this parking to provide for additional street capacity to accommodate an exclusive BRT lane or LRT guideway would in most cases result in a significant impact to these businesses.

	Wilshire BRT	Wilshire BRT/ Exposition BRT	Wilshire BRT/ Exposition LRT
Impact	Business access reduced due to the loss of on-street parking along Wilshire Boulevard.	Same as Wilshire. Expo BRT would displace parking along Sepulveda Boulevard affecting business near National Blvd.	Same as Wilshire. Expo LRT would displace parking along Sepulveda Boulevard affecting businesses near National Blvd.
Degree	Significant	Significant for Wilshire BRT only	Significant for Wilshire BRT only
Mitigation	Implementation of Replacement Parking or Limit BRT to Peak Hour Operations only.	Same as Wilshire	Same as Wilshire
Conclusion	Less than significant if Replacement Parking Strategy is implemented. Not significant if peak hour only BRT operations implemented., except in Santa Monica.	Same as Wilshire	Same as Wilshire

SOCIOECONOMICS - Effects on Population (Section 3.4) - There is no expected direct impact of transit improvements on population. The transit improvements are not specifically bundled with transit-oriented residential developments, however, the presence of convenient transit service could increase the likelihood of such development and attract additional population. It is not expected that this induced population growth would exceed population projections for the corridor.

	Wilshire BRT	Wilshire BRT/ Exposition BRT	Wilshire BRT/ Exposition LRT
Impact	Improvements designed to accommodate projected population growth.	Improvements designed to accommodate projected population growth.	Improvements designed to accommodate projected population growth.
Degree	Less than significant	Less than significant	Less than significant
Mitigation	None required	None required	None required
Conclusion	No Effect	No Effect	No Effect

SOCIOECONOMICS - Mobility for Transit Dependents (Section 3.4) - The eastern portions of both the Wilshire BRT route and the Exposition routes pass through areas of Mid-City and South Los Angeles that have concentrations of auto-less households and low income households. Transit stations are located in these areas and reduced travel times and greater accessibility for transit dependent persons are anticipated.

	Wilshire BRT	Wilshire BRT/ Exposition BRT	Wilshire BRT/ Exposition LRT
Impact	Increase in level of transit service in transit dependent areas.	Increase in level of transit service in transit dependent areas.	Increase in level of transit service in transit dependent areas.
Degree	Less than significant	Less than significant	Less than significant
Mitigation	None required	None required	None required
Conclusion	Beneficial	Beneficial	Beneficial

LAND USE/NEIGHBORHOODS - Compatibility of Transit Operations and Stations (Section 3.5) - Transit stations are expected to attract pedestrian and vehicular activity. In commercial areas these changes are not expected to be significant. Where stations are adjacent or near homes or apartments, transit induced changes in pedestrian and vehicular activity could be the source of nuisances, including visual, noise, parking, circulation, air quality, safety and security impacts.

	Wilshire BRT	Wilshire BRT/ Exposition BRT	Wilshire BRT/ Exposition LRT
Impact	Proposed stations would be located in commercial areas and would be compatible with existing land uses and pedestrian activities.	Same effects along Wilshire BRT route. Proposed stations along the Exposition route would in a number of cases be located adjacent to either multi-family or single family residences, and pedestrian and vehicular activity in these areas could create nuisances.	Same effects along Wilshire BRT route. Proposed stations along the Exposition route would in a number of cases be located adjacent to either multi-family or single family residences, and pedestrian and vehicular activity in these area could create nuisances
Degree	Not Significant	Not significant in commercial areas. Significant in residential areas.	Not significant in commercial areas. Significant in residential areas.
Mitigation	None required	In residential areas, station area plans shall be developed to address pedestrian, vehicular access, buffers, staionorientation and other design issues.	In residential areas, station area plans shall be developed to address pedestrian, vehicular access, buffers, staionorientation and other design issues.
Conclusion	Less than significant	Less than significant	Less than significant

LAND USE/NEIGHBORHOODS - Compatibility of Park and Ride Facilities (Section 3.5) - Providing parking at stations will undoubtedly attract additional vehicles to station areas and affect circulation during peak periods. The affect of this increased activity could affect adjacent businesses and residents, particularly during peak travel periods.

	Wilshire BRT	Wilshire BRT/ Exposition BRT	Wilshire BRT/ Exposition LRT
Impact	No park and ride lots are proposed. Existing MTA lots at Wilshire/Crenshaw and Wilshire/La Brea would be used for replacement parking. These lots are already used for parking and no additional impact is anticipated, however, other sites that may be identified as part of the Replacement Parking Strategy could be adjacent to residential land uses and create proximity impacts (noise, light, glare, visual, etc.)	Same impacts along Wilshire route. Park-and-ride lots along the Exposition Route are proposed at locations at, or immediately adjacent to, the stations, in areas with predominantly industrial or commercial uses to help minimize disruptions to sensitive land uses.	Same impacts along Wilshire route. Park-and-ride lots along the Exposition Route are proposed at locations at, or immediately adjacent to, the stations, in areas with predominantly industrial or commercial uses to help minimize disruptions to sensitive land uses.
Degree	Potentially significant for replacement parking sites located adjacent to residential uses.	Potentially significant for Replacement Parking element of Wilshire BRT. Not significant for Exposition.	Potentially significant for Replacement Parking element of Wilshire BRT. Not significant for Exposition.
Mitigation	Off street parking adjacent to residences shall be screened and laidout to minimize nuisances and disruption.	Same as Wilshire BRT Route. None required for Exposition BRT	Same as Wilshire BRT Route. None required for Exposition BRT
Conclusion	Less than significant	Less than significant	Less than significant

LAND USE/NEIGHBORHOODS - Accessibility and Community Cohesion (Section 3.5) - Because the proposed transit routes link many existing Mid-City and Westside activity centers (schools, museums, entertainment, other institutions), impacts on accessibility are expected to be beneficial. Because, proposed transit improvements would operate within existing public rights-of-way, increased transit service in these areas would not create new barriers that would adversely affect the functions within neighborhoods or the interaction between neighborhoods.

	Wilshire BRT	Wilshire BRT/ Exposition BRT	Wilshire BRT/ Exposition LRT
Impact	Increased access to existing activity centers. Increased transit service on Wilshire Blvd would not affect physical connections between neighborhoods.	Increased access to existing activity centers. Increased transit service on Wilshire Blvd or along the Exposition ROW, Venice or Sepulveda would not affect physical connections between neighborhoods.	Increased access to existing activity centers. Increased transit service on Wilshire Blvd or along the Exposition ROW, Venice or Sepulveda would not affect physical connections between neighborhoods.
Degree	Not significant	Not significant	Not significant
Mitigation	None required	None required	None required
Conclusion	Beneficial	Beneficial	Beneficial

LAND USENEIGHBORHOOD - Neighborhood Character/Quality of Life (Section 3.5) - The future character of station areas is determined by existing land use policies. In most cases, because the proposed transit improvements are within existing major arterials and stations are located at intersections with major arterials, the higher activity levels associated with the proposed stations are substantially consistent with local planning policies which historically have placed higher development levels (residential and/or commercial) at these locations. Because of the relatively lower development levels along the Exposition routes, there will likely be a need to involve the local community to ensure that important aspects of neighborhood character are maintained and not adversely affected by the introduction of new transit stations and parking facilities.

	Wilshire BRT	Wilshire BRT/ Exposition BRT	Wilshire BRT/ Exposition LRT
Impact	The medium to high density character of the Wilshire Boulevard corridor would be consistent with increased levels of transit service and higher activity levels at station locations. The Cities of Los Angeles, Beverly Hills, and Santa Monica, in general, all plan for mixed-uses within station areas to allow for maximum use of the transit system.	Same affects as Wilshire BRT. The low to medium density character of many areas along Exposition route, would likely be more affected by increased transit service and higher activity levels at station locations, particularly those stations in low-medium density residential areas.	Same affects as Wilshire BRT. The low to medium density character of many areas along Exposition route, would likely be more affected by increased transit service and higher activity levels at station locations, particularly those stations in low-medium density residential areas.
Degree	Less than significant	Less than significant on Wilshire. Potentially Significant on Exposition.	Less than significant on Wilshire. Potentially Significant on Exposition.
Mitigation	None required	Along the Exposition ROW, station area plans shall be developed in coordination local jurisdictions, area residents and businesses.	Along the Exposition ROW, station area plans shall be developed in coordination local jurisdictions, area residents and businesses.
Conclusion	Less than significant, and provides transportation and land use planning benefits.	Less than significant, and provides transportation and land use planning benefits.	Less than significant, and provides transportation and land use planning benefits.

LAND USE/ACQUISITION/DISPLACEMENT/RELOCATION (Section 3.6) - This impact category address three types of changes that would result from the proposed project. 1) Acquisition of private or other public agency owned property for guideway or station park and ride lots;2)acquisition of private property to implement the Replacement Parking Strategy along Wilshire Boulevard; and 3) the termination or non-renewal of leases held by the MTA along the former Exposition railroad right-of-way.

	Wilshire BRT	Wilshire BRT/ Exposition BRT	Wilshire BRT/ Exposition LRT
Impact	No acquisition needed to construct exclusive lane or stations. Acquisition could be necessary to successfully replace lost curb parking with off-street locations.	Same Wilshire BRT impacts. Exposition BRT would require non-renewal or termination of MTA leases and licenses between Vermont and Venice, and from Sepulveda to Olympic. Bergamot Station, a commercial arts center in Santa Monica has been developed in recent years on a site that is designated for a transit station & parking facility.	Same Wilshire BRT impacts. Exposition BRT would require non-renewal or termination of MTA leases and licenses between Long Beach Blvd and Venice, and from Sepulveda to Olympic. Bergamot Station, a commercial arts center in Santa Monica has been developed in recents years on a site that is designated for a transit station & parking facility.
Degree	Replacement Parking Strategy could have significant effects.	Significant	Significant
Mitigation	Replacement Parking Strategy would focus on utilizing existing parking lots and vacant land for implementation of new parking. Displacement of existing structures or buildings would only occur as a last resort, in consultation with affected cities.	Same as Wilshire BRT for Replacement Parking Mitigations. Most leases along the MTA-owned Exposition right-of-way would be allowed to run their course, as they are of short duration. Other leases would be terminated in accordance with MTA property acquisition policies. Bergamot Station should be evaluated for potential shared use of the site with the transit facility. This should be conducted as a part of the preliminary design phase of the project.	Same as Wilshire BRT for Replacement Parking Mitigations. Most leases along the MTA-owned Exposition right-of-way would be allowed to run their course, as they are of short duration. Other leases would be terminated in accordance with MTA property acquisition policies. Bergamot Station should be evaluated for potential shared use of the site with the transit facility. This should be conducted as a part of the preliminary design phase of the project.
Conclusion	Significant if Replacement Parking Strategy results in the need for off-street acquisitions. and suitable sites cannot be identified.	Significant Impact for Wilshire Replacement Parking. Less than significant for terminated or non-renewed ROW leases and licenses. Less than significant for Bergamot Station if joint development plans can be developed.	Significant Impact for Wilshire Replacement Parking. Less than significant for terminated or non-renewed ROW leases and licenses. Less than significant for Bergamot Station if joint development plans can be developed.

VISUAL QUALITY - Median Landscaping (Section 3.7) - The character of many of Los Angeles' older boulevards, and Wilshire Boulevard in particular is reinforced by the landscaped median with the notable specimen palm trees. In recent years new landscaped medians have been constructed in the Wilshire Center, Miracle Mile and Beverly Hills segments of Wilshire Boulevard. Portions of the Exposition railroad right-of-way bisect the east and west bound lanes of Exposition Boulevard between Figueroa and Rodeo. The landscaping in the segment between Figueroa and Vermont (USC/Exposition Park) has been significantly improved with berms and grass in recent years. Proposed LRT improvements within the Exposition Park area would retain the existing median and convert the adjacent roadway lane to a trackbed for LRT operations.

	Wilshire BRT	Wilshire BRT/ Exposition BRT	Wilshire BRT/ Exposition LRT
Impact	Alternative 1 requirement for the removal and reconstruction of landscaped medians would result in an adverse visual impact. Median Adjacent Alternative 1A and Curb Lane Alternative 1B would avoid removal and reconstruction of existing Wilshire landscaped medians.	Same as Wilshire BRT Impacts. Installation of dedicated BRT in middle of Exposition Blvd from Vermont to Rodeo would require removal and reconstruction of most of existing median that is currently landscaped, including segment that has substantial number of trees in ROW, including some specimen trees of notable height.	Same Wilshire BRT Impacts. Same as Exposition BRT LRT would also require the removal of up to 5 of the existing 44 Coral trees from the median of Olympic Blvd west of Cloverfield. Other Coral trees in Olympic Blvd median would likely require trimming to avoid conflicts with overhead catenary wiring.
Degree	Significant for Alternative 1. Not applicable for Alternatives 1A and 1B.	Significant	Significant for Wilshire Blvd, Exposition Blvd, Olympic Blvd.
Mitigation	Relocate specimen trees in existing median to new locations, either as street trees (along the parkway or within the sidewalks) or within the new or reconstructed median. Consider Alternatives 1A or 1B to maintain medians.	Relocate specimen trees in existing median to new locations, either as street trees (along parkway or within sidewalks) or within new or reconstructed median.	Relocate specimen trees in existing median to new locations, either as street trees (along parkway or within sidewalks) or within new or reconstructed median. Create a grass trackbed for LRT in segment in Exposition Park.
Conclusion	Significant for Alt 1	Same as Wilshire. Less than significant for Exposition BRT with design of appropriate landscaping plan.	Same as Wilshire. Other effects on Exposition LRT are less than significant with design of appropriate landscaping plan.

VISUAL QUALITY - New Elevated Structures. **(Section 3.7)** - The Wilshire BRT route would not require the construction of any elevated structures. Transit improvements on Exposition would require elevated structures to avoid traffic and circulation impacts at major cross streets. The introduction of elevated structures would change the visual character of areas which are relatively open or low-scale in character.

	Wilshire BRT	Wilshire BRT/ Exposition BRT	Wilshire BRT/ Exposition LRT
Impact	No Impact	Installation of elevated segments at La Cienega Blvd., Pico/Sawtelle Blvd., and Bundy Drive would introduce new visual elements and would obstruct north-south views for motorists along these arterials.	Installation of elevated segments at La Cienega Blvd., Pico/Sawtelle Blvd., and Bundy Drive would obstruct or adversely change views and would result in significant adverse visual impacts.
Degree	None	Not significant at La Cienega because motorists view is affected temporarily for a short distance. Possibly significant at Pico/Sawtelle because of cumulative effect with elevated San Diego Freeway Structure Significant at Bundy because of the low scale residential character of surrounding land use.	Same as Exposition BRT
Mitigation	None required	Mitigation of these impacts caused by elevated segments would require conversion to grade design, which would result in potentially significant traffic impacts and therefore is considered infeasible. At grade or below grade solutions are infeasible at these locations due to the high cost that would range from $50 - $100 million per below ground grade separation. Structure design, screening and landscaping shall be included as part of the station area planning process conducted with local communities.	Same as Exposition BRT
Conclusion	Less than significant	Less than significant at Pico/Sawtelle and Bundy after community planning and design process completed.	Same as Exposition BRT

VISUAL QUALITY - Spillover Light and Glare (Section 3.7) - The primary source of spillover lighting impacts and glare impacts would be parking areas at either replacement off-street locations in the Wilshire Boulevard corridor or at park and ride lots along the Exposition route. It is expected that all parking areas would have nighttime lighting and perimeter walls. The lots would be screened from adjacent land uses.

	Wilshire BRT	Wilshire BRT/ Exposition BRT	Wilshire BRT/ Exposition LRT
Impact	Without mitigation, security lighting for off-street parking areas could be a source of light and glare.	Without mitigation, security lighting for off-street parking areas on Wilshire and park and ride lots on Exposition could be a source of light and glare. Platform and Station area illumination would also be a source of light/glare in residential areas.	Without mitigation, security lighting for off-street parking areas on Wilshire and park and ride lots on Exposition could be a source of light and glare. Platform and Station area illumination would also be a source of light/glare in residential areas.
Degree	Significant	Significant	Significant
Mitigation	Lighting in all parking areas shall be directed away from adjacent residences. Provide landscaping, fences, or other measures of sufficient height to shield adjacent residences from light and glare produced by vehicle headlights that utilize the parking lots.	Same as Wilshire BRT. Exposition Station areas and platforms shall be designed to minimize spillover lighting or glare on adjacent residential areas using a combination of building design, landscape screening and light tilt and orientation.	Same as Wilshire BRT. Exposition Station areas and platforms shall be designed to minimize spillover lighting or glare on adjacent residential areas using a combination of building design, landscape screening and light tilt and orientation.
Conclusion	Less than significant	Less than significant	Less than significant

VISUAL QUALITY - Privacy (Section 3.7) - The focus of this environmental topic is whether the proposed transit improvements will compromise the privacy of residents located adjacent to the route because new views or vantage points are created along the guideway or in station areas.

	Wilshire BRT	Wilshire BRT/ Exposition BRT	Wilshire BRT/ Exposition LRT
Impact	Installation of replacement parking could be located adjacent to existing residential uses, which could provide opportunities for patrons on the parking lots to have views into residences.	At Pico/Sawtelle and Bundy where the route would be located on aerial structures, bus riders would have access to views into residences or the yards of residences at those locations. Similarly, bus patrons waiting at these elevated stations could have views that result in loss of privacy for residential uses located near stations.	At Pico/Sawtelle and Bundy where the route would be located on aerial structures, bus riders would have access to views into residences or the yards of residences at those locations. Similarly, LRT patrons waiting at these elevated stations could have views that result in loss of privacy for residential uses located near stations.
Degree	Significant	Significant	Significant
Mitigation	Provide landscaping, fences, or other measures that would reduce or eliminate direct views from replacement parking lots into adjacent residences.	Provide landscaping or other screening structures to obstruct views into private residences from elevated station platforms. Specifics to be determined through station area community design process.	Provide landscaping or other screening structures to obstruct views into private residences from elevated station platforms. Specifics to be determined through station area community design process.
Conclusion	Less than significant	Less than significant	Less than significant

AIR QUALITY - Regional Emissions. **(Section 3.8)** - The primary indicator of the overall air quality benefit of transit improvements is the change in regional air pollutant emissions as some proportion auto drivers/passengers is diverted to transit use throughout the region.

	Wilshire BRT	Wilshire BRT/ Exposition BRT	Wilshire BRT/ Exposition LRT
Impact	Project would result in a reduction of 26 tons/year of carbon monoxide (CO); 92 tons/year of nitrogen dioxide (NOX) and 1 ton/year of reactive organic gas (ROG). The project would have a negligible effect on particulate matter (PM10).	Project would result in a reduction of 148 tons/year of carbon monoxide (CO); 3 tons/year of nitrogen dioxide (NOX) and 1 ton/year of particulate matter (PM10). The project would result in a 5 ton/year increase in reactive organic gas (ROG).	Project would result in a reduction of 212 tons/year of carbon monoxide (CO); 35 tons/year of nitrogen dioxide (NOX), 13 tons/year of reactive organic gas (ROG) and 1 ton/year of particular matter (PM10).
Degree	Slight Positive Change	Slight Positive Change for all pollutants except reactive organic gas (ROG).	Slight Positive Change
Mitigation	None required	None required	None required
Conclusion	Beneficial	Beneficial. Reactive organic gas (ROG) increase Less than significant.	Beneficial

ENVIRONMENTAL EVALUATION

AIR QUALITY - Carbon Monoxide Hot Spots. **(Section 3.8)** - The air pollutant most indicative of localized adverse impacts from vehicular traffic in and around station areas is carbon monoxide (CO). Typically, the slower traffic moves, the greater the CO emissions and concentrations. Well over 90 percent of CO emissions are generate by motor vehicles.

	Wilshire BRT	Wilshire BRT/ Exposition BRT	Wilshire BRT/ Exposition LRT
Impact	CO levels at 31 study area intersections would range from 4.3 to 6.6 parts per million for the 8-hr period compared to 4.0 to 6.9 parts per million for No Project conditions.	CO levels at 31 study area intersections would range from 4.0 to 7.7 parts per million for the 8-hr period compared to 4.0 to 6.9 parts per million for No Project conditions.	CO levels at 31 study area intersections would range from 4.0 to 7.3 parts per million for the 8-hr period compared to 4.0 to 6.9 parts per million for No Project conditions.
Degree	Less than significant. Increases would not exceed federal or state standards	Negligible change from No Project condition. Increases would not exceed federal or state standards	Less than significant. Increases would not exceed federal or state standards
Mitigation	None required	None required	None required
Conclusion	Less than significant	Less than significant	Less than significant

NOISE AND VIBRATION - Noise (Section 3.9) - The source of noise from BRT and LRT vehicles and operations are quite different. Bus noise is primarily generated from the raised exhaust stack and from the engine and tire areas. LRT noise is primarily related to mechanical undercarriage, metal-metal noise from wheels and on rail and from warning horns, and crossing gate bells.

	Wilshire BRT	Wilshire BRT/ Exposition BRT	Wilshire BRT/ Exposition LRT
Impact	Wilshire Boulevard has very high levels of existing automobile, delivery track and bus traffic. The larger buses would increase noise on Wilshire Blvd by 1 dB or less and would not result in a substantial change.	Same as Wilshire BRT Exposition BRT would result in 681 residential noise impacts.	Same as Wilshire BRT Exposition LRT would result in 135 residential noise impacts.
Degree	Less than significant . FTA criteria would not be exceeded.	Significant. 597 residences would exceed FTA moderate impact criteria and 84 would exceed FTA severe impact criteria.	Significant. 108 residences would exceed FTA moderate impact criteria and 27 would exceed FTA severe impact criteria.
Mitigation	None required	Include noise limits in specifications for BRT vehicles; Construct 21,750 feet of sound barriers 12 feet in height; provide noise control at receptor locations.	Implement wheel and rail maintenance program for LRT; Construct 12,750 feet of sound barriers 4 to 8 feet in height; provide noise control at receptor locations.
onclusion	Not significant	For the Expo BRT Alternative, residual impacts remain at 22 residences following the construction of sound walls. For these properties, site specific pre-construction surveys shall be conducted to identify further mitigation measures such as sound insulation of individual homes.	For the Expo LRT Alternative, residual impacts remain at 15 residences following the construction of soundwalls. For these properties, site specific pre-construction surveys shall be conducted to identify further mitigation measures such as sound insulation of individual homes.

NOISE AND VIBRATION - **Vibration (Section 3.9)** - Ground borne vibration from rail transit is typically a source of annoyance for humans and may possibly affect businesses or institutions with vibration sensitive equipment. Ground borne vibration from rail transit is not typically the source of physical building damage. No measurable vibration is expected from rubber tired BRT vehicles.

	Wilshire BRT	Wilshire BRT/ Exposition BRT	Wilshire BRT/ Exposition LRT
Impact	No vibration from rubber-tire vehicle, only low frequency air-borne noise.	Same as Wilshire BRT.	Same as Wilshire BRT. Impacts at 138 residences, 22 multi-family bldgs, 1 hospital and 1 school.
Degree	Less than significant	Less than significant	Significant
Mitigation	None required	None required	Conduct bldg-specific vibration analysis; Install ballast mats along 15,700 ft
Conclusion	Less than significant	Less than significant	Significant. Impact would remain at 31single-family residences and 3 multi-family bldgs. Special studies shall be conducted for these properties to identify further mitigation measures.

GEOLOGY/SOILS/SEISMICITY (Section 3.10) - The primary concern is this impact area is the potential exposure to transit patrons and to the general public of the construction of elevated structures in areas prone to geotechnical technical hazards such as areas with active faults or areas with geologic conditions which may compromise the integrity of elevated structures during an earthquake.

	Wilshire BRT	Wilshire BRT/ Exposition BRT	Wilshire BRT/ Exposition LRT
Impact	BRT would cross hazardous areas, however it would not require subsurface excavation nor the construction of structures.	Same as Wilshire BRT. Exposition route would construct elevated structures in fault zones and in liquefaction areas.	Same as Wilshire BRT. Exposition route would construct elevated structures in fault zones and in liquefaction areas
Degree	No impact	Significant on Exposition route	Significant on Exposition route
Mitigation	None required	Implementation of recommendations from site specific geotechnical studies at each elevated structure.	Implementation of recommendations from site specific geotechnical studies at each elevated structure.
Conclusion	No impact	Less than significant following implementation of special study recommendations.	Less than significant following implementation of special study recommendations.

ENVIRONMENTAL EVALUATION

WATER RESOURCES - Stormwater Runoff and Flooding. **(Section 3.11)** - Typically stormwater runoff related impacts result from improvements that substantially increase the amount of impervious (hard) surface or projects that substantially alter existing drainage patterns. The proposed transit improvements evaluated in this report do not create these types of changes and stormwater runoff effects are not expected.

	Wilshire BRT	Wilshire BRT/ Exposition BRT	Wilshire BRT/ Exposition LRT
Impact	Construction of BRT lanes on Wilshire Boulevard would not substantially change existing impervious surface or drainage patterns. Alternative 1B would require reconstruction of many storm drains in order to provide an improved curb-lane running surface for buses. Construction of this alternative would be approved by the engineering bureau of each city.	Same as Wilshire BRT. Exposition BRT would require limited grading and may marginally increase impervious surfaces. No substantial change in drainage patterns would occur.	Same as Wilshire BRT. Exposition LRT would require limited grading and may marginally increase impervious surfaces. No substantial change in drainage patterns would occur.
Degree	Negligible	Less than significant	Less than significant
Mitigation	None required	None required	None required
Conclusion	No Effect	No Effect	No Effect

WATER RESOURCES - Groundwater. **(Section 3.11)** - Groundwater is typically adversely affected when improvements disrupt groundwater flow patterns or pave over areas necessary for water to percolate into aquifers below the ground surface. Improvements contemplated along the Wilshire and Exposition routes would not require excavation at groundwater depths nor would the added paved surfaces be substantial enough to affect ground water recharge.

	Wilshire BRT	Wilshire BRT/ Exposition BRT	Wilshire BRT/ Exposition LRT
Impact	BRT would not require excavation nor increase impervious surfaces.	Conversion of Exposition railroad right-of-way to BRT use would incrementally increase impervious surface by constructing a paved roadway over the previous railroad track bed.	Conversion of Exposition railroad right-of-way to LRT use would negligibly increase impervious surface.
Degree	No Impact	Less than significant	No impact
Mitigation	None required	None required	None required
Conclusion	No Impact	Less than significant	No Impact

BIOLOGICAL RESOURCES (Section 3.12) - The Mid-City/Westside Corridor is a well developed urbanized area. The proposed transit alignments do not pass through any open space or ecological areas.

	Wilshire BRT	Wilshire BRT/ Exposition BRT	Wilshire BRT/ Exposition LRT
Impact	No Impact	No Impact	No Impact
Degree	None	None	None
Mitigation	None required	None required	None required
Conclusion	No Impact	No Impact	No Impact

ENERGY RESOURCES (Section 3.13) - This impact category addresses the net change between the fuel consumption of automobile drivers/passengers diverted to transit versus the fuel consumption of transit vehicles need to provide the increased service. All energy consumption is addressed as British Thermal Units (BTU's).

	Wilshire BRT	Wilshire BRT/ Exposition BRT	Wilshire BRT/ Exposition LRT
Impact	Construction of the proposed project would result in a reduction in fuel consumption due to the shifting of travellers from automobiles to transit. The project would result in a 0.02 % reduction compared to No Action.	Construction of the proposed project would result in a reduction in fuel consumption due to the shifting of travellers from automobiles to transit. The project would result in a 0.03% reduction compared to No Action.	Construction of the proposed project would result in a reduction in fuel consumption due to the shifting of travellers from automobiles to transit. The project would result in a 0.04% reduction compared to No Action.
Degree	Small but beneficial impact	Small but beneficial impact	Small but beneficial impact
Mitigation	None required	None required	None required
Conclusion	Beneficial	Beneficial	Beneficial

SAFETY (Section 3.14) - The focus of this topic is whether the proposed improvements create unique hazards to pedestrians or to motorists.

	Wilshire BRT	Wilshire BRT/ Exposition BRT	Wilshire BRT/ Exposition LRT
Impact	Pedestrians will be required to cross Wilshire Blvd only at signalized intersections. Pedestrians will be required to queue on median island platforms in Wilshire Boulevard. Curb Lane Alt 1B would not require pedestrians to use median island platforms.	Same as Wilshire BRT. Exposition BRT route passes adjacent to schools and parks where pedestrian activity is high. Pedestrians will be required to cross BRT lanes only at signalized intersections.	Same as Wilshire BRT. Exposition LRT route passes adjacent to schools and parks where pedestrian activity is high. Pedestrians will be required to cross LRT lanes only at signalized intersections.
Degree	Alt 1. Significant at unsignalized crosswalks. Significant if station median island platforms are too small to accommodate pedestrian queues. Less than significant for motorists. Alt 1A -Significant for vehicle left turns. Alt 1B - Less than significant for vehicle right turns.	Significant	Significant
Mitigation	All pedestrian crosswalk crossings shall be signalized.; Median island stations shall be of sufficient width and length to meet anticipated pedestrian queues, platform barriers may also be installed; posting warning signs, and identifiable BRT lane demarcations; left turning motorists shall have a dedicated left turn pocket and signal phase.	Crossing gates shall be installed at all streets crossing the Exposition ROW where BRT operates at speeds above 35 mph. Pedestrian crossing gates shall be installed near schools; Fencing shall be installed in all segments with BRT speeds greater than 35 mph; school and community safety education/information programs shall be implemented.	Crossing gates shall be installed at all streets crossing the Exposition ROW where BRT operates at speeds above 35 mph. Pedestrian crossing gates shall be installed near schools; Fencing shall be installed in all segments with LRT speeds greater than 35 mph; school and community safety education/information programs shall be implemented.
Conclusion	Beneficial impact to pedestrians. Less than significant for motorists.	Less than significant	Less than significant

SECURITY (Section 3.14) - The concern of this topic is crime, and whether proposed transit improvements would place system users in situations conducive to criminal activity.

	Wilshire BRT	Wilshire BRT/ Exposition BRT	Wilshire BRT/ Exposition LRT
Impact	Not significant for station platform locations. Possibly significant for off-street replacement parking lots behind commercial buildings.	Same as Wilshire. Several stations and parking lots along Exposition BRT route are located in areas with less visibility from the street.	Same as Wilshire. Several stations and parking lots along Exposition LRT route are located in areas with less visibility from the street.
Degree	Possibly significant for off-street replacement parking lots.	Significant for stations and parking lots in isolated commercial and industrial areas.	Significant for stations and parking lots in isolated commercial and industrial areas.
Mitigation	Provision of adequate lighting for off street parking lots and pedestrian pathways to these lots. Security patrols shall include off-street lots.	All stations shall be equipped with surveillance cameras; Station and parking areas shall be adequately lighted; stations shall be designed to eliminate shadowed areas obstructions to visibility; stations and parking lots shall be patrolled.	All stations shall be equipped with surveillance cameras; Station and parking areas shall be adequately lighted; stations shall be designed to eliminate shadowed areas obstructions to visibility; stations and parking lots shall be patrolled.
Conclusion	Less than significant	Less than significant	Less than significant

COMMUNITY FACILITIES (Section 3.15) - This topic is concerned with either the loss of community facilities or reduced accessibility of community facilities created by a physical feature of the proposed transit improvement.

	Wilshire BRT	Wilshire BRT/ Exposition BRT	Wilshire BRT/ Exposition LRT
Impact	13 facilities would be located within 1/4 mile of transit stations. There is a potential loss of support street parking at 3 facilities. There are possible vehicular access disruptions at 8 facilities. No pedestrian barriers are created.	34 facilities would be located within 1/4 mile of transit stations (13 Wilshire, 21 Exposition) The Bergamot Art Center would be impacted by a transit station & par and ride facility. There is a potential loss of support street parking at 3 community facilities (3 Wilshire, 0 Exposition). There are, possible vehicular access disruptions at 13 facilities (8 Wilshire, 5 Exposition). No pedestrian barriers are created.	29 facilities would be located within 1/4 mile of transit stations (13 Wilshire, 16 Exposition. The Bergamot Art Center would be impacted by a transit station & park and ride facility. There is a potential loss of support street parking at 11 community facilities (3 Wilshire, 8 Exposition) There are, possible vehicular access disruptions at 16 facilities (8 Wilshire, 8 Exposition). No pedestrian barriers are created.
Degree	Beneficial for regional accessibility to facilities.Significant for facilities with on street parking space loss and where circulation access is made more indirect.	Beneficial for regional accessibility of facilities. Significant for facilities with reduced parking and vehicular access disrupted.	Beneficial for regional accessibility of facilities. Significant for facilities with reduced parking and vehicular access disrupted.
Mitigation	Alt 1B - Curb Lane would be less disruptive to left turn circulation patterns near facilities; a plan shall be developed to replace lost parking and maintain vehicular access at impacted facilities.	Coordinate with City of Santa Monica for relocation site for Bergamot Station and/or develop station plan for shared use; Develop plan to replace lost parking and maintain vehicular access at impacted facilities.	Coordinate with City of Santa Monica for relocation site for Bergamot Station and/or develop station plan for shared use; Develop plan to replace lost parking and maintain vehicular access at impacted facilities.
Conclusion	Less than significant	Less than significant	Less than significant

HAZARDS (Section 3.16) - The focus of this topic is the identification of site or building contamination issues that would adversely affect workers during the construction process or station patrons once the system is in operation.

	Wilshire BRT	Wilshire BRT/ Exposition BRT	Wilshire BRT/ Exposition LRT
Impact	No impact anticipated for route. Acquisition of replacement parking areas could entail contaminated commercial sites	Same for Wilshire BRT. Prior environmental studies reveal that there are areas of contamination along the Exposition Route including both sites and buildings.	Same for Wilshire BRT. Prior environmental studies reveal that there are areas of contamination along the Exposition Route including both sites and buildings.
Degree	Significant for contaminated replacement parking sites	Significant for contaminated replacement parking sites and for Exposition ROW areas.	Significant for contaminated replacement parking sites and for Exposition ROW areas.
Mitigation	None for Wilshire Boulevard guideway route. Replacement parking lots would require preparation of Phase I Assessments and implementation of cleanup recommendations.	Replacement parking lots and work within Exposition ROW would require preparation of Phase I Assessments and implementation of cleanup recommendations.	Replacement parking lots and work within Exposition ROW would require preparation of Phase I Assessments and implementation of cleanup recommendations.
Conclusion	Less than significant.	Less than significant	Less than significant

CULTURAL RESOURCES - Paleontological. **(Section 3.17)** - The topic relates to fossils that may present in soil layers a strata beneath ground level.

	Wilshire BRT	Wilshire BRT/ Exposition BRT	Wilshire BRT/ Exposition LRT
Impact	BRT component would require up to 2 feet of excavation and could affect paleontological resources.	BRT component would require up to 2 feet of excavation and could affect paleontological resources. The Design option for a tunnel may also result in alteration, removal, and destruction of resources that could be present beneath the USC and Exposition Park areas.	LRT component would require up to 1.5 feet of excavation and could affect paleontological resources. The Design option for a tunnel may result in alteration, removal, and destruction of resources that could be present beneath the USC and Exposition Park areas.
Degree	Significant	Significant	Significant
Mitigation	Prior to any earth moving at the project site, a qualified vertebrate paleontologist approved by the LACMVP will be retained by the MTA or its designated contractor to supervise the mitigation program described in detail in Section 3.17.	As required for Wilshire at-grade component Prior to any earth moving at the project site, a qualified vertebrate paleontologist approved by the LACMVP will be retained by the MTA or its designated contractor to supervise the mitigation program described in detail in Section 3.17.	As required for Wilshire at-grade component Prior to any earth moving at the project site, a qualified vertebrate paleontologist approved by the LACMVP will be retained by the MTA or its designated contractor to supervise the mitigation program described in detail in Section 3.17.
Conclusion	Less than significant	Less than significant	Less than significant

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CULTURAL RESOURCES - Archaeological. **(Section 3.17)** - This topic primarily relates to artifacts and human remains from previous cultures that have existed in California. Grading and subsurface excavation could affect these resources.

	Wilshire BRT	Wilshire BRT/ Exposition BRT	Wilshire BRT/ Exposition LRT
Impact	BRT component would require up to 2 feet of excavation and could affect archaeological resources.	BRT component would require up to 2 feet of excavation ralong the majority of the route and up to several feet for caissons for aerial structures. Tunnel Design Option may affect archaelogical resources	Up to 1.5 feet of excavation required for LRT lane construction along the majority of the route and up to several feet for caissons for aerial structures. Tunnel Design Option may also affect archaelogical resources.
.Degree	Significant	Significant	Significant
Mitigation	Monitoring and scientific recovery of archaeological resources through the preparation and implementation of a data recovery plan	As required for Wilshire BRT Tunnel Design Option would require monitoring and scientific recovery of archaeological resources through the preparation and implementation of a data recovery plan	As required for Wilshire BRT Tunnel Design Option would require monitoring and scientific recovery of archaeological resources through the preparation and implementation of a data recovery plan
Conclusion	Less than significant.	Less than significant	Less than significant

CULTURAL RESOURCES - Historical Resources. **(Section 3.17)** - This topic pertains to properties along the route that satisfy federal and or local criteria for designation as an historic resource. The most critical concern are those properties either listed or eligible for listing on the National Register of Historic Places.

	Wilshire BRT	Wilshire BRT/ Exposition BRT	Wilshire BRT/ Exposition LRT
Impact	The curb adjacent design option could require removal or relocation of potentially historic electroliers and other fixtures along Wilshire Boulevard.	The Exposition BRT component of the project would require the removal and demolition of the Southern Pacific Railroad/Pacific Electric Railway which is eligible to the National Register of Historic Places.	The LRT component of the project would require the removal and demolition of the Southern Pacific Railroad/Pacific Electric Railway which is eligible to the National Register of Historic Places. The Historic setting of the USC/Exposition Park area will be altered under this alternative.
Degree	Significant for curb adjacent design option	Significant	Significant
Mitigation	For the curb design option, an Historic American Engineering Record (HAER) documentation shall be pepared for representable historical electroliers, streetlights and other fixtures. A Memorandum of Agreement between SHPO and MTA shall be required.	As required for the Wilshire BRT curb adjacent design option. Historic American Engineering Record (HAER) documentation shall be prepared for the Pacific Electric Railway; A Memorandum of Agreement between SHPO and MTA will be required.	Historic American Engineering Record (HAER) documentation shall be prepared for the Pacific Electric Railway. A Memorandum of Agreement between SHPO and MTA will be required; Alternative Design of Overhead Catenary System would reduce the visual impacts on the structures in Exposition Park
Conclusion	Less than significant	Less than significant	Less than significant

CONSTRUCTION IMPACTS (Section 3.18) - Typically these are short term effects, however, it is expected that work within major streets would be disruptive to motorists and to adjacent businesses and residents.

	Wilshire BRT	Wilshire BRT/ Exposition BRT	Wilshire BRT/ Exposition LRT
Impact	The total duration of all construction activities would be expcted to extend for 24 months for Alt 1 and1A and 32 months for Alt 1B(curb lane).	The total duration of all construction activities would be expected to extend for 24-32 months for Wilshire BRT; Duration 36-42 months for Expo BRT.	The total duration of all construction activities would be expected to extend for 24-32 months for Wilshire BRT; Duration 36-42 months for Expo LRT
Degree	Significant for traffic disruption, air quality, nighttime noise, impacts on businesses, and water quality.	Significant for traffic disruption, air quality, noise, impacts on businesses, and water quality, worker exposure to contamination.	Significant for traffic disruption, air quality, noise, impacts on businesses, and water quality, worker exposure to contamination and cultural resources.
Mitigation	Maintain at least one through travel lane open in each direction at all times on Wilshire. Limit construction to nighttime hours in areas where lane closures are required. Implement dust control measures; use noise temporary barriers in sensitive areas and limit noisiest activities to daytime hours; implement mitigation measures as specified in socioeconomic, water resources assessments.	Maintain at least one through travel lane open in each direction at all times on all affected streets. Limit construction to nighttime hours in areas where lane closures are required along Wilshire, Venice and Sepulveda. Implement dust control measures; use noise temporary barriers in sensitive areas . Limit noisiest activities to daytime hours; implement mitigation measures as specified in socioeconomic, water resources, hazardous materials assessments.	Maintain at least one through travel lane open in each direction at all times on all affected streets. Limit construction to nighttime hours along Wilshire, Venice and Sepulveda. Implement dust control measures; use noise temporary barriers in sensitive areas. Limit noisiest activities to daytime hours; implement mitigation measures as specified in socioeconomic, water resources, hazardous materials, cultural resource assessments.
Conclusion	Significant for traffic. Less than significant for all other topics.	Significant for traffic. Less than significant for all other topics.	Significant for traffic. Less than significant for all other topics.