completed before the proposed project can be approved by Metro and the FTA. The goal of both legislative acts is to ensure that local and federal decision-makers are aware of the environmental consequences of a project before making a decision whether to proceed.

One of the first steps in the environmental review process is to publish a Notice of Intent (NOI) to prepare an EIS in the Federal Register. This notice was published on October 2, 2007 (Vol 72, No 190) 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 September 28, 2007. In addition to these notices, various other means were used to invite public comment on the project. Three public scoping workshops were held and letters of invitation were mailed to addresses within a 1/4-mile radius of the Crenshaw/LAX Transit Corridor alignment. Articles and advertisements were published in a number of local newspapers including several non-English announcements and electronic mailings (e-mail blasts) were sent to various stakeholders. Metro also distributed bus pamphlets and placed postings in community and council district newsletters. The 30-day public scoping comment period was extended until November 20, 2007, and all 365 comments that were received on the project were documented and reviewed in the preparation of this document.

Metro initiated a second round of public comments with the release of the DEIS/DEIR. During the 45-day public review period for the DEIS/DEIR, the document was placed in local public libraries and other repository sites, and made available on the Metro website (www.metro.net/crenshaw). Information about public hearings and other ongoing project activities was available via the project hotline at (213) 922-2736. For a detailed description of the environmental review process, and related public involvement opportunities, please refer to Chapters 2.0 Alternatives Considered and 7.0 Community Participation of this FEIS/FEIR.

Public hearing testimony and written comments on the DEIS/DEIR were compiled during the public review period. In the Fall of 2009, the Metro Board considered public comments as part of its selection process for the LPA for the Crenshaw/LAX Transit Corridor. In addition to the foregoing outreach, Metro initiated additional public outreach for a Supplemental Draft Environmental Impact Statement/Recirculated Draft Environmental Impact Report (SDEIS/RDEIR) that was required for the evaluation of new maintenance facility sites. This process is further described in ES. 11 Locally Preferred Alternative Selection Process. Metro also conducted community briefings and presentations with more than 40 different groups in the Crenshaw/LAX Transit Corridor. Introductory briefings were conducted with each of the jurisdictions located within the project corridor. City, county, state and congressional representatives and their staff were invited to participate in working groups during the develpoment of the project. Legislative briefings were conducted with the Cities of Inglewood and Los Angeles. Monthly technical advisory committee meetings were held, in which key stakeholders from the cities' planning, utilities and transportation departments were presented with project updates and input was solicited on advanced design concepts. Metro maintained a contact list of stakeholders located throughout the project area and those located adjacent to the potential maintenance facility sites or who could be directly affected by implementation of the project. Stakeholders were notified of public station planning workshops, focused on urban and streetscape design concepts and station area planning for the proposed stations along the project corridor. Workshop participants were involved in group discussions and were given the opportunity to provide feedback to the project team. In addition to the station planning workshops, stakeholders were invited to participate in a public workshop which initiated the additional analysis for new alternative maintenance

Numerous community meetings have been held as part of the Alternatives evaluation and project formulation process.

facility sites. Responses to public comments received during the circulation period have been incorporated into the FEIS/FEIR. Metro and the FTA cannot initiate the proposed project until the FEIS/FEIR is certified with all necessary mitigation measures and a Mitigation Monitoring Program is adopted. Following certification of the FEIR by the Metro Board, the FTA will consider the FEIS and issue a public Record of Decision (ROD) to complete the final step in the environmental review of the project.

ES.9 Cost and Performance

The cost of a transportation investment falls into two categories: capital costs, and operating and maintenance (O&M) costs. Capital costs are the start-up costs for the project, including the costs of guideway construction, vehicles, and any system facilities necessary before the project can begin to operate. O&M costs are the costs associated with the day-to-day running of the new transportation system. Costs, such as labor, vehicle maintenance, and overall facility maintenance fall into this category. This section summarizes both types of costs and presents the proposed capital financing plan, and evaluates Metro's ability to afford the alternatives under consideration. The estimated cost in 2010 dollars for the LPA (which includes a Fully-Covered LAX Trench) is $ 1,589,154,000, compared to $1,331,634,000 for the MOS from the Metro Green Line to King Station and $1,466,304,000 for the MOS from Exposition Boulevard to Century Station. The estimated cost in 2010 dollars for the Project Definition, which includes the Partially-Covered LAX Trench Option, is $1,548,190,000. The additional costs for the LPA design options range from $20,594,000 to $106,306,000.

Table ES.2. Estimated Cost for Project Elements

Project Design Varations	Estimated Cost
LPA	$1,589,154,000
Optional Partially-Covered LAX Trench	$(40,964,000)
Optional Vernon Station (Design Option 5)	$106,306,000
Optional Manchester Station (Aerial)	$66,500,000
Optional Cut-and-Cover Crossing at Centinela Ave (Design Option 3)	$20,599,000
Minimum Operable Segment-Metro Green Line to King Station (MOS-King)	$1,331,634,000
Minimum Operable Segment-Exposition Station to Century Station (MOS-Century)	$1,466,304,000
Maintenance Facility (cost for Crenshaw/LAX Project)	$138,413,730
Project Definition (includes Partially-Covered LAX Trench Design Option	$1,548,140,000

Ridership

Project ridership in year 2030 for the LPA is 12,625 daily boardings, as shown in Table ES.3. The incorporation of the Crenshaw/Vernon Station into the LPA would increase ridership by adding an additional station at Vernon Avenue which would expand the service along the alignment and provide direct access to Leimert Park Village. Neither the cut-and-cover Grade Separation at Centinela Avenue Design Option nor the Exposition Below-Grade Alignment Design Option would have an effect on overall ridership.

Table ES.3. Projected Ridership and Vehicle Miles Traveled (VMT) - 2030

Alternative	Daily Boardings	Study Area VMT	Regional VMT
LPA	12,625	5,126,000	454,402,000
No Build	0	5,128,000	454,428,000
DIFFERENCE	+ 12,625	(2,000)	(26,000)

ES.10 Issues Resolved

Based on the outcome of the alternatives analysis and screening process and technical transit planning considerations, in addition to input received during the comment period, a series of issues (listed below) at the time

The selection of the Locally Preferred Alternative (LPA) by the Metro Board considered a wide variety of variables including the performance, ridership, costs, benefits, environmental impacts, and pubic input.

of the circulation of the DEIS/DEIR were identified. These issues have since been addressed and resolved as the project moved forward through the environmental review process.

Community Acceptance of the TSM and BRT Alternatives as a Credible Mobility Improvement Over Existing Metro Rapid Bus Service as the Long Term Investment

Crenshaw Boulevard currently features Metro Rapid Bus service that supplements local bus service along the corridor. The TSM and BRT Alternatives described in the DEIS/DEIR distinguish small incremental travel time improvements over the existing service. Existing bus service and future options are subject to traffic delays as a portion of these services will have to operate in mixed traffic. The Metro Board has determined that these options are not viable long-term solutions to mobility needs in the Crenshaw/LAX Transit Corridor. The Metro Board of Directors considered engineering and environmental documentation, as well as public comments and concerns to determine that the LRT Alternative is the LPA.

Community Meeting.

Crenshaw/LAX Transit Corridor Connection to the Metro Purple Line/ Metro Purple Line Extension

The Alternatives Analysis process conducted for the Crenshaw/LAX Transit Corridor screened out a LRT connection to the Metro Purple Line due to cost effectiveness considerations. The connection would have to be entirely underground due to the narrow right-of-way on Crenshaw Boulevard, making the option cost prohibitive. If a connection is to be achieved between a Crenshaw/ LAX Transit Corridor LRT Alternative and the Metro Purple Line, a Metro feasibility study has found that an LRT connection towards the west, such as the Wilshire Boulevard/La Brea Avenue intersection rather than Crenshaw/ Wilshire Boulevards intersection would be the most attractive option. The Metro Board determined that the LPA would be designed in order to facilitate a future connection to the Metro Purple Line, which would include a below-grade connection to Exposition Boulevard. The connection of the LPA to the Metro Purple Line is a separate project and is outside the scope of this FEIS/FEIR.

Crenshaw/LAX Transit Corridor Light Rail Alternative Connection to the Exposition Light Rail

Due to unmitigable traffic impacts, physical consraints, and required right-of-way acquisition, the LPA's at-grade configuration from 39th Street to Exposition Station was determined to be infeasible. The below-grade connection

Exposition Line Connection at the Crenshaw/ Exposition Boulevards intersection.

to the Exposition/Crenshaw Station is incorporated into the LPA subject to its financial feasibility.

As defined in the LPA, the ultimate northern terminus (Exposition Station), had an at-grade configuration as the base condition as well as a below-grade design option (Design Option 6) which both underwent further analysis during the ACE phase. All analyzed at-grade configurations were deemed to be infeasible due to a combination of physical constraints, significant environmental impacts, and costs. Consultations with staff from the CPUC (which oversees approval to operate over at-grade crossings), the Community Redevelopment Agency of Los Angeles (which oversees approved development projects in the area), and the Los Angeles Department of Transportation indicate that an at-grade approach would not be acceptable to these agencies. The extent of the impacts for at-grade approach to the Exposition Line also resulted in a higher cost estimate than previous estimates. In addition, there was a substantial amount of support for a below-grade alignment along this segment. It may be necessary to consider either a temporary interim

ISSUES RESOLVED

Potential changes to Leimert Park Village that may be induced by a nearby light rail station have emerged as a local concern.

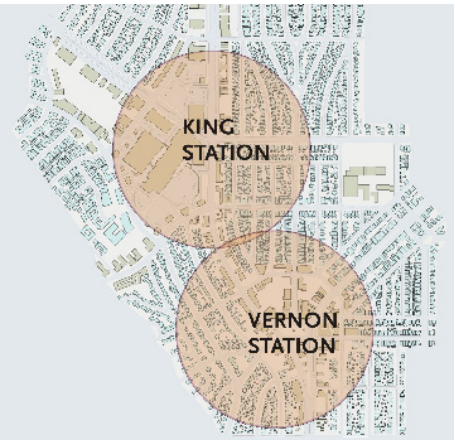
northern terminus of the Crenshaw/LAX line at the King Station (MOS-King) or a temporary southern terminus at the Century Station (MOS-Century). MOS-King would connect with the Metro Green Line at the southern end but would have potentially degraded service to the Exposition Line at the northern end. MOS-Century would connect with the Metro Exposition Line at the northern end but would have potentially degraded service at the southern end.

Light Rail Station Area Development Potential Consistent with Community Goals and Objectives

One key aspect in obtaining federal funding for transit improvements is whether local communities encourage transit-supporting or transit-oriented land uses. Similarly, California, with impetus from Senate Bill 375, has also focused on transit-supporting land uses as a means to reduce greenhouse gas emissions. Transit-supporting land uses often result in an increase in development density and intensity. The Metro Board must weigh Federal and State mandates against community concerns regarding over-development or changes in the character of corridor communities. Although all proposed station areas are subject to this concern, Leimert Park Village residents in particular have expressed concern about increased development. Station area planning workshops were held to identify the types of development that would be supported by the local community, as well as those that would be consistent with land use policies of the applicable jurisdictions. The results of these workshops have been considered and incorporated into the design of the LPA.

Light Rail Station Location(s) Between Martin Luther King Jr. Boulevard and Vernon Avenue

Related to the issue of transit-supporting land use and induced growth is the pending location of the LRT station between Martin Luther King Jr. Boulevard and Vernon Avenue. The LPA indicates two below-grade LRT stations; a station at Martin Luther King Jr. Boulevard and an optional station at Vernon Avenue, adjacent to Leimert Park. These prospective station locations are approximately 1/2-mile apart. An additional station would increase LRT travel times. As proposed with the Design



Station Proximity.

Option, one station would serve the Baldwin Hills Crenshaw Plaza shopping center and the other would serve Leimert Park Village. Community comment indicated support for only stations at the main intersections at Martin Luther King Jr. Boulevard and/or Vernon Avenue and no station in between. The Metro Board has considered whether two stations are necessary and whether the added expense of a Leimert Park Station (near Vernon Avenue) is warranted. Since the alignment is underground at this location, the cost of an additional station is significant and exceeded the project budget. As a result the station was carried forward as an optional station, should funding become available at a later date.

What is a grade separation? A crossing of a roadway and a railroad at different elevations, such as a bridge structure carrying the highway over the railroad or vice versa. A grade separation can also be created by placing railroad or transit line in an undercrossing or tunnel to separate it from a roadway or another rail line. Grade separations reduce pedestrian safety related impacts and eliminate impacts to traffic that may be caused by an intersection between the railroad and a roadway.

Light Rail Underground Construction Method Between 39th Street and 48th Street

Two methods of underground construction may be used: cut-and-cover and tunnel boring machines. The cut-and-cover method requires excavation of the underground trench, and then temporarily covering the trench with wooden planks or concrete or metal panels while the subway is constructed beneath. In the section of Crenshaw Boulevard between 39th Street and 48th Street, this construction technique would likely have adverse effects on traffic flow and to the accessibility for local businesses. The tunnel-boring technique would be less disruptive to the community, but requires stations to be located deeper than with the cut-and-cover method. This technique involves an underground machine that creates the subway structure without disrupting the surface. The construction method is envisioned to be determined by the design-build contractor. It is important to note that even if tunnel boring is selected, the segment from Victoria to 60th Street, the Crensahw/Martin Luther King Station and the optional Crenshaw/Vernon Station would continue to be constructed with the cut-and-cover technique. The segments of the alignment between Exposition Boulevard and 39th Street and 39th Street to 48th Street were analyzed as cut-and-cover constructino as a worst case scenario.

Cut and Cover Construction Goldline Eastside Extension

Light Rail Northern Portal Location and Baldwin Hills Crenshaw Plaza Access

Because the at-grade alignment between Exposition Bouelvard and 39th Street was determined to be infeasible, there is no longer a transition portal at 39th Street between the at-grade and below-grade alignments. King Station would be located at the southeast corner of Crenshaw and Martin Luther King Jr. Boulevard, however, an additional portal located at the southwest corner of Crenshaw and Martin Luther King Jr. Boulevard is being carried forward for consideration.

Treatment of Frontage Roads and Parking From Coliseum to Martin Luther King Jr. Boulevard and from 48th Street to Slauson Avenue

In a number of segments along Crenshaw Boulevard, north of Slauson Avenue, the street features one-way frontage roads that are separated from the main traffic lanes of Crenshaw Boulevard by a raised median. To maintain the current number of traffic lanes and to accommodate LRT in semi-exclusive rights-of-way, the frontage roads would be reconfigured or eliminated. The at-grade segment between 48th Street and 60th Street would require the removal of these frontage roads, however, the sidewalks would be widened and a bikepath would be created. This change has implications for the loss of curb parking along Crenshaw Boulevard and alteration in street landscaping. Access to curb parking would remain, however, parking adjacent to the divider median between Crenshaw Boulevard and the adjacent frontage roads would be removed.

Mature Trees In Crenshaw Median. The LRT would remove this landscaping and provide additional landscaping along a widened sidewalk.

Streetscape and Urban Design Treatments to Mitigate the Loss of Mature Median Trees Between 48th Street and 54th Street.

Since the 1960s (after the termination of the streetcar service on Crenshaw Boulevard), the median of Crenshaw Boulevard has been landscaped from 48th Street to 54th Street. Along this section of the Crenshaw Boulevard median are intervals of mature trees that provide visual relief from the wide Crenshaw Boulevard right-of-way and contribute to aesthetic features of Crenshaw Boulevard as a scenic highway designated by the City of Los Angeles for the section north of Slauson Avenue. LRT improvements

in this section of Crenshaw Boulevard would require the removal of these trees. Mitigation has been incorporated into the design of the LPA to replace the median trees. A landscape maintenance program will be developed in order to determine appropriate treatments.

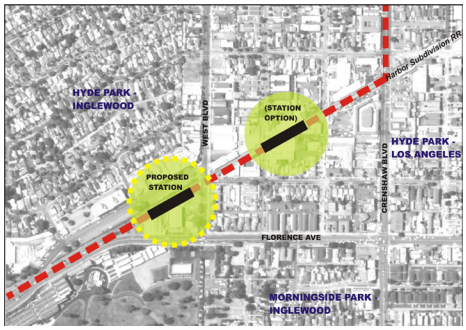
Pedestrian Safety Improvements at Nearby Schools

A number of private and public schools are either adjacent to or near Crenshaw Boulevard. There is also a private school near the Harbor Subdivision and Centinela Avenue crossing. Based on comments siting community concern for pedestrian safety, numerous pedestrian safety measures have been incorporated into the design of the at-grade crossings along Crenshaw Boulevard. These include, but are not limited to, fencing, warning signs, raised median, and adequate pedestrian queuing areas. Metro also has an on-going safety program that is given to local area schools. Additional mitigation measures are provided in Section 4.14, Safety and Security of this FEIS/FEIR to ensure pedestrian safety is achieved.

West Boulevard Station Location

Under the LPA, a station is located west of West Boulevard in the City of Inglewood. Community input received from residents in the Hyde Park community favor moving the station eastward toward Crenshaw Boulevard to provide a better connection with transit services on Crenshaw Boulevard and on Florence Avenue potentially providing improved access from communities to the south along Crenshaw Boulevard, such as Morningside Park. Such a location may provide for revitalization along a corridor between Crenshaw Boulevard and West Boulevard. Some community residents in the City of Inglewood favor the continued location of the station west of West Boulevard, where there may also be transit-oriented development opportunities on vacant parking lots and other under-utilized parcels. Design coordination meetings were held to evaluate the two station options and it was determined that the location of a station adjacent to West Boulevard would be most appropriate and could be perceived as a catalyst to change along West Boulevard that has remained dormant for many years.

Schools adjacent to the LRT raise the awareness regarding pedestrian safety and measures that must be in place to ensure safe LRT operations and pedestrian paths.



Potential Florence/West Station locations.

Connection to Hollywood Park Redevelopment

As discussed above, Metro received comments during meetings in the City of Inglewood that the alignment should be re-directed to serve the City of Inglewood's focus and investment in the Hollywood Park area. Metro reviewed ridership and cost data and concluded that the proposed LPA alignment along the Harbor Subdivision that does not directly connect to the Hollywood Park Redevelopment area remains the most viable and cost-effective option. The LPA alignment serves downtown Inglewood employment with a proposed station near La Brea Avenue. It was determined that the connection from Hollywood Park to the LPA would be achieved through the enhancement of local transit connections and coordination with local developers regarding the provision of shuttle service.

Hollywood Park Redevelopment. Within the City of Inglewood, the Hollywood Park area is undergoing a major change with housing and retail developments expected to replace the race track. Transit connections to this emerging area is a major local concern.

Burlington Northern Santa Fe Use of the Harbor Subdivision Railroad

One of the most significant constraints to transit use of the Harbor Subdivision is the issue of whether Burlington Northern Santa Fe (BNSF) will maintain railroad operations within the right-of-way. Maintaining BNSF operations in the Harbor Subdivision would require the relocation of the railroad tracks to allow for LRT operations. The continued use by BNSF also adds to construction cost, as well as a new element to grade crossings, where crossing signals would need to serve both LRT vehicles and railroad operations. Metro has had discussions with BNSF to determine whether the abandonment (during construction and/or permanently) of the Crenshaw/LAX Transit Corridor portion of the Harbor Subdivision (Crenshaw Boulevard to Imperial Highway) is possible. These discussions are ongoing and the issue is yet-to-be resolved. It is currently assumed in the FEIS/FEIR that the "third track" is preserved.

Harbor Subdivision. Continued freight use of the Harbor Subdivision poses many constraints to the development of LRT transit service within the railroad right-of-way.

Grade Separation at Centinela Avenue

The application of Metro's Grade Crossing Policy is presented in the conclusions of the FEIS/FEIR. At this stage in the analysis, the assessment concludes that no grade separation is needed at Centinela Avenue and the Harbor Subdivision adjacent to Florence Boulevard. Comments received through the community outreach process indicated community concerns regarding access to Edward Vincent Jr. Park (Centinela Park), a nearby private school and church that may be addressed through a grade separation. The grade of Centinela Avenue affects the operation of vehicles through the intersection. The FEIS/FEIR contains a design option for a grade separation at Centinela Avenue to address these concerns. Such grade separation may require more extensive construction in the short term and may create some impacts to the palm trees adjacent to the additional railroad right-of-way. It was determined that there were no significant traffic impacts associated with an at-grade crossing at Centinela Avenue, and a grade separation is not warranted. The incorporation of a grade separation at Centinela Avenue will be subject to the final determination of the California Public Utilities Commission (CPUC).

View of Centinela Avenue at Florence Ave/Harbor Subdivision. Traffic movements along with pedestrian flows to a nearby Vincent Park, church and school are major local concerns. The crossing is at the top of a slight incline.

Specific Effects on Landmark Palm Trees Near Centinela Avenue and Mitigation Options

One of the most noticeable visual elements along the Harbor Subdivision in the City of Inglewood is the dual row of palm trees. The inner row of palms mark the southern boundary of Edward Vincent Park. The guideway requirements were thought to require the removal of some portion of the northern most row of palm trees. Metro held focused community urban design and station area meetings in Inglewood to address this issue and design measures to mitigate the visual impact. The design of the LPA will be

The BNSF Railway is an American freight railroad company headquartered in Fort Worth, Texas, and is one of the largest transcontinental freight networks in North America.

Landmark Palms along Florence Avenue, near Edward Vincent Jr. Park.

constructed to maintain the majority of these landmark trees.

La Brea Avenue Crossing

The LPA defined an elevated aerial structure and station on the west side of La Brea for the Florence/La Brea Station. During advanced conceptual engineering, preliminary geotechnical investigations indicated an earthquake fault crossing at this location. To address this seismic condition, a below grade crossing was proposed. This refinement provide for greater safety and an easier recovery in case of an earthquake. Additional "fault finding" work was undertaken to confirm the location of the fault so that the station can be placed in a safer location. The station was ultimately placed to the east and north of the intersection of Market Street and Florence Avenue in an at-grade configuration which is located in a depression at a lower elevation then Florence Avenue. In addition, the change from elevated to below grade crossing at La Brea Avenue results in at-grade crossings at Ivy and Eucalyptus Streets. The LPA had grade-separated crossings at Ivy and Eucalyptus Streets only to provide a transition from the high elevated alignment at La Brea Avenue. These crossings did not require grade separation on their own. These two at-grade crossings have been discussed with CPUC staff. This new trench alignment is less expensive than the base design.

The La Brea Station would be an at-grade station located east of Market Street.

Grade Separation at Manchester

The application of Metro's Grade Crossing Policy to the Crenshaw/LAX Transit Corridor Project indicates that a grade separation was necessary for the Manchester Boulevard intersection with the Harbor Subdivision.

Role of the Aviation / Manchester Station

Located at the edge of the Westchester district rather than its center, the proposed Aviation / Manchester has one of the lower potentials for ridership growth among the stations along the proposed transit investment. The immediate area lacks a cohesion as it includes a mix of commercial and industrial uses at the border between the Cities of Los Angeles and Inglewood. Curves of the alignment and the potential for an

Grade Crossing at Manchester.

elevated crossing make the location of this station at Manchester difficult. Nonetheless, this location would be the most convenient location for residents of Westchester to access the Crenshaw/LAX Transit Corridor. If there is a station at this location, its siting and configuration would need to balance competing modes of access, including pedestrian access from the residential neighborhood immediately to the north, transit access along Manchester and Florence, and automobile / park-and-ride access from arterials such as Manchester Avenue/ Boulevard, Aviation Boulevard, and La Cienega Boulevard. Designs explored station configurations that straddled Manchester Avenue/Boulevard. Costs were developed for this design option. Also, it was determined that the aerial

Century and Aviation. This location is the gateway to LAX. Metro anticipates that an Automated People Mover system to be constructed operated by the airport will ultimately provide a convenient connection to the airport terminals.

The Harbor Subdivision Alternatives Analysis explores many alternatives between downtown Los Angeles and the harbor area via South Los Angeles, LAX, and the South Bay. The Crenshaw Corridor may affect or enable future projects along the Harbor Subdivision.

guideway could be re-configured in the future to accommodate a station, albeit at some expense. It was determined that ridership would not be high enough to justify a station at Aviation Boulevard and Manchester Boulevard, and that an aerial station on the Manchester over-crossing would be more likely to enhance connectivity with bus lines.

Metro Harbor Subdivision Alternatives Analysis Study

The long term use of the Harbor Subdivision railroad right-of-way has been studied by Metro. Decisions related to the Crenshaw/LAX Transit Corridor Project will have an effect on future planning for the entire Harbor Subdivision. The Metro Board, in its deliberation on the Crenshaw/LAX Transit Corridor Project, considered opportunities and limitations that may be imposed on connections to the South Bay and more broadly the entire railroad corridor from downtown Los Angeles to the harbor area. Future planning for the Harbor Subdivision is concentrated in the south project area and planning of the line will not preclude future connections which would enhance future connectivity to the South Bay.

Connection Between Crenshaw/LAX Transit Corridor Project and the Los Angeles International Airport

The lack of a convenient connection to LAX from Metro's rail transit system has been under discussion for many years. The nearest rail transit stop to LAX is the Aviation/Imperial Green Line station (approximately 1.5 miles from the LAX terminals). The Crenshaw/LAX Transit Corridor Project creates the opportunity to bring a transit connection closer to LAX. The FEIS/FEIR proposes a LRT station at Century Boulevard and Aviation Boulevard. Metro's coordination with LAX indicates that an "automated people mover" from the terminal area may be planned to connect to this area at some time in the future. Metro is currently studying an additional connection from the Metro Green Line into the central terminal area as part of a separate project. The Metro Board, as part of the consideration of the LPA, must consider the certainty and time frame of construction of this important connection. The Metro Board is coordinating with

LAWA to ensure a seamless connection between the LPA and the automated people mover. An aerial station at Century Boulevard and Aviation Boulevard has been incorporated into the LPA to facilitate this connection.

Provision of a Maintenance Facility

The LPA requires a new maintenance facility to service the expanded rail vehicle fleets. Adequate size sites are difficult to find. Two candidate sites were initially identified in the DEIS/DEIR. The Metro Board eliminated these sites during the selection of the LPA.

A new maintenance facility site search was conducted and four potential sites were selected adjacent to the Harbor Subdivision. The four potential sites are located in industrial areas; two of which are adjacent to southern end of the LPA alignment between Manchester Avenue and Century Boulevard, and two of which are located further down the Harbor Subdivision, in the City of Redondo Beach. The preferred maintenance facility site is Site 14, located in an industrial area in the City of Los Angeles. The site is south of Arbor Vitae Street and west of Aviation Boulevard.

Summary of Impacts

Table ES.4 on the following page summarizes the potential impacts of the No-Build, the LPA, MOS 1 and 2, the Design Options, and the maintenance facility. Table ES.5 summarizes the impacts and the mitigation measures for the LPA, MOSs and Design Options. Table ES.6 summarizes the impacts and the mitigation measures for the maintenance facility.

The information presented in these tables is a summary of the analysis contained in this FEIS/FEIR in Chapter 3.0 through 6.0.

Table ES.4. Summary of Impacts

Project Goal/Criteria/Measure	No-Build Alternative	LPA	Maintenance Site #14 - Arbor Vitae/ Bellanca	MOS King - Metro Green Line to King Station	MOS Century - Exposition Station to Century Station	Cut-and-Cover Crossing at Centinela	Optional Below-Grade Station at Vernon	Optional Manchester Station	Alternate Southwest Portal at King Station	Partially-Covered LAX Trench Option
Environmental Effects										
Traffic	○	○*	○	○*	○*	○	○	○	○	○*
Regional Land Use	○	○	○	○	○	○	○	○	○	○
Local Land Use and Development	●	○	○	○	○	○	○	○	○	○
Division of Established Community	○	○	○	○	○	○	○	○	○	○
Consistency with Local Plans/Policies	●	○	○	○	○	○	○	○	○	○
Displacements and Relocation	○	◉	●◗	◉	◉	◉	◉	◉	◉	◉
Community Cohesion	○	○	○	○	○	○	○	○	○	○
Visual	○	◉	○	◉	◉	◉	○	○	◉	◉
Air Quality (Operational)	○	○	○	○	○	○	○	○	○	○
Noise and Vibration	○	◉	○	◉	◉	◉	◉	◉	◉	◉
Ecosystems and Biological Resources	○	◉	◉	◉	◉	◉	◉	◉	◉	◉
Geotechnical	◉	◉	◉	◉	◉	◉	◉	◉	◉	◉
Water	○	○	○	○	○	○	○	○	○	○
Energy	○	○	○	○	○	○	○	○	○	○
Historic, Archaeological, Paleontological	○	◉	○	◉	◉	◉	◉	◉	◉	◉
Parklands and Community Facilities	○	◉	○	○	○	○	○	○	○	◉
Economic	○	○	●◗	○	○	○	○	○	○	○
Safety and Security	○	◉	◉	◉	◉	◉	◉	◉	◉	◉
Construction (without Air Quality)	○	◉	◉	◉	◉	◉	◉	◉	◉	◉
Construction (with Air Quality)	○	◉◗	●◗	◉◗	◉◗	◉◗	◉◗	◉◗	◉◗	◉◗
Growth Inducing	○	○	○	○	○	○	○	○	○	○
Cumulative	○	○	○	○	○	○	○	○	○	○
Environmental Justice	●	◉	○	◉	◉	◉	◉	◉	◉	◉

○ Less Than Adverse Effect, or No Adverse Effect
◉ Less Than Adverse Effect with Implementation of Mitigation Measure
● Potentially Adverse Effect or an Adverse Effect
◗ Significant Impact Under CEQA

* Potentially Significant Impacts per criteria of the Los Angeles Department of Transportation at one intersection, depending upon the ultimately selected signal timing.

Table ES.5. Mitigation Measures for the LPA

Environmental Criteria	
Traffic	**Impact:** There is one location (Crenshaw Boulevard and 54th Street) that is impacted at signal cycle lengths at or less than 140 seconds. There are no changes in street geometry that would reduce impacts.The parking analysis presented above indicates that the LPA would not result in inadequate parking. Impacts associated with spillover parking to the adjacent streets would be minimal. However, parking restrictions and pricing strategies along the adjacent streets are recommended to discourage long-term parking by transit patrons. With implementation of mitigation, no adverse effects are anticipated.
	T1 Metro shall coordinate with the local jurisdictions to designate and identify haul routes for trucks and to establish hours of operation. The selected routes should minimize noise, vibration, and other impacts. **T2** Metro shall prepare a traffic management plan to facilitate the flow of traffic in and around the construction zone. This traffic management plan shall identify a community liaison and shall include the following measures: • Schedule as much of construction-related travel as possible (i.e., deliveries, hauling, and worker trips) during the off-peak hours; • Develop detour routes to facilitate traffic movement through construction zones without significantly increasing cut-through traffic in adjacent residential areas; • Where feasible, temporarily re-stripe roadway to maximize the vehicular capacity at those locations affected by construction closures; • Where feasible, temporarily remove on-street parking to maximize the vehicular capacity at those locations affected by construction closures; • Where feasible, traffic control officers should be at major intersections during peak hours to minimize delays related to construction activities; • Develop and implement an outreach program to inform the general public about the construction process and planned roadway closures; • Develop and implement a program with business owners to minimize impacts to businesses during construction activity, including but not limited, to signage programs. **T3** Metro shall include in the traffic management plan measures that minimize any potential adverse effects to pedestrian movement in the corridor and to maximize pedestrian safety to the extent feasible. **T4** Metro shall coordinate with local school districts to disclose potential impacts to school bus routes. **T5** Project contractors shall provide alternate off-street parking for their employees during the construction period, in order to minimize the loss of parking to adjacent commercial districts. **T6** Project contractors shall prohibit parking for their employees in adjacent residential neighborhoods, in order to minimize the impacts to nearby residents.

Table ES.5. Mitigation Measures for the LPA (continued)

Environmental Criteria	
Land Use and Development	No impact, no mitigation required.
Displacement and Relocation	**Impact:** The LPA would require the acquisition of up to 97 total parcels, including 59 parcels that would be acquired in full, 31 parcels would be acquired in part, four parcels that would require permanent underground easements, and three parcels that would be used as temporary construction laydown areas (for staging equipment and materials). Two single-family residential properties would be acquired in full to accommodate the at-grade LRT guideway. With implementation of mitigation, no adverse effects are anticipated.
	DR1 Metro shall provide relocation assistance and compensation, pursuant to the Uniform Relocation Assistance and Real Property Acquisition Policies Act and the California Relocation Act, to those who are displaced or whose property is acquired as a result of the Crenshaw/LAX Transit Corridor Project.
Community Cohesion	No impact, no mitigation required.
Visual Quality	**Impact:** The loss of landscaping and vegetation would result in an adverse effect to visual quality to residences along La Colina Drive and the along Crenshaw Boulevard from 60th to 48th Street. With implementation of mitigation, no adverse effects are
	V1 To minimize visual clutter, integrate system components, and reduce the potential for conflicts between the transit system and adjacent communities, design of the system stations and components shall follow the recommendations and principles developed in the project urban design explorations. These principles include, but are not limited to: 1) preserve and enhance the unique cultural identity of each station area and its surrounding community by implementing art and landscaping; and 2) promote a sense of place, safety, and walkability by providing street trees, walkways or sidewalks, lighting, awnings, public art, and/or street furniture. Prior to final design, community input shall also be used to help achieve these guidelines. **V2** At locations where existing land uses or vegetation is removed and neighboring uses are exposed to new views of the transit system, additional landscaping shall be provided within the right-of-way or in remnant acquisition parcels to create a buffer between the uses, but not necessarily to completely screen uses. Community input from adjacent residences or sensitive land uses shall be incorporated to the greatest extent feasible on the landscaping design elements to be incorporated. **V3** Mature trees that are removed during construction of the Crenshaw/LAX Transit Corridor Project shall be relocated or replaced with a tree of similar species, or if inappropriate for climate conditions, a species that is low-water use and compliant with the applicable City's landscape ordinance. Replacement should occur in consultation with the Los Angeles Bureau of Street Services Street Tree Division and with the City of Inglewood Department of Public Works.

Table ES.5. Mitigation Measures for the LPA (continued)

Environmental Criteria	
Visual Quality	**V4** Where practical and appropriate, additional landscaping and enhanced design features will be used to minimize the visual image of the TPSS sites and other ancillary facilities. **V5** For the Centinela Avenue cut and cover crossing design option, screening that is consistent with the existing area and Edward Vincent Jr. Park shall be installed on the north side of the trench to the extent feasible to reduce the adverse effects on the south-facing view of the trench. **V6** Should the alternate southwest portal at the King Station be selected, the structure for the portal will be designed to compliment the Streamline Moderne style of the Broadway Department Store consistent with the Secretary of Interior standards.
Air Quality	No impact, no mitigation required.
Noise and Vibration	**Impact:** The LPA would exceed the vibration criteria at 16 locations (Table 4-20). With implementation of mitigation, no adverse effects are anticipated. Warning signal noise would exceed the significance criteria at 57th Street and West Boulevard grade crossing. With implementation of mitigation, no adverse effects are anticipated. Moderate passby noise impacts along La Colina Drive. No feasible mitigation.
	N1 Warning device noise levels shall not exceed 103 dBA at 50 feet, subject to approval by the California Public Utilities Commission. **N2** Further site-specific testing shall be performed during the Final Design where potential for adverse vibration and ground-borne effects has been identified. Where adverse vibration and ground-borne effects are still predicted, the vibration and ground-borne energy transmitted into the ground shall be decreased using design features such as, but not limited to high-resilience fasteners, ballast mats, or floating slab trackbed. Vibration-and ground-borne reducing design specifications for the track sections shall be determined in consultation with a qualified vibration scientist or engineer during the design phase. The features shall reduce the vibration levels below the FTA thresholds identified in Table 4-21 and Table 4-22.
Ecosystems/Biological Resources	**Impact:** The LPA would require the removal or disturbance of mature trees along Crenshaw Boulevard. Removal or disturbance of vegetation during the nesting season could affect the habitat and bird species that are present. With implementation of mitigation, no adverse effects are anticipated.
	EB1 Two biological surveys shall be conducted, one 15 days prior and a second 72 hours prior to construction that would remove or disturb suitable nesting habitat. The surveys shall be performed by a biologist with experience conducting breeding bird surveys. The biologist shall prepare survey reports documenting the presence or absence of protected native bird in the habitat to be removed and other such habitat within 300 feet of the construction work area (within 500 feet for raptors). If a protected native bird is found, surveys will be continued in order to locate nests. If an active nest is located, construction within 300 feet of the nest (500 feet for raptor nests) will be postponed until the nest is vacated and juveniles have fledged and when there is no evidence of a second attempt at nesting. **EB2** If construction of the project requires pruning of native tree species, the pruning shall be performed in a manner that does not cause permanent damage or adversely affect the health of the trees. If construction of the project requires the removal of a native tree

Table ES.5. Mitigation Measures for the LPA (continued)

Environmental Criteria		
Ecosystems/Biological Resources		species, the affected tree species shall be relocated or replaced in consultation with appropriate jurisdiction.
Geotechnical/Subsurface/Seismic/ Hazardous Materials	**Impact:**	Potential for ground deformation to have an adverse effect for the LPA. With implementation of mitigation, no adverse effects are anticipated. The LPA is susceptible to liquefaction in two areas. The first area mapped as being susceptible to liquefaction is south of the I-10 Freeway, along the eastern slopes of the Baldwin Hills. The second area is the portion of the LPA along the Harbor Subdivision. Therefore, there would be a potential for liquefaction in these areas. With implementation of mitigation, no adverse effects are anticipated.
	GEO1	A soil mitigation plan shall be prepared after final construction plans are prepared showing the lateral and vertical extent of soil excavation during construction. The soil mitigation plan shall establish soil reuse criteria, establish a sampling plan for stockpiled materials, describe the disposition of materials that do not satisfy the reuse criteria, and specify guidelines for imported materials. The soil mitigation plan shall include a provision that during grading or excavation activities, soil shall be screened for contamination by visual observations and field screening for volatile organic compounds with a photo ionization detector (PID). Soil samples that are suspected of contamination based on field observations and PID readings shall be analyzed for suspected chemicals by a California certified laboratory. If contaminated soil is found, it shall be removed, transported to an approved disposal location, and remediated or disposed of according to guidance identified in proven technologies and remedies of site cleanup prescribed by the Department of Toxic Substances Control.
	GEO2	All hazardous materials, drums, trash, and debris shall be removed and disposed of in accordance with regulatory guidelines set forth by the Department of Toxic Substances Control in Title 22 Division 4.5 of the California Code of Regulations.
	GEO3	A health and safety plan shall be developed for persons with potential exposure to the constituents of concern identified in the preliminary Geotechnical Report contained in Appendix H.
	GEO4	Historical and present site usage along the many areas of the proposed alignment included businesses that stored hazardous materials and/or waste and used USTs, from at least the 1920s to the present. It is possible that areas with soil and/or groundwater impacts may be present that were not identified in this report, or were considered a low potential to adversely impact the subject property. In general, observations should be made during future development activities for features of concern or areas of possible contamination such as, but not limited to, the presence of underground facilities, buried debris, waste drums, tanks, soil staining or odorous soils. Further investigation and analysis may be necessary, should such materials be encountered.
	GEO5	Best Management Practices (BMPs), identified in Appendix F,required as part of the NPDES permit and application of SCAQMD Rule 403, shall be implemented for the proposed project to not only reduce potential soil erosion, but also to maintain soil stability and integrity during grading, excavation, below grade construction, and installation of foundations for aerial structures, and maintenance and operations facilities. BMPs would comply with applicable Uniform Building Codes and

Table ES.5. Mitigation Measures for the LPA (continued)

Environmental Criteria		
Geotechnical/Subsurface/Seismic/ Hazardous Materials		include, but are not limited to, scheduling excavation and grading activities during dry weather, covering stockpiles of excavated soils with tarps or plastic sheeting, and debris traps on drains.
	GEO6	The design of the project shall adhere to the design specifications of the geotechnical study for maintaining structural integrity under static and seismic loading and operational demands.
Water Resources	**Impact:**	The below-grade segment for the LPA, which is approximately 50 feet below the ground surface, is located within a liquefaction zone that spans along Crenshaw Boulevard from the I-10 Freeway in the north to Vernon Avenue in the south. Areas of liquefaction are known to have high water tables which add to the instability of the soil. Groundwater levels at Exposition Boulevard are as high as 16 feet below ground surface and gradually decline to more than 75 feet at Vernon Avenue. Dewatering activity would likely be required along this segment. With implementation of mitigation, no adverse effects are anticipated.
	WQ1	During project construction and operation, remediation should be required at maintenance facilities and vehicle storage areas, where a potential exists for grease and oil contamination to flow into storm drains. Various types of ditch structures, including grease traps, sediment traps, detention basins, and/or temporary dikes, may be used to control possible pollutants. These facilities shall be constructed pursuant to guidance published in Section 402 of the Clean Water Act (CWA) and shall follow the most current guidance within the NPDES permit program.
	WQ2	The flood capacity of existing drainage or water conveyance features within the project study corridor shall not be reduced in a way that causes ponding or flooding during storm events. A drainage control plan shall be developed during project design to ensure that drainage is properly conveyed from the study area and does not induce ponding on adjacent properties.
	WQ3	A dewatering permit shall be required if groundwater is encountered during construction. The proposed project is located in an urbanized area where potential groundwater contamination may exist. If contaminated groundwater is encountered during construction, the contractor shall stop work in the vicinity of the suspect find, cordon off the area, and contact the appropriate hazardous waste coordinator and maintenance hazardous spill coordinator at Metro and immediately notify the Certified Unified Program Agencies (City of Los Angeles Fire Department, County of Los Angeles Fire Department, and Los Angeles Regional Water Quality Control Board or RWQCB) responsible for hazardous materials or waste incidents. Coordination with the Los Angeles RWQCB shall be initiated immediately to develop an investigation plan and remediation plan for expedited protection of public health and environment. Contaminated groundwater is prohibited from being discharged to the storm drain system. The contractor shall properly treat or dispose of any hazardous or toxic materials, according to local, state, and federal regulations).
	WQ4	The study area currently drains indirectly to Ballona Creek and Dominguez Creek through the Municipal Separate Storm Sewer System (MS4). Treatment control BMPs shall be incorporated into the project design. The project shall consider placing the treatment BMPs in series or in a complimentary system to increase the control of pollutants to the maximum extent practicable. The systems shall be

Table ES.5. Mitigation Measures for the LPA (continued)

Environmental Criteria	
Water Resources	designed to efficiently and effectively handle and treat dry and wet weather flows to the maximum extent practicable. A Standard Urban Stormwater Mitigation Plan (SUSMP) and appropriate drainage control plan shall be implemented to select and place appropriate permanent treatment BMPs. **WQ5** During construction of the project, on-site integrated management strategies that employ green infrastructure strategies to capture runoff and remove pollutants shall be used. Green infrastructure strategies combine a variety of physical, chemical, and biological processes that focus on conveying runoff to bioretention areas, swales, or vegetated open spaces.
Energy	No impact, no mitigation required.
Historic, Archaeological, and Paleontological Resources	**Impact:** Discovery of unknown archaeological or paleontological resources is possible during excavation activities. With implementation of mitigation, no adverse effects are anticipated.
	CR1 Treatment of Undiscovered Archaeological Resources Construction personnel shall be informed of the potential for encountering significant archaeological and paleontological resources along Crenshaw Boulevard in the vicinity of the Crenshaw/King Station, and instructed in the identification of fossils and other potential resources. All construction personnel shall be informed of the need to stop work on the project site until a qualified archaeologist or paleontologist has been provided the opportunity to assess the significance of the find and implement appropriate measures to protect or scientifically remove the find. Monitors with Native American qualifications shall be used at a minimum for construction within a ½ mile of the Crenshaw/King Station. If human remains are encountered during construction, all work shall cease in the area of potential affect and the Los Angeles County Coroner's Office shall be contacted pursuant to procedures set forth in Public Resources Code Section 5097 et seq. and Health and Safety Code in Sections 7050.5, 7051, and 7054 with respect to treatment and removal, Native American involvement, burial treatment, and re-burial, if necessary. A detailed would be prepared prior to implementation of this project, similar in scope to the CRMMP that was prepared for Metro's Eastside Gold Line Transit Corridor (Glenn and Gust 2004). Implementation of a CRMMP during ground disturbance in highly sensitive archaeological areas would ensure that cultural resources are identified and adequately protected. If cultural resources are discovered or if previously identified resources are affected in an unanticipated manner, the Monitoring Plan would also ensure that such resources receive mitigation to reduce the impact to less-than-significant levels. This plan would include, but not be limited to, the following elements: • Worker training • Archaeological monitoring • The scientific evaluation and mitigation of archaeological discoveries • Native American participation, as needed

Table ES.5. Mitigation Measures for the LPA (continued)

Environmental Criteria	
Historic, Archaeological, and Paleontological Resources	• Appropriate treatment of human remains, if applicable • Reporting of monitoring and mitigation results **CR2** Paleontological Monitoring A qualified paleontologist shall produce a Paleontological Monitoring and Mitigation Plan (PMMP) for the proposed project and supervise monitoring of construction excavations. Paleontological resource monitoring shall include inspection of exposed rock units during active excavations within sensitive geologic sediments. The monitor shall have authority to temporarily divert grading away from exposed fossils to professionally and efficiently recover the fossil specimens and collect associated data. All efforts to avoid delays in project schedules shall be made. All project-related ground disturbances that could potentially affect previously undisturbed Quaternary older alluvial deposits shall be monitored by a qualified paleontological monitor under the supervision of a qualified paleontologist on a full-time basis because these geologic units are determined to have a high paleontological sensitivity. Very shallow surficial excavations (less than 5 feet) within areas of previous disturbance or areas mapped as Quaternary younger alluvial deposits or Artificial fill shall be monitored on a part-time basis to ensure that underlying sensitive units (i.e. older alluvium) are not adversely affected. The location of subsurface sensitive sediments shall be determined by the qualified paleontologist upon review of project grading plans. Paleontological monitors shall be equipped with the necessary tools for the rapid removal of fossils and retrieval of associated data to prevent construction delays. This equipment shall include handheld global positioning system (GPS) receivers, digital cameras and cell phones, as well as a tool kit containing specimen containers and matrix sampling bags, field labels, field tools (awls, hammers, chisels, shovels, etc.) and plaster kits. At each fossil locality, field data forms shall be used to record pertinent geologic data, stratigraphic sections shall be measured, and appropriate sediment samples shall be collected and submitted for analysis. Any collected fossils shall be transported to a paleontological laboratory for processing where they will be prepared to the point of curation, identified by qualified experts, listed in a database to facilitate analysis and reposited in a designated paleontological curation facility (such as the Natural History Museum of Los Angeles County). The qualified paleontologist shall prepare a final monitoring and mitigation report to be filed, at a minimum with Metro and the repository. The final report shall include, but not be limited to, a discussion of the results of the mitigation and monitoring program, an evaluation and analysis of the fossils collected (including an assessment of their significance, age and geologic context), an itemized inventory of fossils collected, a confidential appendix of locality and specimen data with locality maps and photographs, an appendix of curation agreements and other appropriate communications, and a copy of the project-specific paleontological monitoring and mitigation plan.

Table ES.5. Mitigation Measures for the LPA (continued)

Environmental Criteria	
Parklands and Community Facilities	**Impact:** Potential effect to flow of pedestrians near Faithful Central Bible Church and La Brea Station. With implementation of mitigation, no adverse effect would occur.
	PCF-1 The project shall incorporate Metro Design Criteria standards for sidewalks to ensure the safe flow of pedestrians. Metro shall coordinate with the City of Inglewood Public
Economic and Fiscal Impacts	No impact, no mitigation required.
Safety and Security	No impact, mitigation included to ensure impacts remain less than adverse..
	SS1 All stations and parking facilities shall be equipped with monitoring equipment and/or be monitored by Metro security personnel on a regular basis.
	SS2 Metro shall implement a security plan for LRT operations that shall include both in-car and station surveillance by Metro security or other local jurisdiction security personnel and establish well lit pedestrian station and parking areas that minimize shadows and provide visibility for security personnel to monitor activity.
	SS3 All stations shall be lit to a standard of no less than two footcandles to minimize shadows and ensure that all pedestrian pathways leading to/from sidewalks and parking facilities shall be well illuminated.
	SS4 Metro shall coordinate and consult with the LAPD, the LA County Sheriff's Department, the Inglewood Police Department, and the LAX Police to develop safety and security plans for the alignment, parking facilities, and station areas which satisfy the requirements necessary for the appropriate policing jurisdiction to effectively patrol the area.
	SS5 The station design shall be undertaken to avoid obstructions to visibility or observation and discrete locations favorable to crime; pedestrian access to at-grade, below-grade, and above-grade station entrances/exits shall be accessible at ground-level with clear sight lines.
	SS6 Metro shall implement appropriate measures to ensure pedestrian crossing safety at all locations with adjacent schools, churches, and high pedestrian areas as determined by the CPUC.
	SS7 Metro shall conduct a Hazard Analysis before the start of Final Design, using current safety analysis as a reference. The Hazard Analysis shall determine a design basis for warning devices as required by the California Public Utilities Commission.
	SS8 Vehicular and pedestrian warning measures, such as signage, shall be provided along the length of the platforms of the LRT Stations. Gates shall be provided at pedestrian crossings of the LRT and/or BNSF tracks within the Harbor Subdivision. These markings will be provided to alert motorists and pedestrians to potential conflict in the area.
	SS9 To discourage crossing the alignment and enhance safety, such as near the Faithful Central Bible Church, Metro shall provide fencing along either side of the alignment, between the parking lot and church buildings and ensure adequate pedestrian safety devices at designated crossings.

Table ES.5. Mitigation Measures for the LPA (continued)

Environmental Criteria		
Construction Impacts	**Impact:**	Temporary construction lighting may potentially affect residential areas by exposing residents to glare from unshielded light sources or by increasing ambient nighttime light levels. With implementation of mitigation, no adverse effects would occur. Visual quality may be altered from the stockpiling of materials at construction staging areas. With implementation of mitigation, no adverse effects would occur. The LPA would generate fugitive dust and equipment emissions from excavation activity and NOX emissions associated with the transport of excavated material. With implementation of mitigation, no adverse effects would occur. Under NEPA, Significant under CEQA. Construction noise levels would exceed existing ambient noise levels by at least 5 dBA at nearby land uses. With implementation of mitigation, no adverse effects would occur. Potential for encountering hazardous materials during grading and excavation within the Harbor Subdivision. It is possible that contaminated soil and/or groundwater may be encountered in the areas of the proposed at-grade, below-grade, and aerial alignments along the entire section. With implementation of mitigation, no adverse effects would occur. Disruption from cut-and-cover construction activities would be more extensive, the duration of reduced number of roadway travel lanes, road closures, traffic diversion, and modified access to business properties, and loss of on-street parking would be greater. These effects would further decrease business visibility and access to businesses by suppliers and customers, and would result in an adverse effect on corridor businesses and commercial property owners. With implementation of mitigation, no adverse effects would occur.
	CON1	Visually obtrusive erosion control devices, such as silt fences, plastic ground cover, and straw bales should be removed as soon as the area is stabilized.
	CON2	Stockpile areas should be located in less visibly sensitive areas and, whenever possible, not be visible from the road or to residents and businesses.
	CON3	During nighttime construction activities, lighting shall be aimed at the downward and away from residential and other sensitive uses adjacent to the alignment and stations.
	CON4	Water or a stabilizing agent shall be applied to exposed surfaces in sufficient quantity to prevent generation of dust plumes.
	CON5	Track-out shall not extend 25 feet or more from an active operation and track-out shall be removed at the conclusion of each workday.
	CON6	Contractors shall be required to utilize at least one of the measures set forth in South Coast Air Quality Management District Rule 403 section (d)(5) to remove bulk material from tires and vehicle undercarriages before vehicles exit the project site.

Table ES.5. Mitigation Measures for the LPA (cotinued)

Environmental Criteria		
Construction Impacts	**CON7**	All haul trucks hauling soil, sand, and other loose materials shall maintain at least 6 inches of freeboard in accordance with California Vehicle Code Section 23114.
	CON8	All haul trucks hauling soil, sand, and other loose materials shall be covered (e.g., with tarps or other enclosures that would reduce fugitive dust emissions).
	CON9	Traffic speeds on unpaved roads shall be limited to 15 mph.
	CON10	Operations on unpaved surfaces shall be suspended when winds exceed 25 mph.
	CON11	Heavy equipment operations shall be suspended during first and second stage smog alerts.
	CON12	On-site stockpiles of debris or rusty materials shall be covered at all times when not being used. On-site stockpiles of dirt shall be or watered at least two times per day or covered at all times when not being used.
	CON13	Contractors shall maintain equipment and vehicle engines in good condition and in proper tune per manufacturers' specifications.
	CON14	Contractors shall utilize electricity from power poles rather than temporary diesel or gasoline generators, as feasible.
	CON15	Heavy-duty trucks shall be prohibited from idling in excess of five minutes, both on- and off-site.
	CON16	Construction parking shall be configured to minimize traffic interference.
	CON17	Construction activity that affects traffic flow on the arterial system shall be limited to off-peak hours, as feasible.
	CON18	Construction staging and vehicle parking, including workers' vehicles, shall be prohibited on streets adjacent to sensitive receptors such as schools, daycare centers, senior facilities, and hospitals.
	CON19	The construction process shall utilize an on-site rock crushing facility with water control to suppress dust, when feasible.
	CON20	Portable generators shall be low-emitting and use ultra low sulfur diesel (<15 parts per million) or gasoline.
	CON21	Construction equipment shall use a combination of low sulfur diesel (<15 parts per million) and exhaust emission controls.
	CON22	The construction process shall use equipment having the minimum practical engine size (i.e., lowest appropriate horsepower rating for the intended job).
	CON23	Contractors shall be prohibited from tampering with construction equipment to increase horsepower or defeat emission control devices.

Table ES.5. Mitigation Measures for the LPA (continued)

Environmental Criteria		
Construction Impacts	**CON24**	Metro shall designate a person to ensure the implementation of air quality mitigation measures through direct inspections, records reviews, and complaint investigations.
	CON25	The construction contractor shall develop a Noise and Vibration Control Plan demonstrating how to achieve the more restrictive of the Metro Design Criteria noise limits and the noise limits of the city noise control ordinance. The Plan should also show how to achieve FTA vibration limits. The Plan shall include measurements of existing conditions, a list of the major pieces of construction equipment that will be used, and predictions of the noise and vibration levels at the closest noise-sensitive receptors (residences, hotels, schools, churches, temples, and similar facilities). The Noise and Vibration Control Plan will need to be approved by Metro prior to initiating construction. Where the construction cannot be prerformed in accordance with the requirements of Metro, the contractor shall investigate alternative construction measures that would result in lower noise and vibration levels. The contractor shall conduct monitoring to demonstrate compliance with contract noise limits. In addition, the contractor shall coordinate with the View Park Preparatory Accelerated and St. John the Evangelist School administrators to avoid disruptive activities during school hours.
	CON26	The construction contractor shall utilize a combination of the following options of best management practices for noise abatement to comply with the Metro Design Criteria: • The contractor shall utilize specialty equipment equipped with enclosed engines and/or high-performance mufflers as commercially available. • The contractor shall locate equipment and staging areas as far from noise-sensitive receptors as possible. • The contractor shall limit unnecessary idling of equipment. • The contractor shall install temporary noise barriers as determined by the Noise Control Plan. • The contractor shall limit unnecessary idling of equipment. • The contractor shall install temporary noise barriers as determined by the Noise Control Plan. • The contractor shall reroute construction-related truck traffic away from residential streets to the extent permitted by the relevant municipality. • The contractor shall avoid impact pile driving near noise-sensitive receptors (residences, hotels, schools, churches, temples, and similar facilities) where possible. Where geological conditions permit their use, drilled piles or a vibratory pile driver is generally quieter.
	CON27	Soil Mitigation Plan – A soil mitigation plan should be prepared after final construction plans are prepared showing the lateral and vertical extent of soil excavation during construction. The soil mitigation plan should establish soil reuse criteria, establish a sampling plan for stockpiled materials, describe the disposition of materials that do not satisfy the reuse criteria, and specify guidelines for imported materials. The soil mitigation plan should include a provision that during grading or excavation activities, soil should be screened for contamination by visual observations and field screening for volatile organic compounds with a PID. Soil samples that are suspected of contamination based on field observations and PID readings shall be analyzed for suspected chemicals by a California certified laboratory. If hazardous soil is found, it shall be removed, transported to an

Table ES.5. Mitigation Measures for the LPA (continued)

Environmental Criteria	
Construction Impacts	approved disposal location, and remediated or disposed according to state and federal laws. Other contaminated but nonhazardous soil may be reused on site applications such as bridge embankments or underneath paved areas provided the public is protected from coming into contact with the contaminated soils and the specific use is agreed to by the California Department of Toxic Substances Control (DTSC). **CON28** Nearby business owners and commercial property owners shall be notified of the schedule for specific planned construction activities, changes in traffic flow, and required short-term modifications to property access. **CON29** General notices shall be provided to local government, transit agencies, major institutions, and other organizations of the schedule for planned construction activities. **CON30** Methods shall be developed by which business owners can convey their concerns about construction activities and the effectiveness of mitigation measures during the construction period so activities can be modified to reduce adverse effects. **CON31** Advance notice shall be provided to affected property owners if utilities would be disrupted for short periods of time and scheduled major utility shut-offs during low-use periods of the day. **CON32** Construction activities shall be planned to minimize effects on community gatherings, special celebrations, or other similar events. **CON33** Public information campaigns shall be conducted to encourage patronage of corridor businesses during the construction period. **CON34** Metro shall ensure that all businesses and service providers are provided with adequate access during construction. Where there is a significant LEP population, signage shall be provided in various languages (as appropriate).
Growth-Inducing Impacts	No impact, no mitigation required.
Cumulative Impact	No impact, no mitigation required.
Environmental Justice	No impact, no mitiation required.

Table ES.6. Mitigation Measures for the Maintenance Facility

Environmental Criteria	
Traffic	None Required
Land Use and Development	None Required
Displacements and Relocation of Existing Uses	**S-DR1** Metro shall provide relocation assistance and compensation, per the Uniform Relocation Assistance and Real Property Acquisition Policies Act and the California Relocation Act, to those who are displaced or whose property is acquired as a result of a maintenance facility for the Crenshaw/LAX Light Transit Corridor Project. **S-DR2** Metro shall set up a business relocation process to oversee the relocation needs of the businesses that would be displaced as a result of a maintenance facility for the Crenshaw/LAX Transit Corridor Project. In addition, Metro shall attempt to minimize disruption to overall production of businesses that are connected with airport activities by relocating in as close proximity to LAX as possible. **S-DR3** Metro shall work with Los Angeles World Airports (LAWA) to ensure that potential displacement and relocation of rental car businesses are compatible with the long term implementation of the LAX Master Plan consolidated rental car center.
Community and Neighborhood Impacts	None Required
Visual Quality	None Required
Air Quality	None Required
Noise and Vibration	None Required
Ecosystems/Biological Resources	None Required
Geotechnical/Subsurface/Seismic/Hazardous Materials	**S-GEO1** All hazardous materials, drums, trash, and debris shall be removed and disposed of in accordance with regulatory guidelines. **S-GEO2** A health and safety plan shall be developed for persons with potential exposure to the constituents of concern, prior to construction of the Project.. **S-GEO3** Historical and present site usage along the many areas of the proposed alignment included businesses that stored hazardous materials and/or waste and used underground storage tanks, from at least the 1920s to the present. It is possible that areas with soil and/or groundwater impacts may be present that were not identified in this report, or were considered a low potential to adversely impact the subject property. In general, observations should be made during any future development activities for features of concern or areas of possible contamination such as, but not limited to, the presence of underground facilities, buried debris, waste drums, tanks, soil staining, or odorous soils. Phase II assessments shall be conducted for the properties within the selected alternative site and any contaminated sites shall be remediated to a level suitable for industrial development.

Table ES.6. Mitigation Measures for the Maintenance Facility (continued)

Environmental Criteria		
	S-GEO4	There is a potential for lead based paint and asbestos containing building materials to be present at the maintenance facility sites. An asbestos survey and lead based paint survey shall be conducted on all sites where on-site structures would be demolished or significantly renovated.
	S-GEO5	Best Management Practices (BMPs), required as part of the National Pollutant Discharge Elimination System (NPDES) permit program and application of the South Coast Air Quality Management District (SCAQMD) Rule 403, shall be implemented for any of the selected site alternatives to not only reduce potential soil erosion, but also to maintain soil stability and integrity during grading, excavation, below-grade construction, and the installation of foundations for aerial structures, and maintenance and operations facilities. BMPs would comply with applicable Uniform Building Codes and would include, but not be limited to, scheduling excavation and grading activities during dry weather, covering stockpiles of excavated soils with tarps or plastic sheeting, and debris traps on drains.
Water Resources	**S-WQ1**	During project construction and operation, remediation should be required at maintenance facilities and vehicle storage areas, where a potential exists for grease and oil contamination to flow into storm drains. Various types of ditch structures, including grease traps, sediment traps, detention basins, and/or temporary dikes, may be used to control possible pollutants. These facilities shall be constructed pursuant to guidance published in Section 402 of the Clean Water Act (CWA) and shall follow the most current guidance within the NPDES permit program for any of the site alternatives.
	S-WQ2	The flood capacity of existing drainage or water conveyance features within the project study corridor shall not be reduced in a way that causes ponding or flooding during storm events. A drainage control plan shall be developed during project design to ensure that drainage is properly conveyed from the study area and does not induce ponding on adjacent properties.
	S-WQ3	A dewatering permit shall be required if groundwater is encountered during construction. The proposed project is located in an urbanized area where potential groundwater contamination may exist. If contaminated groundwater is encountered during construction, the contractor shall stop work in the vicinity of the suspect find, cordon off the area, and contact the appropriate hazardous waste coordinator and maintenance hazardous spill coordinator at Metro and immediately notify the Certified Unified Program Agencies (City of Los Angeles Fire Department, County of Los Angeles Fire Department, and Los Angeles Regional Water Quality Control Board or RWQCB) responsible for hazardous materials or waste incidents. Coordination with the Los Angeles RWQCB shall be initiated immediately to develop an investigation plan and remediation plan for expedited protection of public health and environment. Contaminated groundwater is prohibited from being discharged to the storm drain system. The contractor shall properly treat or dispose of any hazardous or toxic materials, according to local, state, and federal regulations).
	S-WQ4	The study area currently drains indirectly to Ballona Creek and Dominguez Creek through the Municipal Separate Storm Sewer System (MS4). Treatment control BMPs shall be incorporated into the project design. The project shall consider placing the treatment BMPs in series or in a complimentary system to increase the control of pollutants to the maximum extent practicable. The systems shall be

Table ES.6. Mitigation Measures for the Maintenance Facility (continued)

Environmental Criteria		
		designed to efficiently and effectively handle and treat dry and wet weather flows to the maximum extent practicable. A Standard Urban Stormwater Mitigation Plan (SUSMP) and appropriate drainage control plan shall be implemented to select and place appropriate permanent treatment BMPs.
	S-WQ5	During construction of the project, on-site integrated management strategies that employ green infrastructure strategies to capture runoff and remove pollutants shall be used. Green infrastructure strategies combine a variety of physical, chemical, and biological processes that focus on conveying runoff to bioretention areas, swales, or vegetated open spaces.
Energy	None Required	
Historic, Archaeological, and Paleontological Resources	None Required	
Parklands and Community Facilities	None Required	
Economic and Fiscal Impacts	**S-DR1**	Metro shall provide relocation assistance and compensation, per the Uniform Relocation Assistance and Real Property Acquisition Policies Act and the California Relocation Act, to those who are displaced or whose property is acquired as a result of a maintenance facility for the Crenshaw/LAX Transit Corridor Project.
	S-DR2	Metro shall set up a business relocation process to oversee the relocation needs of the businesses that would be displaced as a result of a maintenance facility for the Crenshaw/LAX Transit Corridor Project, or the D22N Expansion site. In addition, Metro shall attempt to minimize disruption to overall production of businesses that are connected with airport activities by relocating in as close proximity to LAX as possible.
	S-DR3	Metro shall work with LAWA to ensure that potential displacement and relocation of rental car businesses are compatible with the long term implementation of the LAX Master Plan consolidated rental car center.
Safety and Security	**S-SS1**	All stations shall be lit to a standard of no less than two footcandles to minimize shadows and ensure that all pedestrian pathways leading to/from sidewalks and parking facilities shall be well illuminated.
	S-SS2	Metro shall coordinate and consult with the LAPD, the Hawthorne Police Department, the Inglewood Police Department, or the Redondo Beach Police Department to develop safety and security plans for the alignment, parking facilities, and station areas, where such facilities fall within the specific jurisdiction.
Construction Impacts	**S-CON1**	Visually obtrusive erosion control devices, such as silt fences, plastic ground cover, and straw bales shall be removed as soon as the area is stabilized.
	S-CON2	Stockpile areas shall be located in less visibly sensitive areas and, whenever possible, not be visible from the road or to residents and businesses.
	S-CON3	For security lighting during construction, lighting shall be aimed at the downward and away from residential and other sensitive uses adjacent the maintenance site alternatives, to the extent feasible.

Table ES.6. Mitigation Measures for the Maintenance Facility (continued)

Environmental Criteria	
	S-CON4 Contractor shall maintain a clean and neat work environment at all times. **S-CON5** Water or a stabilizing agent shall be applied to exposed surfaces in sufficient quantity to prevent generation of dust plumes. **S-CON6** Track-out shall not extend 25 feet or more from an active operation and track-out shall be removed at the conclusion of each workday. **S-CON7** Contractors shall be required to utilize at least one of the measures set forth in SCAQMD Rule 403 Section (d)(5) to remove bulk material from tires and vehicle undercarriages before vehicles exit the project site. **S-CON8** All haul trucks hauling soil, sand, and other loose materials shall maintain at least 6 inches of freeboard in accordance with California Vehicle Code Section 23114. **S-CON9** All haul trucks hauling soil, sand, and other loose materials shall be covered (e.g., with tarps or other enclosures that would reduce fugitive dust emissions). **S-CON10** Traffic speeds on unpaved roads shall be limited to 15 mph. **S-CON11** Operations on unpaved surfaces shall be suspended when winds exceed 25 mph. **S-CON12** Heavy equipment operations shall be suspended during first and second stage smog alerts. **S-CON13** On-site stockpiles of debris, dirt, or rusty materials shall be covered or watered at least two times per day. **S-CON14** Contractors shall maintain equipment and vehicle engines in good condition and in proper tune per manufacturers' specifications. **S-CON15** Contractors shall utilize electricity from power poles rather than temporary diesel or gasoline generators, as feasible. **S-CON16** Heavy-duty trucks shall be prohibited from idling in excess of five minutes, both on- and off-site. **S-CON17** Construction parking shall be configured to minimize traffic interference. **S-CON18** Construction activity that affects traffic flow on the arterial system shall be limited to off-peak hours, as feasible. **S-CON19** During project construction, remediation shall be required at maintenance facilities and vehicle storage areas, where a potential exists for grease and oil contamination to flow into storm drains. Various types of ditch structures, including grease traps, sediment traps, detention basins, and/or temporary dikes shall be used to control possible pollutants. These facilities shall be constructed pursuant to guidance published in Section 402 of the Clean Water Act (CWA) and shall follow the most current guidance within the NPDES program.

Table ES.6. Mitigation Measures for the Maintenance Facility (continued)

Environmental Criteria	
	S-CON20 The maintenance site alternatives currently drain indirectly to Ballona Creek and Dominguez Channel through the MS4. Treatment control BMPs shall be incorporated into the project design. The project shall consider placing the treatment BMPs in series or in a complimentary system to increase the control of pollutants to the maximum extent practicable. The systems shall be designed to efficiently and effectively handle and treat dry and wet weather flows to the maximum extent practicable. A SUSMP and appropriate drainage control plan shall be implemented to select and place appropriate permanent treatment BMPs. **S-CON21** Nearby business owners and commercial property owners shall be notified of the schedule for specific planned construction activities, changes in traffic flow, and required short-term modifications to property access. **S-CON22** Architectural coatings shall be purchased from a compliant architectural coating manufacturer as identified by the SCAQMD. **S-CON23** Contractors shall comply with SCAQMD Rule 1403 (Asbestos Emissions from Demolition/Renovation Activities). The requirements for demolition activities include asbestos surveying, notification, Asbestos-containing materials (ACM) removal procedures and time schedules, ACM handling and clean-up procedures, and storage, disposal, and landfilling requirements for asbestos-containing waste materials. **S-CON24** Noise barriers (e.g., sound attenuation blankets or solid walls) shall be placed such that the line-of-sight is blocked between sensitive receptors (e.g., residential and institutional land uses) and the project site, as feasible. **S-CON25** During the early stages of construction plan development, natural and artificial barriers, such as ground elevation changes and existing buildings, shall be considered for use as shielding against construction noise. **S-CON26** The contractor shall comply with Standard Specification 1565, FTA noise criteria and all local sound control and noise level rules, regulations, and ordinances that apply to any work performed pursuant to the contract. Each internal combustion engine used for any purpose on the job or related to the job shall be equipped with a muffler of a type recommended by the manufacturer. No internal combustion engine shall be operated without a muffler. **S-CON27** Grading and construction contractors shall use quieter equipment as opposed to noisier equipment (such as rubber-tired equipment rather than metal-tracked equipment) as much as possible. **S-CON28** The contractor shall submit a noise plan for construction activity. The plan shall be prepared by a qualified acoustical engineer and should be approved by the resident engineer before construction is initiated. The noise control plan shall include an inventory of the equipment, the estimated noise level at 50 feet for each major piece of equipment, calculations of the noise levels at impacted sensitive receptors, and noise reduction measures for sensitive receptor locations where the predicted noise levels exceed the ambient noise level by 5 dBA.
Growth-Inducing Impacts	None Required

ES.11 Response to Comments

Metro held a series of four public hearings in September/October of 2009 to provide the public with an opportunity to comment on the DEIS/DEIR which was circulated to the public for a 45-day period beginning on September 11, 2009. Approximately 1,500 CDs containing the DEIS/DEIR were mailed to stakeholders and 177 CDs containing the DEIS/DEIR were mailed to public agencies, elected officials, and community groups. Hardcopies of the DEIS/DEIR was also made available at libraries within and adjacent to the corridor. The four public hearings were located in four different areas of the alignment to provide all residents and businesses an opportunity to attend.

There were 1,234 comments received from 533 commenters during the circulation period for the DEIS/DEIR. Comments were received from federal, state, and local agencies, elected officials, community organizations, transit advocates, and from members of the general public. Additional comments were received and recorded after the circulation period closed. Comments were received via fax, mail, e-mail, phone, and at each scoping meeting. Comments were recorded in a database with the source, date, method of receipt, and issue area identified.

The majority of public comments received as a result of the community outreach program expressed support for the LRT Alternative. A significant number of comments requested a below-grade alignment along Crenshaw Boulevard between the Exposition Line and the Harbor Subdivision, especially the segment of the alignment between 48th Street and 59th Street. These comments sited traffic related impacts and pedestrian safety concerns, as well as street reconfiguration and landscaping. Public input regarding this specific segment of Crenshaw Boulevard prompted a study of a below-grade alignment through Park Mesa Heights between 48th and 60th Streets. Based on the findings of this study, it was determined that the environmental effects of an at-grade alignment through this segment were not significant enough to justify the additional expense involved with constructing and operating a below-grade alignment.

There were 198 written comments from 42 commenters and oral comments made by 53 speakers received dring the circulation period for the SDEIS/RDEIR. Comments were received via mail, e-mail, phone, and the public hearings from federal, state, and local agencies, elected officials, community organizations, transit advocates, and from members of the general public. They were recorded in a database with the source, date, method of receipt, and issue area identified. One hundred ninety-seven of the total 198 comments received on the SDEIS/RDEIR were related to the Maintenance Facilities, primarily related to noise, economics, displacement, construction, traffic and air quality. Primarily these comments were related to Site #17 - Marine/Redondo Beach and Division 22 Northern Expansion Alternatives. One comment was received related to parklands and historic and cultural resources concerning Edward Vincent J. Park.

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