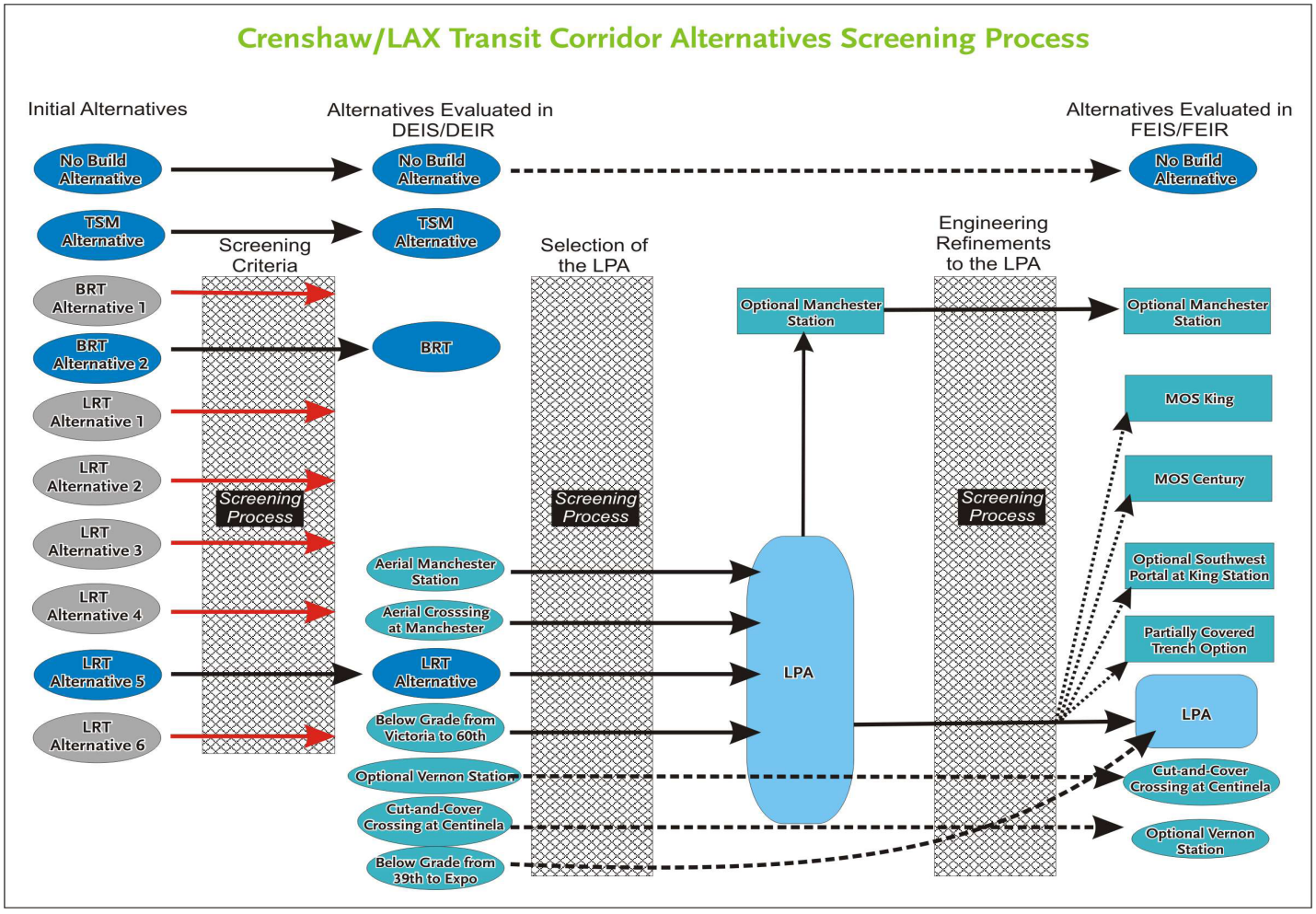
CONSIDERATION OF ALTERNATIVES

LAX Transit Corridor Project would provide transportation and transit improvements that would provide the area with an energy-efficient way of reducing the number of vehicles on roadways and freeways. This would contribute to the improvement of Southern California's regional and local air quality, and a reduction in greenhouse gas emissions. Moreover, both Federal and State government are placing increased emphasis on improving the sustainability of neighborhoods and communities. Improved accessibility utilizing transit improvements will greatly aid in achieving sustainability for neighborhoods and communities within the corridor that are highly dependent on access to employment, services and education resources outside of the boundaries of the corridor.

ES.3 Alternatives Considered

As part of the environmental review process, Metro followed an established protocol to identify the transit alternatives and issues to be analyzed, including seeking input from the public, corridor stakeholders, and other affected parties. The alternatives in the DEIS/DEIR provided a reasonable range of possible alternatives, which met the project goals and objectives. As part of this process, Metro considered all reasonable alternatives before selecting the preferred alternative.

The process typically results in the narrowing down of options and alternatives are eliminated based on their effectiveness, environmental impacts, efficiency, financial feasibility, and equity. The end result of the process is the selection of a locally preferred alternative, or LPA, by the Metro Board. The identification and screening of the alternatives is shown below.



CONSIDERATION OF ALTERNATIVES

Initial alignment alternatives were built up from a variety of alignments in the corridor.

Locally Preferred Alternative Selection Process

Prior to the selection of a Locally Preferred Alternative (LPA), the initial alternatives were presented at scoping meetings and reviewed with input from the public and various agencies. The alternatives were screened using engineering and environmental constraints such as comparing transit design configurations and alignments to existing right-of-way widths and then to the surrounding community and environment. The alternatives included a No-Build Alternative, a Transportation System Management (TSM) Alternative, a Bus Rapid Transit (BRT) and Light Rail Transit (LRT) operating along different alignments.

Evaluation of Alternatives

A list of criteria was used in order to compare the performance of each alternative.

These criteria included:

- Regional Connectivity
- Key Environmental Effects
- Economic Development/Land Use Planning
- Ridership
- Travel Time and Reliability
- Cost-Effectiveness
- Financial Capability
- Regulatory Constraints

The results of the analysis showed that the LRT Alternative would:

- Generate the greatest benefits to travel time along the corridor;
- Generate more riders along the segment between the Exposition Line and the Metro Green Line;
- Improve accessibility for passengers in several corridors;

What is an LPA? The DEIS/DEIR process culminated in the Metro Board of Directors making a recommendation for the Locally Preferred Alternative (LPA). A LPA is the project alternative that the Lead Agency feels would best balance the needs of the population for which the project serves. This recommendation was based on the results of the environmental evaluation as well as public opinion conveyed throughout the public participation process. The selection of an LPA has allowed the project to move forward into more advanced design and engineering, with a more detailed environmental analysis as presented in this FEIS/FEIR.

- Provide economic development in the corridor;
- Create more opportunities for linkages with adjacent development
- Provide the largest degree of travel time savings, reliability and ridership for comparable segments;
- Provide the strongest support of community goals for economic development; and
- Provide connections with other elements of the Metro rail system, including the ability to facilitate a connection to LAX airport-service.

Selection of a Locally Preferred Alternative

Following circulation of the DEIS/DEIR, a LPA Recommendation Report was prepared which proposed the adoption of the Light Rail Transit Alternative, including several design options, as the locally preferred alternative. Based on the environmental review, conceptual engineering activities and technical studies, as well as feedback from an extensive community outreach program, the Metro Board of Directors adopted the Light Rail Transit Alternative as the Locally Preferred Alternative.

The Board Adopted LPA Included the Following Options:

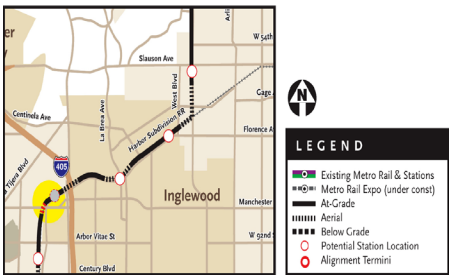
Design Option 1

Design Option 1 involves an aerial station on the north side of Century Boulevard instead of an at-grade station located approximately 1,500 feet north of Century Boulevard near 96th Street.

Design Option 1 is an elevated station at Century Boulevard.

Design Option 2

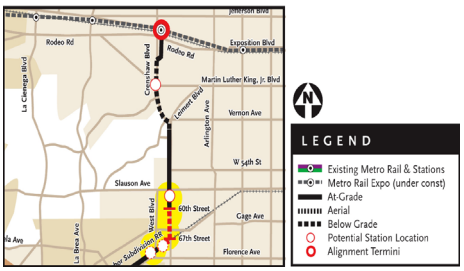
Design Option 2 involves an aerial crossing rather than an at-grade crossing at Manchester Avenue. An aerial crossing over Manchester Avenue would replace the at-grade LRT alignment and would extend an aerial alignment approximately 1,300 feet within the Harbor Subdivision. The over crossing would consist of an 800-foot bridge and 250-foot approaches on each side. The aerial alignment would return to grade on the north side of Manchester Avenue before the at-grade station proposed on the north side of Hindry Avenue.



Design Option 2 is an elevated crossing above Manchester Avenue

Design Option 4

Design Option 4 involves a cut-and-cover alignment between Victoria Avenue and 60th Street instead of an aerial alignment, starting on Crenshaw Boulevard and extending into the Harbor Subdivision. The below-grade alignment would be built as a cut-and- cover tunnel.



Design Option 4 is a below grade alignment from 60th street to Victoria Avenue.

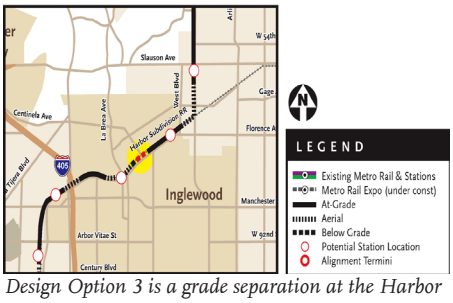
Based on the evaluation, Design Options 1, 2 and 4 would address technical and environmental requirements and woule best meet the goals and objectives established for the corridor while staying within the proposed budget for the project. Design Option 1 would facilitate a potential connection to LAX, providing the largest amount of regional connectivity which would lead to higher potential ridership once that connection is established. Design Option 2 would eliminate potential traffic impacts at the Manchester Avenue crossing. This key environmental effect would be achieved at a relatively low cost compared to the other design options. Design Option 4 would also eliminate key environmental effects, specifically related to the aerial structure impacts to the visual character of the Hyde Park neighborhood, which is a low income area that is subject to environmental justice consideration. Because these aesthetic and community division effects would be disproportionately placed on the low income Hyde Park community environmental justice impacts would also occur. Design Option 4 eliminates these potential environmental effects. For these reasons, Design Options 1, 2, and 4 were recommended to be incorporated into the LPA.

Design Options Carried Forward with the LPA

Three other design options were not recommended as part of the LPA but were authorized for continued environmental review and advanced conceptual engineering so that they could be implemented at a later time, should funding become available. The three design options to be carried forward included:

Design Option 3

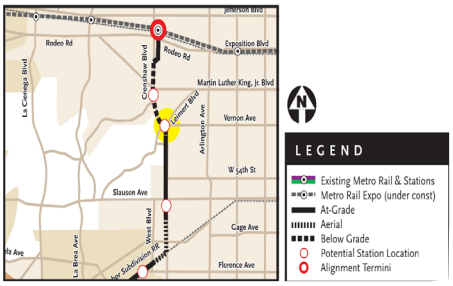
Design Option 3 involves a cut-and-cover crossing instead of an at-grade crossing at Centinela Avenue. An LRT under-crossing at Centinela Avenue would replace the at-grade LRT alignment proposed under the LPA and would extend approximately 2,000 feet within the Harbor Subdivision. The under-crossing would consist of a 200-foot long bridge with a 700-foot depressed LRT alignment section on the west and an 1,100-foot depressed section on the east side of Centinela Avenue.



Design Option 3 is a grade separation at the Harbor Subdivision and Centinela Avenue.

Design Option 5

Design Option 5 involves a below-grade station at Vernon Avenue in Leimert Park. The Crenshaw/Vernon station is an optional below-grade station. This would be within a half mile of Crenshaw/King Station.



Design Option 5 considers the feasiblity of two stations in close proximity at Crenshaw/King and at Crenshaw/Vernon. The Crenshaw/Vernon station is the optional station.

Design Option 6

Design Option 6 involves a below-grade alignment between 39th Street and Exposition with a below-grade station at Crenshaw Boulevard and Exposition Boulevard. A below-grade alignment between 39th Street and Exposition Boulevard would replace the at-grade LPA alignment and would extend the tunnel north of Martin Luther King Jr. Boulevard to Exposition Boulevard with a below-grade station.

Design Option 6 is a below grade alignment along Crenshaw Boulevard between Exposition and 39th Street.

Supplemental Draft Environmental Impact Statement/Recirculated Draft Environmental Impact Report

Four initial maintenance and operations facility sites were evaluated in the DEIS/DEIR. These sites were compared using evaluation criteria such as size and proximity; land use and zoning; land ownership; buffers; potential expansion; community disruption; and most valuable and best use. Based on the analysis, these four potential maintenance sites were ranked from most preferred to least preferred.

Based on public comments and concerns expressed during the comment period, the Metro Board, as part of its actions on the Project, removed from further consideration the two maintenance facility sites (Sites B and D) in the cities of Los Angeles (Westchester) and El Segundo that were evaluated in the DEIS/DEIR. A Supplemental Draft Environmental Impact Statement (SDEIS)/Recirculated Draft Environmental Impact Report (RDEIR) was prepared to provide environmental analysis of four new alternative maintenance facility sites for the proposed project. In addition, a Section 4(f) Evaluation of eligible historic resources and parklands within the updated APE for the project was completed.

Refinements to the Locally Preferred Alternative (LPA)

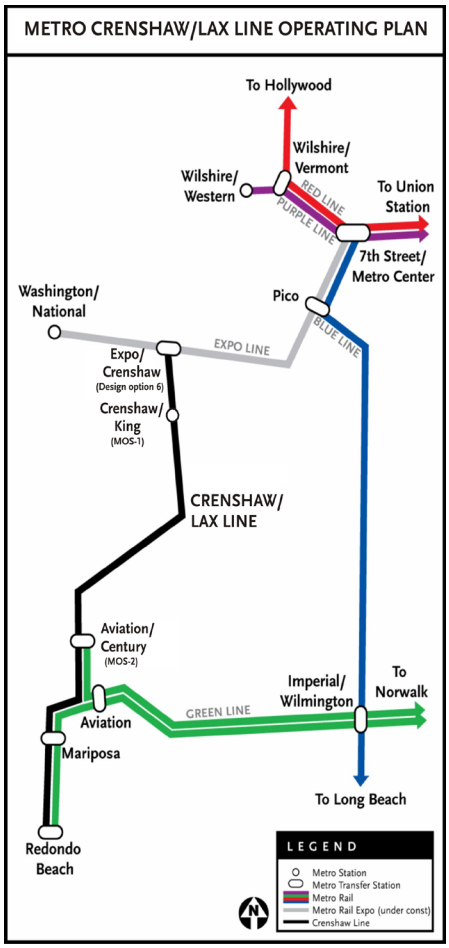
Following adoption of the LRT as the Locally Preferred Alternative, various refinements were required due to engineering constraints, environmental concerns, and budgetary considerations. The refinements to the LPA associated with this base project are described below.

La Brea Avenue Crossing.

An open trench configuration across La

CONSIDERATION OF ALTERNATIVES

LPA Alignment. The LPA route is approximately 8.5 miles in length. It extends from the Exposition Light Rail line to the Green Line. This baseline option includes at grade, below grade and elevated sections, with six stations, as shown above.



LPA operation will involve a single service from Exposition/Crenshaw to Aviation/Century, with a connection to the Redondo Beach Station along new infrastructure and the Metro Green Line.

Brea Avenue with an at-grade station east of the Market Street.

Segment from 39th Street to Exposition Boulevard.

The LPA's northern terminus at the Crenshaw/Exposition Station had an at-grade configuration with a design option for a below-grade alignment (Design Option 6), which would extend a tunnel between 39th Street and a below-grade Crenshaw/Exposition Station. During the ACE phase, all analyzed at-grade configurations were determined infeasible due to physical constraints and significant traffic and land use impacts. Design Option 6 is determined to be a feasible alternative to an at-grade alignment and is recommended for inclusion into the project definition, contingent upon the section's financial feasibility. In the event that Design Option 6 cannot be incorporated into the project, the FEIS/FEIR also considers two Minimum Operable Segments (MOS) alternatives that would be consistent with the Metro financial plan for the project. MOS-King would extend from the Metro Green Line to the King Station, at a distance of 8