

Table ES.6. Summary of Impacts (continued)

Project Goal/Criteria/Measure	No-Build Alternative	TSM Alternative	BRT Alternative	LRT Alternative
Environmental Justice	Disproportionate Adverse Effects related to transit service equity and traffic congestion along Crenshaw Boulevard, Florence Avenue and Aviation Boulevard	Disproportionate Adverse Effects related to traffic congestion along Crenshaw Boulevard	Disproportionate Adverse Effects related to aesthetics and parklands adjacent to and along Edward Vincent Jr. Park	Disproportionate Adverse Effects related to community cohesion and aesthetics in Hyde park area on Crenshaw Boulevard

Source: Parsons Brinckerhoff, 2009

Table ES.7. LRT Alternative Design Options and Impacts Summary

Project Goal/Criteria/Measure	LRT Alternative Design Option 1	LRT Alternative Design Option 2	LRT Alternative Design Option 3	LRT Alternative Design Option 4	LRT Alternative Design Option 5	LRT Alternative Design Option 6
Description	An aerial station at Century Boulevard instead of an at-grade station at LAX.	An aerial crossing instead of an at-grade crossing at Manchester Avenue.	A cut and cover crossing instead of an at-grade crossing at Centinela Avenue.	A cut and cover alignment instead of an aerial alignment between Victoria Avenue and 60th Street.	A subway station at Vernon Avenue near Leimert Park.	A below-grade alignment between 39th Street and Exposition with a subway station instead of an at-grade alignment north of 39th Street with connection to Exposition and an at-grade station.
Estimated Capital Costs of Base LRT Alternative + Design Option (000s 2008 Dollars)	1,316,863	1,321,889	1,318,848	1,334,259	1,460,795	1,541,394
Net Incremental Costs of Design Option (000s 2008 Dollars)	11,265	16,291	13,250	28,661	155,197	235,796
Environmental						
<i>Land Use and Development</i>						
Regional Land Use	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Adverse Effect
Local Land Use and Development	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Adverse Effect	Potential Adverse Effect, intensification of high density development in the Leimert Park area may result in an adverse effect	No Adverse Effect
Division of Established Community	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Adverse Effect
City of Los Angeles Transportation Policy	Consistent	Consistent	Consistent	Consistent	Consistent	Consistent

Table ES.7. LRT Alternative Design Options and Impacts Summary

Project Goal/Criteria/Measure	LRT Alternative Design Option 1	LRT Alternative Design Option 2	LRT Alternative Design Option 3	LRT Alternative Design Option 4	LRT Alternative Design Option 5	LRT Alternative Design Option 6
City of Los Angeles General Plan, - Transportation and Land Use Elements	More Consistent than the Base LRT Alternative, the improved traffic flows on the surrounding streets would result in better mobility for the area	More Consistent than the Base LRT Alternative, the improved traffic flows on the surrounding streets would result in better mobility for the area	More Consistent than the Base LRT Alternative, the improved traffic flows on the surrounding streets would result in better mobility for the area	More Consistent than the Base LRT Alternative, the improved traffic flows on the surrounding streets would result in better mobility for the area	More Consistent than the Base LRT Alternative, the improved traffic flows on the surrounding streets would result in better mobility for the area	More Consistent than the Base LRT Alternative, the improved traffic flows on the surrounding streets would result in better mobility for the area
County of Los Angeles General Plan	Consistent	Consistent	Consistent	Consistent	Consistent	Consistent
City of Inglewood General Plan	Consistent	Consistent	Consistent	Consistent	Consistent	Consistent
City of El Segundo General Plan	Consistent	Consistent	Consistent	Consistent	Consistent	Consistent
City of Hawthorne General Plan	Consistent	Consistent	Consistent	Consistent	Consistent	Consistent
City of Los Angeles Municipal Code RAS and Density Bonus Ordinance	Consistent	Consistent	Consistent	Consistent	Consistent	Consistent
West Adams, Baldwin Hills, Leimert Park, Westchester Playa del Rey and Wilshire Community Plans	Consistent	Consistent	Consistent	Consistent	Consistent	Consistent
Crenshaw Corridor Specific Plan	Consistent, would enhance the community through increased mobility while preserving the visual character	Consistent, would enhance the community through increased mobility while preserving the visual character	Not within the specific plan area	Consistent, would increase the mobility through the area and preserve the low-density residential character of the community more than the Base LRT Alternative.	Consistent, would preserve low-density residential community and not affect the character of the surrounding residential community.	Consistent, would preserve low-density residential community and not affect the character of the surrounding residential community.
Park Mile Specific Plan	Consistent, would maintain low density residential area and park-like setting	Consistent, would maintain low density residential area and park-like setting	Not within the specific plan area	Not within the specific plan area	Not within the specific plan area	Not within the specific plan area

Table ES.7. LRT Alternative Design Options and Impacts Summary

Project Goal/Criteria/Measure	LRT Alternative Design Option 1	LRT Alternative Design Option 2	LRT Alternative Design Option 3	LRT Alternative Design Option 4	LRT Alternative Design Option 5	LRT Alternative Design Option 6
CRA/LA, Mid-City Corridors and Crenshaw and Crenshaw/Slaughter Corridors Redevelopment Projects	More Consistent than the Base LRT Alternative because it would be located closer to Century Boulevard where the majority of pedestrian activity in the area occurs.	More Consistent than the Base LRT Alternative because it would better enhance automobile circulation, eliminating delay from light rail vehicle crossings	More Consistent than the Base LRT Alternative because it would better enhance automobile circulation, eliminating delay from light rail vehicle crossings	More Consistent than the Base LRT Alternative because it would better enhance automobile circulation, eliminating delay from light rail vehicle crossings	More Consistent than the Base LRT Alternative because it would better enhance automobile circulation, eliminating delay from light rail vehicle crossings	More Consistent than the Base LRT Alternative because it would better enhance automobile circulation, eliminating delay from light rail vehicle crossings
LAX Master Plan	More Consistent than the Base LRT Alternative, the LAX connection point would facilitate connections with passengers from transit services other than light rail traveling along the Harbor Subdivision right-of-way	Consistent, would develop a connection point to LAX	Consistent, would develop a connection point to LAX	Consistent, would develop a connection point to LAX	Consistent, would develop a connection point to LAX	Consistent, would develop a connection point to LAX
Displacements	None	None	1 partial parcel	<ul style="list-style-type: none"> • 3 partial parcels, 1 on Crenshaw Blvd. • 2 full parcels, 1 on Crenshaw Blvd. 	1 partial parcel on Crenshaw Blvd.	None
Community Cohesion	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Adverse Effect

Table ES.7. LRT Alternative Design Options and Impacts Summary

Project Goal/Criteria/Measure	LRT Alternative Design Option 1	LRT Alternative Design Option 2	LRT Alternative Design Option 3	LRT Alternative Design Option 4	LRT Alternative Design Option 5	LRT Alternative Design Option 6
Visual	Less than Adverse Effect	Less than Adverse Effect	<ul style="list-style-type: none"> • Less than Adverse Effect with mitigation. • Mature palm trees removed along Crenshaw Blvd. at Edward Vincent Jr. Park 	Less than Adverse Effect	Less than Adverse Effect	Less than Adverse Effect
Air Quality	<ul style="list-style-type: none"> • Adverse Effect • NO_x exceeds federal regional threshold • 3,249 tons per year increase in Green House Gases 	<ul style="list-style-type: none"> • Adverse Effect • NO_x exceeds federal regional threshold • 3,249 tons per year increase in Green House Gases 	<ul style="list-style-type: none"> • Adverse Effect • NO_x exceeds federal regional threshold • 3,249 tons per year increase in Green House Gases 	<ul style="list-style-type: none"> • Adverse Effect • NO_x exceeds federal regional threshold • 3,249 tons per year increase in Green House Gases 	<ul style="list-style-type: none"> • Adverse Effect, • NO_x exceeds federal regional threshold • 3,249 tons per year increase in Green House Gases 	<ul style="list-style-type: none"> • Adverse Effect • NO_x exceeds federal regional threshold • 3,249 tons per year increase in Green House Gases

Table ES.7. LRT Alternative Design Options and Impacts Summary

Project Goal/Criteria/Measure	LRT Alternative Design Option 1	LRT Alternative Design Option 2	LRT Alternative Design Option 3	LRT Alternative Design Option 4	LRT Alternative Design Option 5	LRT Alternative Design Option 6
Noise and Vibration	<ul style="list-style-type: none"> • Adverse Effect • Moderate LRT pass by noise impact between 54th St. and Victoria Ave. • Moderate at-grade signal noise impacts at Centinela Ave. and West Blvd. • Moderate special traffic work noise impact at the Expo Line station and at the Century Blvd. station 	<ul style="list-style-type: none"> • Adverse Effect • Moderate LRT pass by noise impact between 54th St. and Victoria Ave. • Moderate at-grade signal noise impacts at Centinela Ave. and West Blvd. • Moderate special traffic work noise impact at the Expo Line station and at the Century Blvd. station 	<ul style="list-style-type: none"> • Adverse Effect • Moderate LRT pass by noise impact between 54th St. and Victoria Ave. • Moderate at-grade signal noise impacts at West Blvd. • Moderate special traffic work noise impact at the Expo Line station and at the Century Blvd. station 	<ul style="list-style-type: none"> • Adverse Effect • Moderate LRT pass by noise impact between 54th St. and 60th St. • Moderate at-grade signal noise impacts at Centinela Ave. and West Blvd. • Moderate special traffic work noise impact at the Expo Line station and at the Century Blvd. station 	<ul style="list-style-type: none"> • Adverse Effect • Moderate LRT pass by noise impact between 54th St. and Victoria Ave. • Moderate at-grade signal noise impacts at Centinela Ave. and West Blvd. • Moderate special traffic work noise impact at the Expo Line station and at the Century Blvd. station 	<ul style="list-style-type: none"> • Adverse Effect • Moderate LRT pass by noise impact between 54th St. and Victoria Ave. • Moderate at-grade signal noise impacts at Centinela Ave. and West Blvd. • Moderate special traffic work noise impact at the Expo Line station and at the Century Blvd. station
Ecosystems and Biological Resources	<ul style="list-style-type: none"> • Less than Adverse Effect with mitigation • Mature palm trees removed at Edward Vincent Jr. Park • Native trees and vegetation removed 	<ul style="list-style-type: none"> • Less than Adverse Effect with mitigation • Mature palm trees removed at Edward Vincent Jr. Park • Native trees and vegetation removed 	<ul style="list-style-type: none"> • Less than Adverse Effect with mitigation • Mature palm trees removed at Edward Vincent Jr. Park • Native trees and vegetation removed 	<ul style="list-style-type: none"> • Less than Adverse Effect with mitigation. • Mature palm trees removed at Edward Vincent Jr. Park • Native trees and vegetation removed 	<ul style="list-style-type: none"> • Less than Adverse Effect with mitigation • Mature palm trees removed at Edward Vincent Jr. Park • Native trees and vegetation removed 	<ul style="list-style-type: none"> • Less than Adverse Effect with mitigation • Mature palm trees removed at Edward Vincent Jr. Park • Native trees and vegetation removed

Table ES.7. LRT Alternative Design Options and Impacts Summary

Project Goal/Criteria/Measure	LRT Alternative Design Option 1	LRT Alternative Design Option 2	LRT Alternative Design Option 3	LRT Alternative Design Option 4	LRT Alternative Design Option 5	LRT Alternative Design Option 6
Geotechnical	<ul style="list-style-type: none"> • Less than Adverse Effect with mitigation. • Potential Adverse Effect • Discovery of subsurface gases • Ground deformation from Newport-Inglewood fault • Seismically induced settlement 	<ul style="list-style-type: none"> • Less than Adverse Effect with mitigation. • Potential Adverse Effect • Discovery of subsurface gases • Ground deformation from Newport-Inglewood fault • Seismically induced settlement 	<ul style="list-style-type: none"> • Less than Adverse Effect with mitigation. • Potential Adverse Effect • Discovery of subsurface gases • Ground deformation from Newport-Inglewood fault • Seismically induced settlement 	<ul style="list-style-type: none"> • Less than Adverse Effect with mitigation. • Potential Adverse Effect • Discovery of subsurface gases • Ground deformation from Newport-Inglewood fault • Seismically induced settlement 	<ul style="list-style-type: none"> • Less than Adverse Effect with mitigation. • Potential Adverse Effect • Discovery of subsurface gases • Ground deformation from Newport-Inglewood fault • Seismically induced settlement 	<ul style="list-style-type: none"> • Less than Adverse Effect with mitigation. • Potential Adverse Effect • Discovery of subsurface gases • Ground deformation from Newport-Inglewood fault • Seismically induced settlement
Water	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Adverse Effect

Table ES.7. LRT Alternative Design Options and Impacts Summary

Project Goal/Criteria/Measure	LRT Alternative Design Option 1	LRT Alternative Design Option 2	LRT Alternative Design Option 3	LRT Alternative Design Option 4	LRT Alternative Design Option 5	LRT Alternative Design Option 6
Historic, Archaeological, Paleontological	<ul style="list-style-type: none"> • Adverse Effect to Angelus Funeral Home from proposed TPSS site immediately north and from partial take of Century Lounge • Potential Adverse Effects to Department of Water and Power, May Company Department Store (now Macy's Department Store), Broadway Department Store (now Wal-Mart), Maverick's Flat and Leimert Park and in the rare case of potential settlement and damage that may result during excavation. 	<ul style="list-style-type: none"> • Adverse Effect to Angelus Funeral Home from proposed TPSS site immediately north and from partial take of Century Lounge • Potential Adverse Effects to Department of Water and Power, May Company Department Store (now Macy's Department Store), Broadway Department Store (now Wal-Mart), Maverick's Flat and Leimert Park and in the rare case of potential settlement and damage that may result during excavation. 	<ul style="list-style-type: none"> • Adverse Effect to Angelus Funeral Home from proposed TPSS site immediately north and from partial take of Century Lounge • Potential Adverse Effects to Department of Water and Power, May Company Department Store (now Macy's Department Store), Broadway Department Store (now Wal-Mart), Maverick's Flat and Leimert Park and in the rare case of potential settlement and damage that may result during excavation. 	<ul style="list-style-type: none"> • Adverse Effect to Angelus Funeral Home from proposed TPSS site immediately north and from partial take of Century Lounge • Potential Adverse Effects to Department of Water and Power, May Company Department Store (now Macy's Department Store), Broadway Department Store (now Wal-Mart), Maverick's Flat and Leimert Park and in the rare case of potential settlement and damage that may result during excavation. 	<ul style="list-style-type: none"> • Adverse Effect to Angelus Funeral Home from proposed TPSS site immediately north and from partial take of Century Lounge • Potential Adverse Effects to Department of Water and Power, May Company Department Store (now Macy's Department Store), Broadway Department Store (now Wal-Mart), Maverick's Flat and Leimert Park and in the rare case of potential settlement and damage that may result during excavation. 	<ul style="list-style-type: none"> • Adverse Effect to Angelus Funeral Home from proposed TPSS site immediately north and from partial take of Century Lounge • Potential Adverse Effects to Department of Water and Power, May Company Department Store (now Macy's Department Store), Broadway Department Store (now Wal-Mart), Maverick's Flat and Leimert Park and in the rare case of potential settlement and damage that may result during excavation.

Table ES.7. LRT Alternative Design Options and Impacts Summary

Project Goal/Criteria/Measure	LRT Alternative Design Option 1	LRT Alternative Design Option 2	LRT Alternative Design Option 3	LRT Alternative Design Option 4	LRT Alternative Design Option 5	LRT Alternative Design Option 6
Parklands and Community Facilities	No Adverse Effect	No Adverse Effect	No Adverse Effect, Edward Vincent Jr. Park – de minimis Section 4(f) effect for removing the mature palm trees, but not affecting the park features, uses, or attributes	No Adverse Effect	No Adverse Effect	No Adverse Effect
Economic	<ul style="list-style-type: none"> • No Adverse Effect • 880 additional jobs, 272 transit operations • \$73.2 million increase in economic output • \$42.4 million increase in household earnings • \$113,500 property tax loss 	<ul style="list-style-type: none"> • No Adverse Effect • 880 additional jobs, 272 transit operations • \$73.2 million increase in economic output • \$42.4 million increase in household earnings • \$113,500 property tax loss 	<ul style="list-style-type: none"> • No Adverse Effect • 880 additional jobs, 272 transit operations • \$73.2 million increase in economic output • \$42.4 million increase in household earnings • \$113,500 property tax loss 	<ul style="list-style-type: none"> • No Adverse Effect • 880 additional jobs, 272 transit operations • \$73.2 million increase in economic output • \$42.4 million increase in household earnings • \$113,500 property tax loss 	<ul style="list-style-type: none"> • No Adverse Effect • 880 additional jobs, 272 transit operations • \$73.2 million increase in economic output • \$42.4 million increase in household earnings • \$113,500 property tax loss 	<ul style="list-style-type: none"> • No Adverse Effect • 880 additional jobs, 272 transit operations • \$73.2 million increase in economic output • \$42.4 million increase in household earnings • \$113,500 property tax loss

Table ES.7. LRT Alternative Design Options and Impacts Summary

Project Goal/Criteria/Measure	LRT Alternative Design Option 1	LRT Alternative Design Option 2	LRT Alternative Design Option 3	LRT Alternative Design Option 4	LRT Alternative Design Option 5	LRT Alternative Design Option 6
Safety and Security	<ul style="list-style-type: none"> • No Adverse Effects with mitigation • Train crossings would occur with traffic signals • Pedestrian and motorist gates and visual and audible warning devices would be provided • Stations will include monitoring equipment and be lighted to avoid shadows 	<ul style="list-style-type: none"> • No Adverse Effects with mitigation • Would enhance pedestrian safety, they can cross under aerial structure. • Train crossings would occur with traffic signals • Pedestrian and motorist gates and visual and audible warning devices would be provided Stations will include monitoring equipment and be lighted to avoid shadows 	<ul style="list-style-type: none"> • No Adverse Effects with mitigation • Would eliminate collisions with trains, LRVs, pedestrians, or motorists at Centinela Ave. • Train crossings would occur with traffic signals • Pedestrian and motorist gates and visual and audible warning devices would be provided • Stations will include monitoring equipment and be lighted to avoid shadows 	<ul style="list-style-type: none"> • No Adverse Effects with mitigation • Train crossings would occur with traffic signals • Pedestrian and motorist gates and visual and audible warning devices would be provided • Stations will include monitoring equipment and be lighted to avoid shadows 	<ul style="list-style-type: none"> • No Adverse Effects with mitigation • Train crossings would occur with traffic signals • Pedestrian and motorist gates and visual and audible warning devices would be provided • Stations will include monitoring equipment and be lighted to avoid shadows 	<ul style="list-style-type: none"> • No Adverse Effects with mitigation • Would eliminate collisions LRVs, and motorists • Train crossings would occur with traffic signals • Pedestrian and motorist gates and visual and audible warning devices would be provided • Stations will include monitoring equipment and be lighted to avoid shadows

Table ES.7. LRT Alternative Design Options and Impacts Summary

Project Goal/Criteria/Measure	LRT Alternative Design Option 1	LRT Alternative Design Option 2	LRT Alternative Design Option 3	LRT Alternative Design Option 4	LRT Alternative Design Option 5	LRT Alternative Design Option 6
Construction Impacts	<ul style="list-style-type: none"> • No Adverse Effects with mitigation, except air quality • Temporary construction noise, vibration, street closures, cars using neighborhood streets to avoid construction, visible staging areas with equipment, stockpiles and concrete barriers, increased emissions, and pedestrian and motor vehicle access, safety, and security effects 	<ul style="list-style-type: none"> • No Adverse Effects with mitigation, except air quality • Temporary construction noise, vibration, street closures, cars using neighborhood streets to avoid construction, visible staging areas with equipment, stockpiles and concrete barriers, increased emissions, and pedestrian and motor vehicle access, safety, and security effects 	<ul style="list-style-type: none"> • No Adverse Effects with mitigation, except air quality • Temporary construction noise, vibration, street closures, cars using neighborhood streets to avoid construction, visible staging areas with equipment, stockpiles and concrete barriers, increased emissions, and pedestrian and motor vehicle access, safety, and security effects • Potential nighttime glare may affect the residences located along La Colina Drive 	<ul style="list-style-type: none"> • No Adverse Effects with mitigation, except air quality • Temporary construction noise, vibration, street closures, cars using neighborhood streets to avoid construction, visible staging areas with equipment, stockpiles and concrete barriers, increased emissions, and pedestrian and motor vehicle access, safety, and security effects 	<ul style="list-style-type: none"> • No Adverse Effects with mitigation, except air quality • Temporary construction noise, vibration, street closures, cars using neighborhood streets to avoid construction, visible staging areas with equipment, stockpiles and concrete barriers, increased emissions, and pedestrian and motor vehicle access, safety, and security effects 	<ul style="list-style-type: none"> • No Adverse Effects with mitigation, except air quality • Temporary construction noise, vibration, street closures, cars using neighborhood streets to avoid construction, visible staging areas with equipment, stockpiles and concrete barriers, increased emissions, and pedestrian and motor vehicle access, safety, and security effects • Potential nighttime glare may affect the multi-family residences and other sensitive uses along Crenshaw Boulevard

Table ES.7. LRT Alternative Design Options and Impacts Summary

Project Goal/Criteria/Measure	LRT Alternative Design Option 1	LRT Alternative Design Option 2	LRT Alternative Design Option 3	LRT Alternative Design Option 4	LRT Alternative Design Option 5	LRT Alternative Design Option 6
Construction Impacts (continued)	<ul style="list-style-type: none"> • Potential nighttime glare may affect a motel at Century and Aviation Boulevards • Increased construction period compared to the LRT Base Alternative 	<ul style="list-style-type: none"> • There are no sensitive uses located at Manchester Avenue and the Harbor Subdivision right-of-way that would be affected by nighttime construction lighting • Increased construction period compared to the LRT Base Alternative 	<ul style="list-style-type: none"> • Increased construction period compared to the LRT Base Alternative 	<ul style="list-style-type: none"> • Potential nighttime glare may affect the multi-family residences and motel along Crenshaw Boulevard, south of 60th Street and West Angeles Villas, a senior living complex at Crenshaw Boulevard and 60th Street • Increased construction period compared to the LRT Base Alternative 	<ul style="list-style-type: none"> • Potential nighttime glare may affect the residential and other sensitive uses east of the station • Increased construction period compared to the LRT Base Alternative 	<ul style="list-style-type: none"> • Increased construction period compared to the LRT Base Alternative
Growth Inducing	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Adverse Effect

Table ES.7. LRT Alternative Design Options and Impacts Summary

Project Goal/Criteria/Measure	LRT Alternative Design Option 1	LRT Alternative Design Option 2	LRT Alternative Design Option 3	LRT Alternative Design Option 4	LRT Alternative Design Option 5	LRT Alternative Design Option 6
Cumulative Impacts	<ul style="list-style-type: none"> • No Adverse Effect, except air quality. • Decrease in VMT enhances traffic circulation • Displacement and relocation • Division of Hyde Park Community • Increase in green house gases • Decrease in energy consumption 	<ul style="list-style-type: none"> • No Adverse Effect, except air quality. • Decrease in VMT enhances traffic circulation • Displacement and relocation • Division of Hyde Park Community • Increase in green house gases • Decrease in energy consumption 	<ul style="list-style-type: none"> • No Adverse Effect, except air quality. • Decrease in VMT enhances traffic circulation • Displacement and relocation • Division of Hyde Park Community • Increase in green house gases • Decrease in energy consumption 	<ul style="list-style-type: none"> • No Adverse Effect, except air quality. • Decrease in VMT enhances traffic circulation • Displacement and relocation • Division of Hyde Park Community • Increase in green house gases • Decrease in energy consumption 	<ul style="list-style-type: none"> • No Adverse Effect, except air quality. • Decrease in VMT enhances traffic circulation • Displacement and relocation • Division of Hyde Park Community • Increase in green house gases • Decrease in energy consumption 	<ul style="list-style-type: none"> • No Adverse Effect, except air quality. • Decrease in VMT enhances traffic circulation • Displacement and relocation • Division of Hyde Park Community • Increase in green house gases • Decrease in energy consumption
Environmental Justice	No Disproportionate Adverse Effects	No Disproportionate Adverse Effects	No Disproportionate Adverse Effects	No Disproportionate Adverse Effects	No Disproportionate Adverse Effects	No Disproportionate Adverse Effects

Source: Parsons Brinckerhoff, 2009

Table ES-8 Maintenance and Operations Facilities and Impacts Summary

Project Goal/Criteria/Measure	Maintenance and Operations Facility B	Maintenance and Operations Facility D
Description	Approximately 16.3 acres and bound by 83rd Street, Harbor Subdivision right-of-way, and Isis Avenue	Approximately 14.8 acres and in close proximity to the Metro Green Line and bound by the Harbor Subdivision, a Union Pacific Branch Line and Rosecrans Avenue
Environment		
Land Use and Development		
Regional Land Use	No Adverse Effect	No Adverse Effect
Local Land Use and Development	Consistent	Consistent
Division of Established Community	No Adverse Effect	No Adverse Effect
City of Los Angeles Transportation Policy	Consistent	Consistent
City of Los Angeles General Plan, - Transportation and Land Use Elements	Consistent	Consistent
County of Los Angeles General Plan	Consistent	Consistent
City of Inglewood General Plan	Consistent	Consistent
City of El Segundo General Plan	Consistent	Consistent
City of Hawthorne General Plan	Consistent	Consistent
City of Los Angeles Municipal Code RAS and Density Bonus Ordinance	Consistent	Consistent
West Adams, Baldwin Hills, Leimert Park, Westchester Playa Del Rey and Wilshire Community Plans	Consistent	Consistent
Crenshaw Corridor Specific Plan	Not Applicable	Not Applicable
Park Mile Specific Plan	Not Applicable	Not Applicable
CRA/LA, Mid-City Corridors and Crenshaw and Crenshaw/Slauson Corridors Redevelopment Projects	Consistent	Consistent
LAX Master Plan	Not Applicable	Not Applicable
Displacements	<ul style="list-style-type: none"> • 8 partial parcels • 9 full parcels 	<ul style="list-style-type: none"> • 10 partial parcels • 3 full parcel
Community Cohesion	No Adverse Effect	No Adverse Effect
Visual Quality	No Adverse Effect	No Adverse Effect
Air Quality	Adverse Effect, no mitigation feasible	Adverse Effect, no mitigation feasible
Noise and Vibration	No Adverse Effect	No Adverse Effect
Ecosystems and Biological Resources	No Adverse Effect	• No Adverse effect with mitigation. Native trees and vegetation removed
Geotechnical/Hazardous Materials	No Adverse Effect with mitigation	No Adverse Effect with mitigation
Water	No Adverse Effect	No Adverse Effect

Table ES-8 Maintenance and Operations Facilities and Impacts Summary

Project Goal/Criteria/Measure	Maintenance and Operations Facility B	Maintenance and Operations Facility D
Historic, Archaeological, Paleontological	Potential Adverse Effect to Kaiser Homes' production plant from a partial take	No Adverse Effect
Parklands and Community Facilities	No Adverse Effect	No Adverse Effect
Economic	No Adverse Effect, 17 industrial/ commercial structures displaced and \$113,500 property tax loss	No Adverse Effect, \$72,100 property tax loss
Safety and Security	No Adverse Effect	No Adverse Effect
Construction	No Adverse Effect with mitigation	No Adverse Effect with mitigation
Environmental Justice	No Adverse Effect	No Adverse Effect

Table ES.9. CEQA Determination Impact Summary With Mitigation Measures

Project Goal/Criteria/Measure	No-Build Alternative	TSM Alternative	BRT Alternative	LRT Alternative	LRT with Design Options	Maintenance and Operations Facility
Traffic						
Intersection Analysis	No Impact	No Impact	Significant and Unavoidable Impact	Significant and Unavoidable Impact	Significant and Unavoidable Impact	No Impact
Parking	No Impact	No Impact	Less-Than-Significant Impact	Less-Than-Significant Impact	No Impact	No Impact
Pedestrian/Bicycle Circulation	No Impact	No Impact	No Impact	No Impact	No Impact	No Impact
Mitigation Measure(s)	<p>T1 Between 48th Street and 60th Street the existing frontage road would be narrowed to provide one travel lane and one parking lane (eliminating parking on the inside lane of the frontage road). Crenshaw Boulevard would be widened to provide a semi-exclusive curb lane for buses, without any loss in northbound and southbound through traffic capacity on Crenshaw Boulevard.</p> <p>T2 Provide a southbound right turn overlap phase on Centinela Avenue or provide a second eastbound left turn lane in Florence Avenue.</p> <p>T3 Extend the Florence Avenue southbound right turn bay by 415 feet, add a southbound right turn overlap phase, and add a protected phase for the westbound left turn movement on Manchester Boulevard.</p> <p>T4 Prohibit northbound and southbound left turns from Crenshaw Boulevard to 54th Street.</p> <p>T5 A combination of the following four basic control approaches shall be recommended by Metro to political jurisdictions along the alignment to reduce impacts of Metro patron parking in neighborhoods:</p> <ul style="list-style-type: none"> ■ Prohibit on-street parking ■ Time-limited parking ■ Resident permit parking ■ Non-resident permits for registered carpools who work in the zone <p>T6 A combination of the following four basic control approaches shall be recommended by Metro to political jurisdictions along the alignment to reduce impacts of Metro patron parking in neighborhoods:</p> <ul style="list-style-type: none"> ■ Prohibit on-street parking ■ Time-limited parking ■ Resident permit parking ■ Non-resident permits for registered carpools who work in the zone 					
Land Use						
Division of Established Community	No Impact	Less-Than-Significant Impact	Less-Than-Significant Impact	Less-Than-Significant Impact	Less-Than-Significant Impact	Less-Than-Significant Impact
Adopted Plan Consistency	Significant Impact	Significant Impact	No Impact	No Impact	No Impact	No Impact

Table ES.9. CEQA Determination Impact Summary With Mitigation Measures

Project Goal/Criteria/Measure	No-Build Alternative	TSM Alternative	BRT Alternative	LRT Alternative	LRT with Design Options	Maintenance and Operations Facility
Surrounding Land Use Compatibility	No Impact	Less-Than-Significant Impact	Less-Than-Significant Impact	Less-Than-Significant Impact	Less-Than-Significant Impact	Less-Than-Significant Impact
Mitigation Measure(s)	None Required					
Displacements and Relocation	No Impact	No Impact	Less-Than-Significant Impact	Less-Than-Significant Impact	Less-Than-Significant Impact	Less-Than-Significant Impact
Mitigation Measure(s)	<p>DR1 Metro shall relocate or replace any of the mature palm trees adjacent to the Harbor Subdivision at Edward Vincent Park that require removal as a result of the proposed project. Relocation or replacement shall subject to the approval of the City of Inglewood Parks and Recreation Department.</p> <p>DR2 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 the Crenshaw Transit Corridor Project.</p>					
Community Cohesion	No Impact	No Impact	Less-Than-Significant Impact	Less-Than-Significant Impact	No Impact	No Impact
Mitigation Measure(s)	<p>CN1 For the aerial LRT structure segment along Crenshaw Boulevard in the Hyde Park neighborhood, design guidelines shall be prepared prior to construction phase of the project. Metro, the City of Los Angeles, and the CRA/LA will coordinate guidelines to integrate the aerial structure with the existing community. These guidelines shall provide for convenient and safe pedestrian access to cross the aerial structure and be compatible with city land use plans and include specific visual features to ensure that the aerial structure would be more consistent with the urban environment.</p> <p>CN2 For the aerial LRT structure segment along Crenshaw Boulevard in the Hyde Park neighborhood, Metro shall conduct community workshops, meetings or similar to obtain input from residents on this alignment segment for Metro's consideration. The public input needed would be regarding the potential visual, engineering, and/or art features of the aerial structure that may improve the visual quality of the area.</p>					
Visual	No Impact	No Impact	Significant and Unavoidable Impact	Significant and Unavoidable Impact	Significant and Unavoidable Impact	No Impact

Table ES.9. CEQA Determination Impact Summary With Mitigation Measures

Project Goal/Criteria/Measure	No-Build Alternative	TSM Alternative	BRT Alternative	LRT Alternative	LRT with Design Options	Maintenance and Operations Facility
Mitigation Measure(s)	<p>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 should follow the recommendations and guidance developed in the urban design analysis conducted for the proposed project (Parsons Brinckerhoff and RAW International, Inc., 2008). These guidelines 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.</p> <p>V2 At locations where existing land uses or vegetation is removed and neighboring uses are exposed to new views of the bus or transit system, additional landscaping will 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.</p> <p>V3 Where mature trees are removed due to roadway widening and/or realignment and/or to accommodate system components, replacement with landscape amenities of equal value should be considered to enhance the visual integrity of the corridor.</p> <p>V4 Where the flexibility in system component design is available, aesthetic treatments that reduce glare, enhance visual character, deter graffiti and vandalism, and create a human-scale and pedestrian friendly environment will be used.</p> <p>V5 Source shielding in exterior lighting at stations and ancillary facilities, such as maintenance sites, will be used to ensure that light sources (such as bulbs) would not be directly visible from residences and streets, and to limit spillover light and glare in residential areas.</p> <p>V6 In locations where project components are too large to apply minimizing techniques, appropriate and sensitive ‘showcasing’ of project components will be considered. Showcasing may include but is not limited to: decorative lighting/underlighting, installing texture onto project components, base relief designs, and contextual art features.</p> <p>V7 Where practical and appropriate, additional landscaping and enhanced design features will be used to minimize the visual image of maintenance and other ancillary facilities. Redevelopment efforts should be directed towards locating these facilities where their visual impact will be minimized.</p> <p>V8 Where appropriate, during preliminary engineering for the proposed project, the system design will be integrated with area redevelopment plans.</p> <p>V9 For the Centinela Avenue cut and cover crossing design option, screening that is consistent with the existing area and Edward Vincent Jr. Park will be installed on the north side of the trench to reduce the adverse effects on the south-facing view of the trench.</p> <p>V10 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.</p> <p>V11 Street trees and other vegetation removed to accommodate construction or project components should be replaced with appropriate sized vegetation.</p> <p>V12 Stockpile areas should be located in less visibly sensitive areas and, whenever possible, not be visible from the road or to residents and businesses.</p>					
Air Quality	No Impact	Less-Than-Significant Impact	Less-Than-Significant Impact	Significant and Unavoidable Impact	Significant and Unavoidable Impact	Less-Than-Significant Impact

Table ES.9. CEQA Determination Impact Summary With Mitigation Measures

Project Goal/Criteria/Measure	No-Build Alternative	TSM Alternative	BRT Alternative	LRT Alternative	LRT with Design Options	Maintenance and Operations Facility
Mitigation Measure(s)	No Feasible Mitigation					
Noise and Vibration	No Impact	No Impact	Less-Than-Significant Impact	Less-Than-Significant Impact	Less-Than-Significant Impact	Less-Than-Significant Impact
Mitigation Measure(s)	None Required					
Ecosystems and Biological Resources	No Impact	No Impact	Less-Than-Significant Impact	Less-Than-Significant Impact	Less-Than-Significant Impact	Less-Than-Significant Impact
Mitigation Measure(s)	<p>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 any protected native bird in the habitat to be removed and any 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 any 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.</p> <p>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 species, the affected tree species shall be relocated or replaced at a minimum ratio of 2:1 and subject to the conditions of the Native Tree Protection Ordinance under Article 6 Chapter IV of the Los Angeles City Municipal Code.</p>					
Geotechnical	No Impact	Less-Than-Significant Impact	Less-Than-Significant Impact	Less-Than-Significant Impact	Less-Than-Significant Impact	Less-Than-Significant Impact

Table ES.9. CEQA Determination Impact Summary With Mitigation Measures

Project Goal/Criteria/Measure	No-Build Alternative	TSM Alternative	BRT Alternative	LRT Alternative	LRT with Design Options	Maintenance and Operations Facility
Mitigation Measure(s)	<p>GEO1 A geotechnical study for proposed at-grade, aerial, and below-grade structures and improvements shall be required. This technical study shall identify design specifications for maintaining structural integrity under static and seismic loading and operational demands. The geotechnical study shall include a soil-gas investigation at planned below-grade structures and where deep excavations are anticipated to develop mitigation measures to be implemented during construction and incorporated in the design. Mitigation measures typically include installation of soil gas barriers, monitoring, venting, and purging. The study shall be performed before the commencement of Final Design.</p> <p>GEO2 Conduct a limited Phase II ESA prior to construction in areas where construction workers may be exposed to impacted soil. A base line soil sampling protocol shall be established with special attention to those areas of potential environmental concern identified in the Phase I report. The soil shall be assessed for constituents likely to be present in the subsurface including, but not limited to, total petroleum hydrocarbons (TPH), VOCs, semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), polynuclear aromatic hydrocarbons (PAHs), pesticides, lead arsenates, and Title 22 metals. The depth of the sampling shall be based on the depth of grading or cut and fill activities. In addition, in areas where groundwater will be encountered, samples shall also be analyzed for suspected contaminants prior to dewatering. This will ensure that National Pollutant Discharge Elimination System (NPDES) discharge requirements are satisfied.</p> <p>GEO3 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 according to State and federal laws.</p> <p>GEO4 All hazardous materials, drums, trash, and debris shall be removed and disposed of in accordance with regulatory guidelines.</p> <p>GEO5 A health and safety plan shall be developed for persons with potential exposure to the constituents of concern identified in the limited Phase II ESA.</p> <p>GEO6 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 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. Further investigation and analysis may be necessary, should such materials be encountered.</p>					

Table ES.9. CEQA Determination Impact Summary With Mitigation Measures

Project Goal/Criteria/Measure	No-Build Alternative	TSM Alternative	BRT Alternative	LRT Alternative	LRT with Design Options	Maintenance and Operations Facility
	<p>GE07 Best Management Practices (BMPs), 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 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.</p>					
Water	No Impact	Less-Than-Significant Impact	Less-Than-Significant Impact	Less-Than-Significant Impact	Less-Than-Significant Impact	Less-Than-Significant Impact
Mitigation Measure(s)	<p>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 and shall follow the most current guidance within the NPDES program.</p> <p>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.</p> <p>WQ3 A dewatering permit shall be required if groundwater is encountered during tunneling operations. 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 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 (see Section 4.9 for details on potential groundwater contamination and remediation).</p> <p>WQ4 The study area currently drains indirectly to Ballona Creek and Dominguez Creek 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.</p>					

Table ES.9. CEQA Determination Impact Summary With Mitigation Measures

Project Goal/Criteria/Measure	No-Build Alternative	TSM Alternative	BRT Alternative	LRT Alternative	LRT with Design Options	Maintenance and Operations Facility
Energy	No Impact	Less-Than-Significant Impact	Less-Than-Significant Impact	Less-Than-Significant Impact	Less-Than-Significant Impact	Less-Than-Significant Impact
Mitigation Measure(s)	None Required					
Historic, Archaeological, Paleontological	No Impact	Less-Than-Significant Impact	Significant and Unavoidable Impact	Significant and Unavoidable Impact	Significant and Unavoidable Impact	Significant and Unavoidable Impact
Mitigation Measure(s)	<p>CR1 Archaeological Monitoring</p> <p>No new surficial archaeological resources were identified within the proposed project area. The locations of the pre-recorded sites within the proposed project boundaries have been developed and no surficial evidence of the sites were observed during the archaeological reconnaissance survey. The majority of the project area is developed (residential, retail, industrial) and disturbed from existing roads, railroad alignments and landscape vegetation. However, shallow archaeological deposits may exist beneath the disturbed land surface. Of the pre-recorded sites, one was identified eleven feet below the surface; therefore, even with the majority of the project area developed there is the potential for buried archaeological deposits beneath the developed land surface. Of the 19 previous cultural resource studies conducted within the proposed project area, only nine were conducted within the past eight years and of those nine studies only three cover portions of the linear project route. Due to the potential for buried archaeological deposits and the sporadic cover of cultural resource studies of the proposed project route, archaeological monitoring by a qualified archaeologist shall be conducted for the entire project area during all ground-disturbing activities. Archaeological monitoring by a qualified archaeologist is recommended during initial ground disturbance (a qualified archaeologist has at least a Bachelor’s degree in anthropology and experience, and is supervised by is a registered professional archaeologist). If buried cultural resources—such as flaked or ground stone, historic debris, building foundations, or non-human bone—are inadvertently discovered during ground-disturbing activities, work will stop in that area and within 100 feet of the find until a qualified archaeologist can assess the significance of the find and, if necessary, develop appropriate treatment measures. Treatment measures typically include development of avoidance strategies, capping with fill material, or mitigation of impacts through data recovery programs such as excavation or detailed documentation. If during cultural resources monitoring the qualified archaeologist determines that the sediments being excavated are previously disturbed or unlikely to contain significant cultural materials, the qualified archaeologist can specify that monitoring be reduced or eliminated. If cultural resources are discovered during construction activities, the construction contractor will verify that work is halted until appropriate site-specific treatment measures—such as those listed above—are implemented.</p>					

Table ES.9. CEQA Determination Impact Summary With Mitigation Measures

Project Goal/Criteria/Measure	No-Build Alternative	TSM Alternative	BRT Alternative	LRT Alternative	LRT with Design Options	Maintenance and Operations Facility
	<p>Due to the potential for buried archaeological deposits and the sporadic cover of cultural resource studies of the proposed project route, archaeological monitoring by a qualified archaeologist shall be conducted for the entire project area during all ground-disturbing activities. If buried cultural resources—such as flaked or ground stone, historic debris, building foundations, or non-human bone—are inadvertently discovered during ground-disturbing activities, work shall stop in that area and within 100 feet of the find until a qualified archaeologist can assess the significance of the find and, if necessary, develop appropriate treatment measures. Treatment measures typically include development of avoidance strategies, capping with fill material, or mitigation of impacts through data recovery programs such as excavation or detailed documentation. If during cultural resources monitoring the qualified archaeologist determines that the sediments being excavated are previously disturbed or unlikely to contain significant cultural materials, the qualified archaeologist shall specify that monitoring be reduced or eliminated.</p> <p>Additionally, there remain two gated and locked vacant parcels to be surveyed that were inaccessible at the time of this current survey. Historic boundaries of the Inglewood Park Cemetery need to be researched and confirmed due to the potential for uncovering burial sites during construction activities.</p> <p>If human remains are exposed during construction, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to PRC 5097.98. Construction must halt in the area of the discovery of human remains, the area must be protected, and consultation and treatment should occur as prescribed by law. If the coroner determines the remains to be Native American, the coroner must contact the NAHC.</p> <p>If Native American human remains are discovered during project construction, it will be necessary to comply with state laws relating to the disposition of Native American burials that are under the jurisdiction of the NAHC (PRC Section 5097). For remains of Native American origin, no further excavation or disturbance shall take place until: the most likely descendant of the deceased Native American(s) has made a recommendation to the landowner or the person responsible for the excavation work regarding means of treating or disposing of the human remains and any associated grave goods, with appropriate dignity, as provided in the PRC Section 5097.98; or the NAHC is unable to identify a most likely descendant or the descendant fails to make a recommendation within 24 hours after being notified by the Commission. In consultation with the most likely descendant, the project archaeologist and the project proponent will determine a course of action regarding preservation or excavation of Native American human remains, and this recommendation will be implemented expeditiously. If a most likely descendent cannot be located or does not make a recommendation, the project archaeologist and the project proponent will determine a course of action regarding preservation or excavation of Native American human remains, which will be submitted to the NAHC for review prior to implementation.</p> <p>CR2 HABS/Historic American Engineering Record (HAER) Documentation-- Century Lounge (formerly Carolina Lanes Bowling Center) – 5601 West Century Boulevard</p> <p>Documentation of the building to Historic American Buildings Survey (HABS) archival standards shall be prepared, submitted to SHPO for review and approval, and donated to a suitable repository, such as the Los Angeles Public Library. The documentation would not mitigate the demolition of the buildings to less than adverse or less than significant.</p>					

Table ES.9. CEQA Determination Impact Summary With Mitigation Measures

Project Goal/Criteria/Measure	No-Build Alternative	TSM Alternative	BRT Alternative	LRT Alternative	LRT with Design Options	Maintenance and Operations Facility
	<p>CR3 Monitoring of Settlement During Construction</p> <p>Although settlement adjacent to cut-and-cover construction is not anticipated, monitoring of soil settlement shall be conducted where historic buildings are in close proximity to cut-and-cover construction. If settlement is detected, steps shall be taken to stop the settlement before damage to historic buildings occurs. If historic buildings are damaged, they shall be repaired in accordance with the Secretary of the Interior’s Standards. Monitoring of potential settlement shall be undertaken at the following locations:</p> <ul style="list-style-type: none"> ■ Department of Water and Power – 4030 Crenshaw Boulevard ■ May Company Department Store – 4005 Crenshaw Boulevard ■ Broadway Department Store – 4101 Crenshaw Boulevard ■ Maverick’s Flat – 4225 Crenshaw Boulevard ■ Great Western Savings & Loan – 4401 Crenshaw Boulevard ■ Leimert Park – Commercial Buildings. 					
	<p>CR4 Paleontological Monitoring</p> <p>A qualified paleontological monitor shall monitor all excavation in areas identified as likely to contain paleontological resources below 5 feet. These areas are defined as all areas within the Metro Crenshaw Transit Corridor where excavation would exceed 5 feet in depth (i.e., tunnel boring, cut-and-cover construction, deep footings).</p> <p>The qualified paleontological monitor shall retain the option to reduce monitoring if, in his or her professional opinion, the sediments being monitored were previously disturbed. Monitoring may also be reduced if the potentially fossiliferous units, previously described, are not present or, if present, are determined by qualified paleontological personnel to have a low potential to contain fossil resources. The monitor shall be equipped to salvage fossils and samples of sediments as they are unearthed to avoid construction delays and shall be empowered to temporarily halt or divert equipment to allow removal of abundant or large specimens. Recovered specimens shall be prepared to a point of identification and permanent preservation, including washing of sediments to recover small invertebrates and vertebrates. Specimens shall be curated into a professional, accredited museum repository with permanent retrievable storage. A report of findings, with an appended itemized inventory of specimens, shall be prepared and will signify completion of the program to mitigate impacts on paleontological resources.</p>					
	<p>CR5 TPSS Setback or Design</p> <p>The TPSS near the Angelus Funeral Home at 3886 Crenshaw Boulevard shall be designed and/or set back to minimize the visual effect on the historic building and its setting. Consultation with a qualified architectural historian or historic preservation architect shall be conducted and their comments implemented in the design or location of the TPSS site. SHPO will be given an opportunity for review, comment, and approval.</p>					

Table ES.9. CEQA Determination Impact Summary With Mitigation Measures

Project Goal/Criteria/Measure	No-Build Alternative	TSM Alternative	BRT Alternative	LRT Alternative	LRT with Design Options	Maintenance and Operations Facility
	<p>CR6 Design of LRT and BRT Elevated Section and Station at Carolina Lanes Site The LRT and BRT station(s) at the Century Lounge (formerly Carolina Lanes Bowling Center) at 5601 West Century Boulevard shall be designed to minimize the permanent visual effect on the historic building and its setting. Consultation with a qualified architectural historian or historic preservation architect shall be conducted and their comments implemented. SHPO will be given an opportunity for review, comment, and approval.</p> <p>CR7 HABS/HAER Documentation and Adaptive Reuse--Kaiser Homes Production Plant The buildings that comprised the Kaiser Homes Production Plant shall be photographed and documented in their current location according to HABS standards, reviewed and approved by SHPO, and the resulting documentation shall be donated to a suitable repository, such as the Los Angeles Public Library. The National Park Service’s website, www.nps.gov, defines the HABS standards as the following: The Secretary of the Interior’s Standards and Guidelines for Architectural and Engineering Documentation define the products acceptable for inclusion in the Heritage Documentation Programs (HABS/Historic American Engineering Record [HAER]/Historic American Landscapes Survey [HALS]) collections in the Library of Congress as measured drawings, large-format black and white photographs, and written histories. They require that the documentation captures the significance of the site or structure, is accurate and verifiable, has archival stability, and is clear and concise. “The Guidelines provide advice and technical information on meeting the standards. Most importantly, they outline an approach to historic architecture, engineering and landscapes that helps ensure the documentation will meet the Secretary of the Interior’s Standards while creating a comprehensive understanding of the site or structure. They also provide recommendations on research methods and report organization, line weight and sheet layout, photographic paper and negative preparation, and the disposition of field notes.” A qualified architectural historian or historic preservation architect shall prepare an adaptive reuse plan for the extant significant buildings on the Kaiser Homes Production Plant site that would incorporate them into the proposed project re-use of the site. The adaptive reuse plan shall be submitted to SHPO for review and approval. If the significant extant buildings are adaptively reused in accordance with the Secretary of the Interior’s Standards, then the project impacts will be mitigated to less than significant. Both Section 106 and CEQA allow buildings to be altered in accordance with the Secretary of the Interior’s Standards without resulting in an adverse effect under Section 106 or a significant effect under CEQA. If an adaptive reuse plan cannot be developed to achieve the project objectives while mitigating the effects on historic properties, then the effect will be adverse under Section 106 and significant under CEQA. Documentation of the buildings to HABS standards without the adaptive reuse of the significant buildings would not mitigate the demolition of the buildings to less than adverse or less than significant.</p>					
Parklands and Community Facilities	No Impact	No Impact	Less-Than-Significant Impact	Less-Than-Significant Impact	Less-Than-Significant Impact	Less-Than-Significant Impact
Mitigation Measure(s)	None Required					

Table ES.9. CEQA Determination Impact Summary With Mitigation Measures

Project Goal/Criteria/Measure	No-Build Alternative	TSM Alternative	BRT Alternative	LRT Alternative	LRT with Design Options	Maintenance and Operations Facility
Economic	No Impact	Less-Than-Significant Impact	Less-Than-Significant Impact	Less-Than-Significant Impact	Less-Than-Significant Impact	Less-Than-Significant Impact
Mitigation Measure(s)	None Required					
Safety and Security	No Impact	No Impact	Less-Than-Significant Impact	Less-Than-Significant Impact	Less-Than-Significant Impact	Less-Than-Significant Impact
Mitigation Measure(s)	<p>SS1 All stations and parking facilities shall be equipped with monitoring equipment and/or be monitored by Metro security personnel on a regular basis.</p> <p>SS2 Metro shall implement a security plan for BRT and LRT operations. The plan shall include both in-car and station surveillance by Metro security or other local jurisdiction security personnel.</p> <p>SS3 All stations shall be lit to standards that minimize shadows and all pedestrian pathways leading to/from sidewalks and parking facilities shall be well illuminated.</p> <p>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.</p> <p>SS5 The station design shall not include design elements that obstruct visibility or observation nor provide 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.</p> <p>SS6 Metro shall monitor pedestrian crossing activity at all locations with adjacent schools and implement appropriate measures to ensure pedestrian crossing safety, as determined by the CPUC.</p> <p>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.</p> <p>SS8 Traffic warning measures, such as signage, shall be provided along the length of the platforms of the BRT and LRT Stations. These markings will be provided to alert motorists to significant pedestrian activity in the area.</p> <p>SS9 To discourage crossing the alignment at other locations near the Faithful Central Bible Church and enhance safety, Metro shall provide fencing along either side of the alignment, between the parking lot and church buildings.</p>					
Construction (All Except AQ)	No Impact	No Impact	Less-Than-Significant Impact	Less-Than-Significant Impact	Less-Than-Significant Impact	Less-Than-Significant Impact
Air Quality	No Impact	No Impact	Significant and Unavoidable Impact	Significant and Unavoidable Impact	Significant and Unavoidable Impact	Significant and Unavoidable Impact

Table ES.9. CEQA Determination Impact Summary With Mitigation Measures

Project Goal/Criteria/Measure	No-Build Alternative	TSM Alternative	BRT Alternative	LRT Alternative	LRT with Design Options	Maintenance and Operations Facility
Mitigation Measure(s)	<p>CON1</p> <p>CON2</p> <p>CON3</p> <p>CON4</p> <p>CON5</p> <p>CON6</p> <p>CON7</p> <p>CON8</p> <p>CON9</p> <p>CON10</p> <p>CON11</p> <p>CON12</p> <p>CON13</p> <p>CON14</p> <p>CON15</p> <p>CON16</p> <p>CON17</p> <p>CON18</p> <p>CON19</p> <p>CON20</p> <p>CON21</p>	<p>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.</p> <p>Stockpile areas should be located in less visibly sensitive areas and, whenever possible, not be visible from the road or to residents and businesses.</p> <p>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.</p> <p>Water or a stabilizing agent shall be applied to exposed surfaces in sufficient quantity to prevent generation of dust plumes.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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).</p> <p>Traffic speeds on unpaved roads shall be limited to 15 mph.</p> <p>Operations on unpaved surfaces shall be suspended when winds exceed 25 mph.</p> <p>Heavy equipment operations shall be suspended during first and second stage smog alerts.</p> <p>On-site stockpiles of debris, dirt, or rusty materials shall be covered or watered at least two times per day.</p> <p>Contractors shall maintain equipment and vehicle engines in good condition and in proper tune per manufacturers' specifications.</p> <p>Contractors shall utilize electricity from power poles rather than temporary diesel or gasoline generators, as feasible.</p> <p>Heavy-duty trucks shall be prohibited from idling in excess of five minutes, both on- and off-site.</p> <p>Construction parking shall be configured to minimize traffic interference.</p> <p>Construction activity that affects traffic flow on the arterial system shall be limited to off-peak hours, as feasible.</p> <p>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.</p> <p>Noise barriers shall be constructed during the initial stages to reduce potential adverse construction noise effects along the right-of-way for traffic mitigation.</p> <p>The contractor shall comply with Standard Specifications 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.</p> <p>Noisier activities involving large machinery shall be limited to daytime hours when most people normally affected are either not present or engaged in less noise-sensitive activities. Nighttime construction shall require a variance.</p>				

Table ES.9. CEQA Determination Impact Summary With Mitigation Measures

Project Goal/Criteria/Measure	No-Build Alternative	TSM Alternative	BRT Alternative	LRT Alternative	LRT with Design Options	Maintenance and Operations Facility
	<p>CON22</p>	<p>Two biological surveys shall be conducted, one fifteen 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 any protected native bird in the habitat to be removed and any 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 any 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.</p> <p>CON23 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.</p> <p>CON24 Phase II ESA - Conduct a limited Phase II ESA prior to construction in areas where construction workers may be exposed to impacted soil. A base line soil sampling protocol should be established with special attention to those areas of potential environmental concern identified in this report. The soil should be assessed for constituents likely to be present in the subsurface including, but not limited to, TPH, VOCs, SVOCs, PCBs, PAHs, pesticides, lead arsenates, and Title 22 metals. The depth of the sampling should be based on the depth of grading or cut and fill activities. In addition, in areas where groundwater will be encountered, samples should also be analyzed for suspected contaminants prior to dewatering. This will ensure that NPDES discharge requirements are satisfied.</p> <p>CON25 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 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).</p> <p>CON26 Hazardous Material and Debris Removal - All hazardous materials, drums, trash, and debris shall be removed and disposed of in accordance with regulatory guidelines.</p> <p>CON27 Health and Safety Plan - A health and safety plan should be developed for persons with potential exposure to the constituents of concern identified in the limited Phase II ESA.</p>				

Table ES.9. CEQA Determination Impact Summary With Mitigation Measures

Project Goal/Criteria/Measure	No-Build Alternative	TSM Alternative	BRT Alternative	LRT Alternative	LRT with Design Options	Maintenance and Operations Facility
						<p>CON28 Construction Observations - 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 adverse effects 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. Further investigation and analysis may be necessary, should such materials be encountered.</p> <p>CON29 Upon selection of a maintenance and operations facility site, a Phase I ESA shall be prepared to identify potential soil contamination, and if necessary, a Phase II ESA shall follow to determine the extent of the soil contamination.</p> <p>CON30 During project construction, 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 CWA and shall follow the most current guidance within the NPDES program.</p> <p>CON31 A dewatering permit is required due to the high groundwater table. 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 (LAFD, County of Los Angeles Fire Department, and Los Angeles RWQCB) responsible for hazardous materials or waste incidents. Coordination with the appropriate regulatory agencies will 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 discharge 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 (see Section 4.9 for details on potential groundwater contamination and remediation)</p> <p>CON32 The project site currently drains indirectly to Ballona Creek and Dominguez Creek 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.</p>

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						<p>CON33 Archaeological monitoring by a qualified archaeologist shall be conducted during initial ground disturbance (a qualified archaeologist has at least a Bachelor’s degree in anthropology and experience, and is supervised by is a registered professional archaeologist). If buried cultural resources—such as flaked or ground stone, historic debris, building foundations, or non-human bone—are inadvertently discovered during ground-disturbing activities, work shall stop in that area and within 100 feet of the find until a qualified archaeologist can assess the significance of the find and, if necessary, develop appropriate treatment measures. Treatment measures typically include: development of avoidance strategies, capping with fill material, or mitigation of impacts through data recovery programs such as excavation or detailed documentation. If during cultural resources monitoring the qualified archaeologist determines that the sediments being excavated are previously disturbed or unlikely to contain significant cultural materials, the qualified archaeologist can specify that monitoring be reduced or eliminated. If cultural resources are discovered during construction activities, the construction contractor shall verify that work is halted until appropriate site-specific treatment measures—such as those listed above—are implemented.</p> <p>If human remains of Native American origin are discovered during ground-disturbing activities, it is necessary to comply with state laws relating to the disposition of Native American burials that fall within the jurisdiction of the California Native American Heritage Commission (PRC Section 5097). According to California Health and Safety Code, six or more human burials at one location constitute a cemetery (Section 8100), and disturbance of Native American cemeteries is a felony (Section 7052). Section 7050.5 requires that excavation be stopped in the vicinity of discovered human remains until the coroner can determine whether the remains are those of a Native American. If the remains are determined to be Native American, the coroner must contact the California Native American Heritage Commission to determine the most likely living descendant(s). The most likely living descendant shall determine the most appropriate means of treating the human remains and any associated grave artifacts, and shall oversee disposition of the human remains and associated artifacts by the project archaeologists.</p> <p>CON34 Documentation of the Century Lounge (formerly Carolina Lanes Bowling Center at 5601 West Century Boulevard to HABS archival standards shall be prepared, submitted to SHPO for review and approval, and donated to a suitable repository, such as the Los Angeles Public Library. The documentation would not mitigate the demolition of the buildings to less than adverse.</p> <p>CON35 Although settlement adjacent to cut-and-cover construction is not anticipated, monitoring of soil settlement shall be conducted where historic buildings are in close proximity to cut-and-cover construction. If settlement is detected, steps shall be taken to stop the settlement before damage to historic buildings occurs. If historic buildings are damaged, they shall be repaired in accordance with the Secretary of the Interior’s Standards. Monitoring of potential settlement shall be undertaken at the following locations:</p> <ul style="list-style-type: none"> ▪ Department of Water and Power – 4030 Crenshaw Boulevard ▪ May Company Department Store (now Macy’s) – 4005 Crenshaw Boulevard ▪ Broadway Department Store (now WalMart) – 4101 Crenshaw Boulevard ▪ Maverick’s Flat - 4225 Crenshaw Boulevard ▪ Great Western Savings and Loan (now Chase Bank) – 4401 Crenshaw Boulevard ▪ Leimert Park-Commercial Buildings

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	<p>CON36</p> <p>CON37</p> <p>CON38</p> <p>CON39</p> <p>CON40</p> <p>CON41</p> <p>CON42</p> <p>CON43</p> <p>CON44</p> <p>CON45</p>	<p>A qualified paleontological monitor shall monitor all excavation in areas identified as likely to contain paleontological resources below 5 feet. These areas are defined as all areas within the Crenshaw Transit Corridor where excavation would exceed 5 feet in depth (i.e., tunnel boring, cut-and-cover construction, deep footings.)</p> <p>The qualified paleontological monitor shall retain the option to reduce monitoring if, in his or her professional opinion, the sediments being monitored were previously disturbed. Monitoring may also be reduced if the potentially fossiliferous units, previously described, are not present or, if present, are determined by qualified paleontological personnel to have a low potential to contain fossil resources. The monitor shall be equipped to salvage fossils and samples of sediments as they are unearthed to avoid construction delays and shall be empowered to temporarily halt or divert equipment to allow removal of abundant or large specimens. Recovered specimens shall be prepared to a point of identification and permanent preservation, including washing of sediments to recover small invertebrates and vertebrates. Specimens shall be curated into a professional, accredited museum repository with permanent retrievable operation. A report of findings, with an appended itemized inventory of specimens, shall be prepared and will signify completion of the program to mitigate impacts on paleontological resources.</p> <p>The TPSS near the Angelus Funeral Home at 3886 Crenshaw Boulevard shall be designed and/or set back to minimize the visual effect on the historic building and its setting. Consultation with a qualified architectural historian or historic preservation architect shall be conducted and their comments implemented in the design or location of the TPSS site. SHPO will be given an opportunity for review, comment, and approval.</p> <p>The LRT and BRT station(s) at the Century Lounge (formerly Carolina Lanes Bowling Center) at 5601 West Century Boulevard shall be designed to minimize the permanent visual effect on the historic building and its setting. Consultation with a qualified architectural historian or historic preservation architect shall be conducted and their comments implemented. SHPO will be given an opportunity for review, comment, and approval.</p> <p>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.</p> <p>General notice shall be provided to local government, transit agencies, major institutions, and other organizations of the schedule for planned construction activities.</p> <p>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.</p> <p>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.</p> <p>Construction activities shall be planned to minimize effects on community gatherings, special celebrations, or other similar events.</p> <p>Public information campaigns shall be conducted to encourage patronage of corridor businesses during the construction period.</p> <p>An Educational safety awareness program shall be instituted at schools adjacent to construction activity along the project alignment, which provide information to students about the threat to safety from entering construction sites.</p>				

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	<p>CON46 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).</p> <p>CON47 Metro shall provide funding for temporary signage and advertising during construction to help businesses that are partially blocked or that have inconvenient access due to construction activity.</p>					
Growth Inducing	No Impact	No Impact	No Impact	No Impact	No Impact	No Impact
Mitigation Measure(s)	None Required					
Cumulative Impacts (All Except AQ)	No Impact	No Impact	Less-Than-Significant Impact	Less-Than-Significant Impact	Less-Than-Significant Impact	Less-Than-Significant Impact
Air Quality	No Impact	No Impact	Less-Than-Significant Impact	Significant and Unavoidable Impact	Significant and Unavoidable Impact	Significant and Unavoidable Impact
Mitigation Measure(s)	No Feasible Mitigation					

Source: TAHA, 2009