4.17 Cumulative Impacts

4.17.1 Regulatory Setting

The regulations established by the CEQ, regarding the implementation of the NEPA, define cumulative effects as those effects that result from incremental impacts of a proposed action when added to past, present, and reasonably foreseeable future actions, regardless of which agency (federal or nonfederal) or person undertakes such actions.

Section 15355 of the CEQA guidelines (2005) defines cumulative impacts as two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. Cumulative effects can result from individually minor, but collectively significant actions that take place over a period of time (40 CFR 1508.7).

The process used in this cumulative impact analysis follows the guidelines provided in "Considering Cumulative Effects under the National Environmental Policy Act" (CEQ, January 1997). The analysis in this chapter is also consistent with CEQA guidelines, Section 15130(b)(1), which directs cumulative impact analyses to include "a summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact."

4.17.2 Study Area

The study area for the proposed Crenshaw Transit Corridor Project is north-south oriented and includes portions of five local government jurisdictions: the Cities of Los Angeles, Inglewood, Hawthorne, El Segundo, as well as portions of unincorporated Los Angeles County, California. The communities and planning areas of Los Angeles that are adjacent to the study area include: Mid-City, West Adams, Baldwin Hills, View Park, Jefferson Park, County Club Park, Leimert Park, Windsor Hills, Westchester, Lennox, and Hyde Park. Furthermore, the study area crosses through two of the 14 subregions in SCAG's planning area: the City of Los Angeles and the SBCCOG subregions. The Cities of Inglewood, Hawthorne, and El Segundo are located within the SBCCOG subregion.

Regional growth management plans, developed by the SCAG, are described in Section 4.1 Land Use and Development.

4.17.3 Impact Assessment

4.17.3.1 Methodology

"Cumulative impacts" refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. The individual effects may be changes resulting from a single project or a number of separate projects, whereas the cumulative impact is the change in the environment from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable future projects. Cumulative impacts can result from individually minor, but collectively significant, projects taking place over a period of time.

CEQA requires that the discussion of cumulative impacts reflects the severity of the impacts, as well as the likelihood of their occurrence; however, the discussion need not be as detailed as the discussion of environmental impacts attributable to the proposed project alone. Further, the discussion is intended to be guided by the standards of practicality and reasonableness. CEQA also requires an EIR to explore the long-term effects of a proposed project, those impacts which may not be tangible in the near term, but may ultimately evolve into significant adverse environmental impacts in the long term. Issues to be addressed in the EIR include the growth-inducing impacts of the proposed project and significant irreversible effects. The CEQA Guidelines state that the discussion of growth-inducing impacts should focus on the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment.

An adequate discussion of significant cumulative impacts involves analyzing either (1) "a list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency", or (2) "a summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact."

This cumulative impact analysis relies on method (2) described above. This cumulative impact analysis incorporates the regional projections from the RTP. The Crenshaw Transit Corridor Project extends through two of the 14 Subregions in SCAG's planning area, including the City of Los Angeles and the Westside Cities Subregions. The RTP reflects transportation, population, employment, and land use data for the six-county SCAG area through the year 2035, and is, thus, an appropriate basis for the analysis of cumulative impacts.

The region wide impact analysis conducted in the RTP PEIR (SCH No. 2007061126, May 2008), serves as the basis for this analysis of cumulative impacts, per Section 15150 of the CEQA guidelines. SCAG states that lead agencies, such as the Los Angeles County Metropolitan Transportation Authority (Metro), may use the region-wide impact analysis contained in the RTP PEIR as the basis of their cumulative impact analysis. The RTP PEIR contains a thorough analysis of environmental impacts resulting from implementation of various transportation projects throughout SCAG's six county region that encompasses approximately 38,000 square miles. Therefore, the RTP PEIR is used as the basis of this cumulative impact analysis and is hereby incorporated by reference per Section 15150 of CEQA guidelines.

The cumulative affects analysis examines the effects of the proposed project as discussed in Sections 4.1 to 4.16 within the framework of the cumulative regional transportation analysis contained in the RTP PEIR. These impacts are summarized below:

4.17.3.2 Traffic, Circulation, and Parking

The RTP PEIR indicates that the region is expected to grow in both population and vehicle miles traveled (VMT). Development and redevelopment would result in increased traffic congestion, particularly along Crenshaw Boulevard, with the planned expansion of

the Baldwin Hills Crenshaw Plaza. The No Build Alternative would not affect or contribute to a cumulative effect on traffic circulation or parking. It would not relieve or contribute to traffic congestion. The TSM Alternative and the build alternatives would expand regional transportation choices and are aimed at improving regional quality of life and overall mobility. The TSM Alternative and the build alternatives would result in a decrease in VMT due to the increased use of transit. Therefore, the TSM and the build alternatives would result in a beneficial cumulative effect on traffic circulation.

The increase in transit use also reduces the reliance on automobiles and generally reduces the demand for parking on a regional basis. The study area is heavily developed and built out. Crenshaw Boulevard and other areas along the proposed corridor offer limited off-street parking. For station areas of limited on-street and off-street parking outlined in Section 3.0 Transportation Impacts, the TSM Alternative and the build alternatives would result in a significant adverse impact if the parking supply does not meet the demands of the transit users and land uses generating parking demand, such as commercial and residential land uses. The proposed project would result in a cumulative impact to on-street parking near transit station areas due to the demand of on-street parking by transit users.

4.17.3.3 Land Use and Development

The projects outlined in the RTP would contribute to new growth or the intensity of development within the SCAG region. As discussed in Section 4.1 Land Use, the SCAG region is expected to grow in population by 24.6 percent (or 5.4 million persons) between 2005 and 2035. Likewise, employment in the region is expected to grow by 24.3 percent during the same time period. The proposed project does not result in any adverse direct impacts associated with regional land use under any of the alternatives or the associated maintenance and operations facilities sites. The No Build Alternative would not involve any substantial physical changes to the environment. The TSM Alternative would also not result in any adverse direct impacts associated with regional land use because no significant changes that would spur new regional growth would occur. Therefore, the No Build and the TSM Alternative would not contribute to a cumulative effect on land use or population growth.

Under the BRT, Base LRT Alternatives, and the six LRT Alternative Design Options, no new regional growth would be generated, and land use and development patterns are not expected to substantially change at a regional level (See Section 4.1 Land Use and Development and 4.17.1.2 Cumulative Impacts). The BRT Alternative, Base LRT Alternative, and design options, when considered as part of the Metro Long Range Plan, would play an important role in expanding regional transportation choices and in improving regional quality of life and overall mobility. These alternatives would not be incompatible with the study area's land uses and would provide connectivity between land uses and activity centers. Therefore, no adverse cumulative impacts associated with regional land use are anticipated. No cumulative population growth resulting from the proposed project in conjunction with the projects within the RTP would be expected beyond the RTP projections.

4.17.3.4 Displacement and Relocation of Existing Uses

Implementation of the projects within the RTP would result in substantial right-of way acquisition and considerable displacement of homes and businesses. Implementation of the Crenshaw Transit Corridor Project would involve termination or non-renewal of leases and right-of-way acquisition, as discussed in Section 4.2 Displacement and Relocation of Existing Uses. The right-of-way impacts would be mitigated through the use of relocation assistance programs and be isolated to areas along the alignment and, therefore, the build alternatives would not contribute to cumulative displacement and relocation effects.

4.17.3.5 Community and Neighborhood

Projects included in the RTP are intended to increase the overall accessibility and mobility of persons within the SCAG region. The Crenshaw Transit Corridor Project would contribute to the beneficial impact of increased accessibility to community resources, businesses, and residences and increased regional mobility.

Under the No Build Alternative and the TSM Alternative, no substantial permanent change to the physical environment and no impacts related to the division of an established community are anticipated to occur. The No Build and TSM Alternatives would not result in cumulative community, neighborhood or environmental justice impacts.

Minor driveway and sidewalk reconfiguration will be required under the BRT Alternative; however, no substantial barriers, disruption, or displacement related to the division of an established community would occur. The BRT Alternative is anticipated to have less-than-significant impacts related to the division of an established community and, therefore, would not contribute to cumulative community, neighborhood or environmental justice impacts.

Under the Base LRT Alternative, significant impacts are anticipated related to the division of the Hyde Park community as a result of an aerial structure traversing between two major community facilities. In addition, several properties located at the southeast corner of Crenshaw Boulevard and Exposition Place would require full acquisition. The closure of Exposition Place would also be required due to the at-grade LRT operations transitioning onto the Exposition LRT Line right-of-way and the Exposition Station. Mitigation measures identified in Section 4.3 Community and Neighborhood Impacts would be implemented and a less-than-significant impact would remain related to the division of the Hyde Park community. As such, no potential adverse cumulative effects associated with community cohesion within Hyde Park are anticipated.

The LRT Alternative may include the following six design options:

- LRT Alternative Design Option 1: An aerial station at Century Boulevard instead of an at-grade station at LAX.
- LRT Alternative Design Option 2: An aerial crossing instead of an at-grade crossing at Manchester Avenue.
- LRT Alternative Design Option 3: A cut and cover crossing instead of an at-grade crossing at Centinela Avenue.

- LRT Alternative Design Option 4: A cut and cover alignment instead of an aerial alignment between Victoria Avenue and 60th Street.
- LRT Alternative Design Option 5: A below-grade station at Vernon Avenue near Leimert Park.
- LRT Alternative Design Option 6: A below-grade alignment between 39th Street and Exposition with a below-grade station instead of an at-grade alignment north of 39th Street with connection to Exposition and an at-grade station.

These design options would not have adverse cumulative community cohesion impacts. Design Option 2 would add a new visual element to the area; however, it would not be located in an established residential or commercial corridor and, as such, would not contribute to a cumulative adverse impact on community cohesion.

The proposed maintenance and operations facility sites for the Base LRT Alternative, Site B and Site D, are not located within an established community or neighborhood. Construction of a maintenance and operations facility at either Site B or Site D would not alter or block access to any community assets, displace on- or off- street parking spaces, or impact economic development. Construction of a maintenance and operations facility at either site would not contribute to adverse cumulative community and neighborhood impacts.

4.17.3.6 Visual Quality

The RTP PEIR concludes that RTP projects potentially would obstruct views of scenic resources, thus resulting in a cumulative visual quality impact. However, with the implementation of the measures identified in Section 4.4 Visual Quality, the BRT and Base LRT Alternatives for the Crenshaw Transit Corridor Project would not result in adverse visual impacts and, therefore, the alternatives would not contribute to an adverse cumulative visual impact when considered in conjunction with the projects in the RTP.

The No Build Alternative would not include any construction activities within the proposed project corridor and therefore, there would be no impacts to scenic resources or increases in light and glare. The TSM Alternative would consist of minor construction activities associated with intersection improvements to provide service enhancements. These minor activities would have negligible impacts to visual resources and community character. The No Build Alternative and TSM Alternative would not contribute to an adverse cumulative visual impact.

The BRT Alternative includes potential acquisitions, removal of mature vegetation and construction of elevated stations and exclusive curb lanes that may increase or introduce new sources of light and glare. Implementation of mitigation measures identified in Section 4.4 Visual Quality would reduce all identified impacts to less-than-significant levels and therefore, the BRT Alternative would not contribute to cumulative visual quality impacts.

Similar to the BRT Alternative, the Base LRT Alternative would require potential acquisitions, remove mature vegetation and landscaping, introduce new sources of light and glare and require construction of elevated guideway and stations. The Base LRT Alternative would require removal of landscaped medians and roadway widening on Crenshaw Boulevard (designated scenic highway), construction of large, elevated structural components in close

proximity to residential uses, vegetation removal along the frontage of Edward Vincent Jr. Park (designated scenic resource) at Florence Avenue, and removal of screening vegetation between a residential neighborhood and the BNSF tracks. This would impact the visual character of these areas and introduce new sources of light and glare. Implementation of mitigation measures identified in Section 4.4 Visual Quality would reduce impacts and those impacts would be isolated and not contribute to a cumulative visual impact; therefore, the Base LRT Alternative would not contribute to cumulative visual quality impacts.

As discussed previously, the LRT Alternative may include six design options. These design options would not have adverse visual impacts. Design Option 2 would add a new visual element to the area; however, it would not be located in an established residential or commercial corridor and, with implementation of the mitigation measures identified in Section 4.4 Visual Quality, would not contribute to a cumulative adverse impact.

4.17.3.7 Air Quality

The implementation of public transit projects such as the proposed alternatives would help to remove vehicles from roadways and freeways, decreasing the VMT and the usage of fuels. Lower automobile VMT corresponds to a reduction of criteria pollutant emissions from the vehicles. Consistent with the RTP PEIR air quality analysis, the build alternatives would result in a net cumulative beneficial effect to regional air quality resulting from the increased transit ridership and the anticipated reduction in automobile use. The Crenshaw Transit Corridor Project would contribute to the implementation of the adopted Air Quality Management Plan.

The TSM Alternative expands the Metro Rapid bus services operating in the Crenshaw Transit Corridor. The BRT Alternative provides for new transit services in the Crenshaw Transit Corridor, which would travel in mixed-traffic and in exclusive curb lanes. These alternatives would reduce automobile VMT and associated MSATs as well as increase bus VMT in the transportation system and VMT. The TSM Alternative and BRT Alternative would result in less GHG emissions than baseline conditions and, as such, would contribute to a beneficial global warming impact. Furthermore, the TSM Alternative and the BRT Alternative would not include any land use or activity that typically generates adverse odors and would not result in an adverse odor impact. Therefore, these alternatives would not contribute to a cumulative adverse effect on air quality from criteria pollutant emissions, toxic air contaminants, or odor.

As shown in Section 4.4 Air Quality, the LRT Alternative and its design options would increase GHG emissions compared to baseline conditions and would result in NO_x emissions that exceed the federal threshold and would increase GHG emissions. The Base LRT Alternative and design options would contribute to a cumulative impact on GHG emissions. However, the Base LRT Alternative and design options would reduce automobile VMT and increase bus and light rail VMT in the transportation system. The Base LRT Alternative and design options would reduce regional VMT and associated MSATs. The Base LRT Alternative and design options would not include any land use or activity that typically generates adverse odors and would not result in an adverse odor impact. The Base LRT alternative and design options would contribute to a cumulative adverse effect on air quality from NO_x emissions.

4.17.3.8 Noise and Vibration

No noise impacts were identified for the No Build Alternative, TSM Alternative, and BRT Alternative. These alternatives would not contribute to cumulative noise and vibration impacts.

Resulting noise effects of the Base LRT Alternative have been identified from three potential sources: passby noise from LRT vehicles, warning signals at the grade-crossing on Centinela Avenue, and areas of special track work. All noise impacts would be mitigated with the use of soundwalls and placement of special track work away from areas of noise sensitive land uses. Operation of the Base LRT Alternative would not contribute to cumulative noise and vibration impacts.

As discussed previously, the LRT Alternative may include six design options. These design options would have similar noise impacts and mitigation that is applicable. Design Options 2, 3, and 4 would reduce the ambient noise as warning signals would not be needed. Upon implementation of the mitigation measures identified in Section 4.6 Noise and Vibration, these design options would not contribute to a cumulative adverse noise impact.

4.17.3.9 Ecosystems and Biological Resources

The RTP PEIR analysis indicates that cumulative impacts to biological resources could occur due to construction in undeveloped areas and growth and development on natural lands. The No Build Alternative and the TSM Alternative would not result in physical impacts and therefore, no impacts to sensitive species, habitat, or locally protected trees would occur.

There are currently no sensitive species or habitat located directly within the BRT Alternative or the Base LRT Alternative project areas. As identified in Section 4.7 Ecosystems/Biological Resources, the BRT Alternative and Base LRT Alternative and design options may require the removal and/or disturbance (including trimming) of mature trees along the proposed alignment. Through compliance with the City of Los Angeles Native Tree Ordinance and implementation of mitigation measures identified in Section 4.7 Ecosystems/Biological Resources, construction of the BRT Alternative or the Base LRT Alternative and design options would reduce potential impacts to biological resources to less than significant levels. In addition, operation of the BRT Alternative or the Base LRT Alternative and design options would be along a defined corridor within a highly urbanized area. It is unlikely the BRT Alternative or the LRT Alternative and design options would contribute to adverse cumulative biological resource impacts.

Construction of the maintenance and operations facility at Site D may require the removal or disturbance (including trimming) of mature trees located at the site. Through compliance with the City of Los Angeles Native Tree Ordinance and implementation of mitigation measures identified in Section 4.7 Ecosystems/Biological Resources, construction of the maintenance and operations facility at Site D would not contribute to cumulative biological resource impacts.

4.17.3.10 Geotechnical/Subsurface/Seismic/Hazardous Materials

Potential hazardous areas consisting of subsurface gases, the Newport-Inglewood fault, liquefaction, and seismically-induced settlement have been identified for the BRT Alternative and the Base LRT Alternative and design options Section 4.8 Geological/Subsurface/ Seismic/Hazardous Materials). The Newport-Inglewood fault was also identified to be in close proximity to the TSM Alternative. Standard construction procedures for transportation projects ensure that the BRT Alternative and the Base LRT Alternative and design options would consider local geotechnical conditions and address potential impacts with mitigation measures. Therefore, the BRT Alternative and the Base LRT Alternative and design options would not contribute to cumulative impacts related to geotechnical, subsurface, and seismic conditions.

Features included in the selected maintenance and operations facility site will require the storage and usage of hazardous materials and waste onsite. There is the potential for hazardous materials/waste spills to occur; however, it is assumed that the storage and disposal of hazardous materials/waste will be conducted in accordance with all federal and state regulatory requirements that are intended to prevent or manage hazards, and that if a spill does occur, remediation would occur accordingly. No long-term hazardous material impacts are anticipated.

Hazardous materials that could be encountered during construction of the BRT Alternative, the Base LRT Alternative and design options, and the LRT maintenance and operations facility include underground storage tanks, and contaminated soil and groundwater. Mitigation for hazardous materials impacts would ensure that no impacts would occur. The proposed construction activities are not likely to present a substantial cumulative impact in concert with other proposed projects, if conducted in accordance with applicable hazardous waste laws, statues and regulations in conjunction with use of sound hazardous material detection and management practices. Hazardous materials encountered during construction will be removed or treated in place, thus reducing the potential for cumulative impacts. Therefore, the BRT Alternative, the LRT Alternative and design options, and the LRT maintenance and operations facility would not contribute to cumulative impacts related to hazardous materials.

4.17.3.11 Water Resources

SCAG's analysis of the RTP PEIR concludes cumulative impacts to water quality would result due to projected growth induced by the RTP, and would include increased impervious surfaces, increased development in alluvial fan floodplains, and increased water demand and associated impacts, such as drawdown of groundwater aquifers.

The No Build Alternative would have no impacts to water resources. The TSM Alternative would have short-term impacts on water quality during minor construction activities associated with intersection improvements to improve service. Compliance with NPDES standards and implementation of a SWPPP will be required and would minimize the short-term impacts on water quality. Construction and operation of the BRT Alternative and the Base LRT Alternative and design options will not result in significant impacts on water resources. Compliance with NDPES standards, implementation of a SWPPP, and mitigation measures and Best Management Practices identified in Section 4.9 Water Resources would ensure no significant short- and long-

term impacts to drainage patterns, surface waters, groundwater quality, discharge of pollutants, construction-related erosion and sedimentation, or exposure of people or structures to flood-related hazards would occur. The TSM Alternative, BRT Alternative, Base LRT Alternative, LRT Alternative Design Options, and the maintenance and operations facilities would not contribute to cumulative impacts related to water quality.

4.17.3.12 Energy

The implementation of public transit projects such as the proposed alternatives and design options would help to remove vehicles from roadways and freeways, easing the increase in VMT and the usage of fuels. The build alternatives would result in less energy consumption than baseline conditions and, as such, would result in a beneficial energy impact. Therefore, the proposed alternatives would have cumulative beneficial implications with regard to the region's energy resources.

4.17.3.13 Historic, Archaeological and Paleontological Resources

The RTP PEIR indicates that a significant cumulative impact to cultural resources would result due to a substantial increase in urbanization in the SCAG region. Certain transportation improvements in the RTP would result in significant impacts to historic, archaeological, and paleontological resources. Impacts to cultural resources resulting from the Crenshaw Transit Corridor Project would be mitigated to less than significant levels; the proposed project would not contribute to the adverse cumulative cultural resources impacts detailed in the RTP PEIR. Although many properties within the Area of Potential Effect appear to have historical or architectural significance at the local, state or national level, only one would be adversely affected after mitigation: the Carolina Lanes Bowling Center. The proposed project includes requirements that if any buildings or structures are altered for the proposed project, modifications will be made in accordance with the Secretary of Interior's Standards such that the impacts would not be adverse and would be less than significant. The alternatives would not contribute to adverse cumulative cultural resources impacts.

Regarding archaeological resources, the proposed project is in a heavily developed urban area, and no National Register-eligible sites were identified. Therefore, the proposed project is not anticipated to adversely impact archaeological resources and is not expected to result in a cumulative adverse effect in regards to archaeological resources. However, one pre-recorded site 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. Discovery of archaeological resources is possible during construction of the build alternatives, and if a National Register-eligible archaeological resource is damaged or destroyed during construction of the build alternatives, the build alternatives would result in an adverse cumulative effect on archeological resources.

Based upon the paleontological review, the majority of the project area has a high level of sensitivity for paleontological resources, especially at depths below 5 feet. The TSM Alternative would not affect paleontological resources and would not result in a cumulative impact on paleontological resources. The BRT Alternative and Base LRT Alternative and design options may require excavation exceeding 5 feet for elevated

guideway and station locations. While it is unlikely, if construction of the BRT Alternative or Base LRT Alternative and design options destroys a significant paleontological resource, these alternatives would contribute to an adverse cumulative impact on paleontological resources.

4.17.3.14 Parklands and Community Facilities

The No Build Alternative and the TSM Alternative would not result in physical impacts and therefore, no impacts to parklands or community/public facilities would occur. As identified in Section 4.12 Parklands and Community Facilities, the BRT Alternative and the Base LRT Alternative and design options would have the beneficial impact of situating public transit adjacent to parks, and thereby, potentially increasing accessibility to the parks. Although the proposed BRT Alternative and Base LRT Alternative and design options would potentially make these parklands more accessible, this accessibility would not create such a demand on the parklands that they would need to be expanded or have new facilities constructed. Overall, the alternatives would contribute to beneficial cumulative impacts related to parklands due to the improved accessibility.

The BRT Alternative and the Base LRT Alternative and design options would be served by existing public service facilities and would not generate an increase in the need for new or expanded public services in the vicinity or interfere with response times of police and fire service providers. In addition, the maintenance and operations facility site associated with the BRT Alternative and the Base LRT Alternative and design options would not result in the need for new or expanded public services. The build alternatives would not contribute to adverse cumulative impacts related to community/public facilities.

4.17.3.15 Economic and Fiscal Impacts

The anticipated economic and fiscal impacts discussed in Section 4.13 Economic and Fiscal Effects include regional economic activity, construction employment, government revenues, and construction disruptions (primarily access) to adjacent and nearby businesses in the project corridor. Generally, government revenues directly associated with purchases of materials and supplies would be sales tax. The amount of materials and supplies required for the proposed project, however, is relatively small compared to all construction projects that would be on-going in the region. As such, it is unlikely that the state or local governments would see a substantial increase in sales tax revenues. It is expected that the regional labor force would meet the expected demand for labor for all of the alternatives. It is not expected that the labor expenditures would result in substantial net new expenditures for construction labor in the region. As such, economic and fiscal impacts would be less than significant for all proposed project alternatives. The proposed project is not expected to result in a cumulative economic and fiscal impact.

4.17.3.16 Safety and Security

The No Build Alternative and the TSM Alternative would not result in any safety or security impacts. Implementation of regional transportation improvements contemplated in the RTP would be physically and financially impossible to protect all transportation systems from natural disaster or human caused incidents. There is nothing inherent in transportation improvements that would be reasonably anticipated to result in significant cumulative safety and security impacts. Community outreach has

identified concern over the pedestrian safety of an at-grade Base LRT Alternative. With the addition of the Base LRT Alternative, the project area would contain two at-grade LRT projects, which could have a potential cumulative effect in the area where the two alignments come together. Implementation of Mitigation Measures **SS1** through **SS9** would ensure that these effects are reduced to less-than-significant levels. In addition, implementation of the BRT Alternative, the Base LRT Alternative and design options, or other RTP projects may have a beneficial cumulative effect in this area, due to safety and security elements (personnel, technology and physical improvements) associated with these projects.

4.17.3.17 Construction Impacts

Construction impacts, by nature, would be temporary and intermittent over the construction period for the Crenshaw Transit Corridor Project. Over this time period, other developments in the vicinity may compound construction nuisances, such as air quality, noise, and traffic delays, for the community and motorists in isolated areas in and around the Crenshaw Transit Corridor. The project area is a growing area, and any major development adjacent to the proposed project alignment could potentially have a short-term cumulatively considerable construction impact. Each alternative includes measures to minimize construction impacts and thereby, reduce the proposed project's contribution to cumulative construction impacts. However, in the long-term, construction impacts would not be considered cumulatively significant.

4.18 Environmental Justice

The need for the study of a mass transit service along the Crenshaw Transit Corridor has developed over the years, in a large part due to issues that pertain to environmental justice. Over the years as Metro has developed and invested in its bus and rail systems throughout the County of Los Angeles. However, the Crenshaw Transit Corridor remained an overlooked and underserved community that contained a large transit dependent population that is characterized by being primarily minority and low-income. Although several studies had been completed regarding mass transit in the Corridor, there has not been a comprehensive study that takes into account all of the unique facets of the communities within the Corridor until now. The present study is intended to bridge the gap between regional transit planning and adequately serving transit dependent communities within the Crenshaw Transit Corridor.

This section describes the existing conditions related to environmental justice indicators within the study area. A discussion of the federal and State environmental justice regulations is provided along with a demographic profile of the study area and proposed stations areas. Ultimately, the potential impacts to minority, low-income, elderly, and LEP communities will be assessed to determine if a disproportionate share of the proposed project impacts will be placed on these communities.

4.18.1 Regulatory Framework

Federal

On February 4, 1994, Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, was signed into law. Executive Order 12898 requires federal agencies to achieve environmental justice by "identifying and addressing the social and economic effects of their programs, policies, and activities on minority populations and low-income populations in the United States." As Executive Order 12898 applies to the USEPA, environmental justice is the *fair treatment* and *meaningful involvement* of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no group of people, including a racial, ethnic, or socioeconomic group, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or policies. Meaningful involvement means that: (1) potentially affected community residents have an appropriate opportunity to participate in decisions about a proposed activity that will affect their environment and/or health; (2) the public's contributions can influence the regulatory agency's decision; (3) the concerns of all participants will be considered in the decision-making process; and, (4) the decision- makers shall seek out and facilitate the involvement of those potentially affected groups.

In response to Executive Order 12898, the USDOT issued an Order to Address Environmental Justice in Minority Populations and Low-Income Populations. This order, issued in April 1995, sets guidelines to ensure that all federally-funded transportation-related programs, policies, or activities that have the potential to adversely affect human health or the environment involve a planning and programming process that explicitly considers the effects on minority populations and low-income populations. Furthermore, in 1998, the FHWA has issued the "FHWA Actions to Address

Environmental Justice in Minority Populations and Low-Income Population" that defines and provides guidance for environmental justice issues as they apply to projects overseen by the FHWA.

Executive Order 13166 requires federally assisted programs to identify any need for services to those persons with LEP and develop and implement a system to provide those services so LEP persons can have meaningful access to them. Executive Order 13166 has a two-fold purpose. First, it provides enforcement and implementation of an existing obligation under Title VI of the Civil Rights Act of 1964 which prohibits recipients of federal financial assistance from discriminating based on national origins by failing to provide meaningful access to LEP individuals. Secondly, Executive Order 13166 sets forth a new obligation, which requires that all federal agencies meet the same standards as federal financial assistance recipients to provide meaningful access to LEP individuals to federally conducted programs. Additionally, like Executive Order 12898, each federal agency must develop a plan to provide this access. Meaningful access can include availability of vital documents, printed and internet-based information in one or more languages, depending on the location of the project, and translation services during public meetings.

The Age Discrimination Act of 1975 prohibits the discrimination based on age of individuals from having meaningful access and participating in federally funded programs.

State

Following the lead of the environmental justice movement at the federal level, a series of laws, beginning in 1999, have been enacted in California to implement environmental justice. The OPR has been designated the "coordinating agency in state government for environmental justice programs." As part of its new environmental justice coordinator role, the OPR must now incorporate environmental justice considerations into local government planning decisions. California law requires the OPR to coordinate with federal agencies regarding environmental justice based on Executive Order 12898.

Local

Metro includes guidelines and planning policies regarding environmental justice issues in its current LRTP. Metro's 2008 LRTP evaluates how much additional transit service would be provided in areas with high transit dependency and minority and low-income populations. The 2008 LRTP includes extensive transit investments and includes policies about placement of these investments in proximity to areas with minority and lower-income populations and to job opportunities that support those areas.

4.18.2 Affected Environment/Existing Settings

The FHWA uses the following definition given in Title IV of the Civil Rights Act of 1964 to define "minority":

Black	a person having origins in any of the black racial groups of Africa
Hispanic	a person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race

Asian	a person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent
American Indian	a person having origins in any of the original people of North America and who maintains cultural identification through tribal affiliation or community recognition
Native Hawaiian or other Pacific Islander	a person having origins in any of the original peoples of Hawaii, Guam Samoa, or other Pacific Islands

The FHWA uses the following definition given in Title IV of the Civil Rights Act of 1964 to define "low-income":

Low-income	a person whose household income (or in the case of a community or group, whose median household income) is at or below the U.S. Department of Health and Human Services (HHS) poverty guidelines.

4.18.2.1 Los Angeles County

The characteristics of Los Angeles County are shown in Table 4-91. As of the 2000 U.S. Census, approximately 9.5 million persons reside in Los Angeles County. There are approximately 3.3 million households in Los Angeles County. Approximately 69 percent of the Los Angeles County population is characterized as minority. The largest minority population is Hispanic, making up approximately 45 percent of the total population. According to the 2000 U.S. Census, approximately 18 percent of Los Angeles County is characterized as low-income. The percentage of persons with Limited English Proficiency (LEP population) over the age of five for Los Angeles County is 16 percent (and, of this percentage, 12 percent speak only Spanish). The percentage of elderly (age 65 and older) in Los Angeles County is 9.7 percent of the total population. The County of Los Angeles has an unemployment rate of 5 percent.

Table 4-91. Demographic Characteristics of Los Angeles County

Characteristic	Value
Total Population	9,519,338 Persons
Total Households	3,270,909 Households
Percent population low-income	18%
Median Household income	$42,189
Percent Minority	69%
Percent Limited English Proficiency, Age 5 or older	16%
Percent of Population over 65 years of Age	9.7%
Unemployment Rate	5%

Source: U.S. Census Bureau, 2000.

4.18.2.2 Study Area

The study area for the Crenshaw Transit Corridor Project traverses various communities within Los Angeles County. These include the Cities of Los Angeles, Inglewood,

Hawthorne, El Segundo, and unincorporated areas of Los Angeles County. In the City of Los Angeles, the study area includes several City-designated communities/ neighborhoods, including Mid-City, Crenshaw, and Jefferson Park. As shown in Table 4-92, according to the 2000 U.S. Census, there are 370,362 persons residing in the study area. In addition, there are 126,934 households in the study area. The study area has an overall employment density of approximately 4,950 jobs per square mile.[14] The average unemployment rate for the study area is 6.1 percent, compared to the overall Los Angeles County unemployment rate of 5 percent.

Table 4-92. Study Area Demographic and Socioeconomic Data

General Characteristics		Value
Total Persons		370,362
Total Households		126,934
Race	**% of Total Population**	**Persons**
White	6.3%	23,199
Black or African American	43.6%	161,487
American Indian or Native Alaskan	0.3%	1,078
Asian	5.2%	19,275
Native Hawaiian and Other Pacific Islander	0.3%	1,180
Some Other Race	0.3%	1,227
Two or more Races	2.2%	7,998
Hispanic or Latino	41.8%	154,918
Total Minority Population	93.7%	347,163
Annual Income	**% of Total Working Population /a/**	**Total**
Less than $10,000	22.3%	38,484
Between $10,000 and $14,999	14.5%	24,912
Between $15,000 and $19,999	11.6%	20,027
Between $20,000 and $24,999	10.0%	17,281
Between $25,000 and $29,999	8.5%	14,584
Between $30,000 and $39,999	12.9%	22,149
Between $40,000 and $59,999	14.2%	24,428
Between $60,000 and $99,999	4.1%	7,019
Over $100,000	1.9%	3,309
Median Household Income		$34,505
Poverty Levels	**% of Total Population /b/**	**Total**
Population below Poverty Threshold	23.1%	84,658
Population above Poverty Threshold	76.9%	282,102

/a/ The total working population is 172,193 persons.
/b/ Percentage of the total population evaluated for poverty status (366,760 persons), which is 99 percent of the total population.
Source: 2000 U.S. Census.

[14] There are approximately 229,400 jobs in the census tracts associated with the study area. These census tracts comprise a total area of 55.29 square miles. The total area of the Census tracts exceeds the Crenshaw Transit Corridor total area of 33 square miles because the geography of various Census tracts that were used for the analysis extends beyond the Corridor boundaries.

Approximately 94 percent of the study area population belongs to a minority group, as shown in Table 4-92. The minority group with the largest representation in the study area is African-Americans (44 percent). The second largest minority group in the study area is Hispanics/Latinos (42 percent). The study area is comprised of less than 10 percent of the following races: White, American Indian or Native Alaskan, Asian, Native Hawaiian or other Pacific Islander, or other race. Of the total population, 2.2 percent identify themselves as belonging to more than one race. The racial density distribution of the Crenshaw Transit Corridor is shown in Figure 4-55.

In terms of income, the median household income in the study area was $34,505.00 in 1999. Of the various income levels shown in Table 4-92, the highest percentage of the working population (22.3 percent) earned less than $10,000 per year. In the 2000 U.S. Census, 99 percent of the study area's population (366,760 persons) was evaluated for poverty status. Poverty status computations are derived by the U.S. Census using the Health and Human Services poverty thresholds (Table 4-93). As shown, 23 percent of the population in the study area is living below the poverty threshold. The distribution of households below poverty in the Crenshaw Transit Corridor is shown in Figure 4-56.

Table 4-93. 2000 U.S. Census Poverty Thresholds

Household Size	Income Threshold
One-Person	$8,794.00
Two-Person	$11,239.00
Three-Person	$13,738.00
Four-Person	$17,603.00
Five-Person	$20,819.00
Six-Person	$23,528.00
Seven-Person	$26,754.00
Eight-Person	$29,701.00
Nine-Person	$35,060.00

Source: U.S. Census Bureau, Housing and Household Economic Statistics Division, 2000.

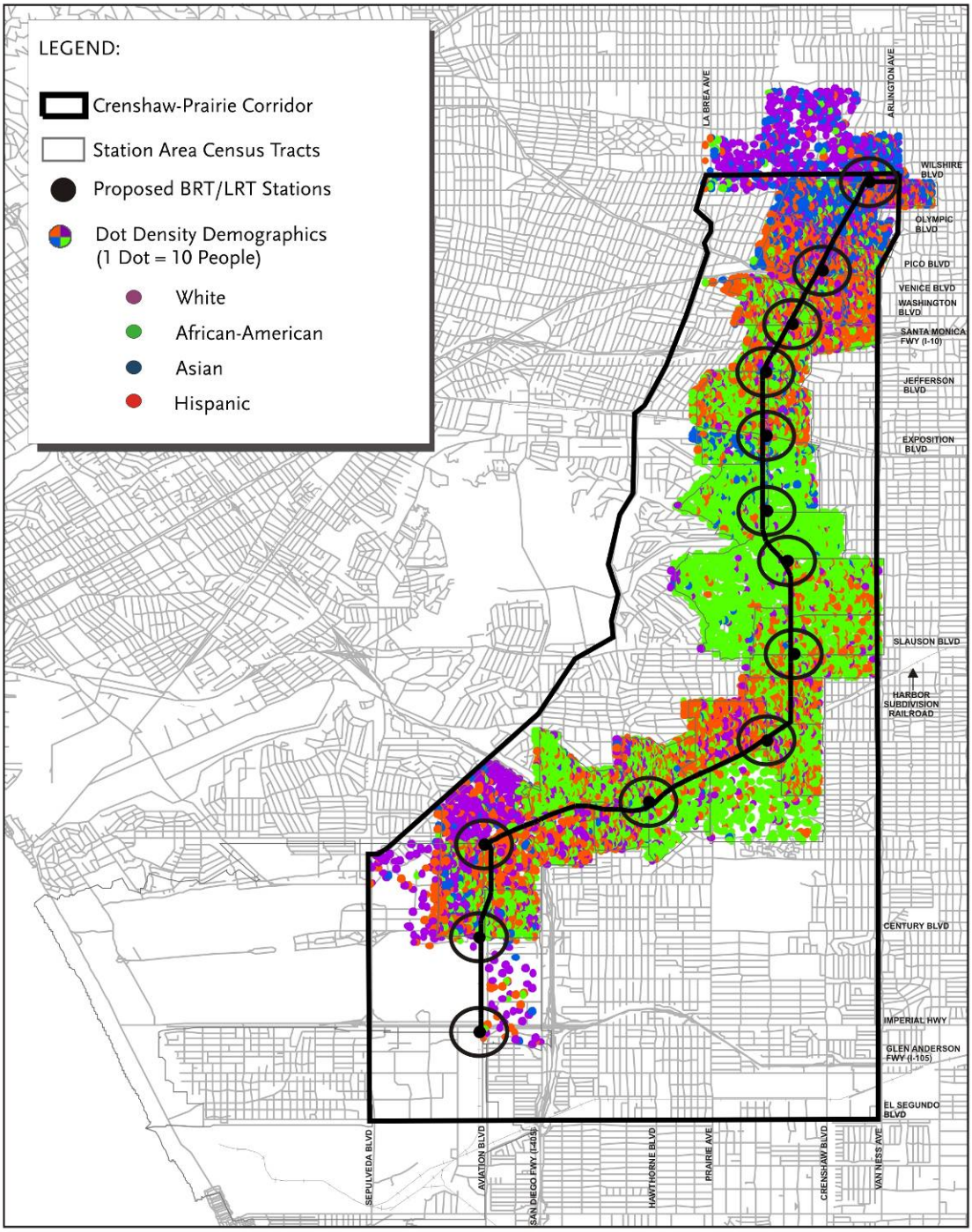
4.18.2.3 Proposed Station Areas

In order to analyze the socioeconomic impacts of the proposed stations, the census tracts within 0.25 mile of each of the proposed station locations were evaluated. The results are summarized in Table 4-94.

As shown in Table 4-94, 10 of the 13 proposed station areas have a minority population of over 50 percent. Only the Aviation Boulevard/Metro Green Line Aviation Station had a minority population of less than 50 percent. Seven of the 13 proposed station areas have a racial majority of African-Americans, with five of the proposed station areas containing an ethnic majority of Hispanics.

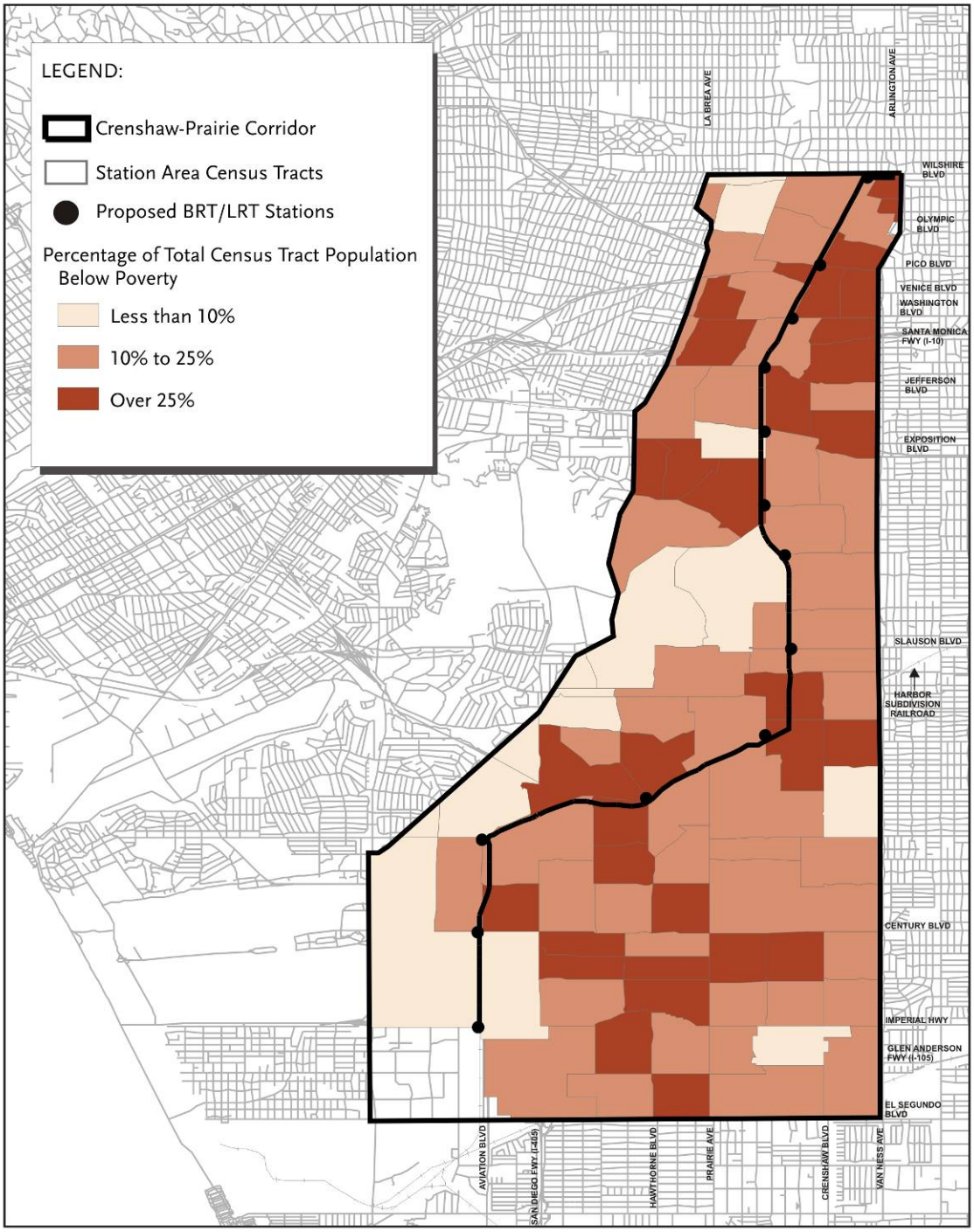
Seven of the 13 proposed station areas have a median household income that is lower than the average median household income for the entire study area ($34,505.00). Only one proposed station area, the Aviation Boulevard/Metro Green Line Aviation Station, have a median household income above $50,000.00. This same proposed station area is the only one where less than ten percent of the residential population lives below the poverty threshold.

Figure 4-55. Demographic Characteristics of the Corridor



Source: ESRI and TAHA, 2008

Figure 4-56. Station Area Poverty Distribution



Source: ESRI and TAHA, 2008

Table 4-94. Station Area Demographic Data

Station Location	Census Tracts Affected	Percent Minority	Largest Minority Group (% of Total Population)	Median Household Income	% of Population Below Poverty Threshold
Crenshaw/Wilshire Blvds /a/	2117.01, 2126.10, 2127	83.0%	Hispanic (28.3%)	$36,911	18.4%
Crenshaw/Pico Blvds	2128, 2129, 2181.10	95.1%	Hispanic (55.0%)	$26,281	26.7%
Crenshaw/Washington Blvds	2181.10, 2182.20, 2187, 2188	41.56	Hispanic (55.0%)	$23,716	31.34%
Crenshaw/Adams Blvds	2187, 2193, 2200	97.5%	African-American (50.1%)	$25,271	21.9%
Crenshaw/Exposition Blvds	2187, 2193, 2200, 2342	97.6%	African-American (55.1%)	$28,418	20.1%
Crenshaw/Martin Luther King Jr. Blvds	2342, 2343, 2361	98.6%	African-American (85.9%)	$29,283	22.1%
Crenshaw Blvd/Vernon Ave	2343,2345,7032	97.23	African-American (81.2%)	$42,605	13.6%
Crenshaw Blvd/Slauson Ave	2346, 2347	98.4%	African-American (67.5%)	$30,568	18.7%
West Blvd Harbor Subdivision	2352.02, 6009.12	97.6%	Hispanic (53.0%)	$29,892	28.2%
La Brea Ave Harbor Subdivision	6009.02, 6010.01, 6012.11, 6013.02	96.4%	African-American (62.7%)	$27,480	26.2%
Harbor Subdivision/ Manchester Blvd	2771, 2772, 6014.01	76.3%	Hispanic (41.8%)	$45,785	14.6%
Aviation/Century Blvds	2772, 2774, 2780	76.5%	African-American (34.9%)	$41,150	19.7%
Aviation Blvd/Metro Green Line Aviation Station	2780, 6200.13	37.6%	Hispanic (16.3%)	$55,370	8.6%

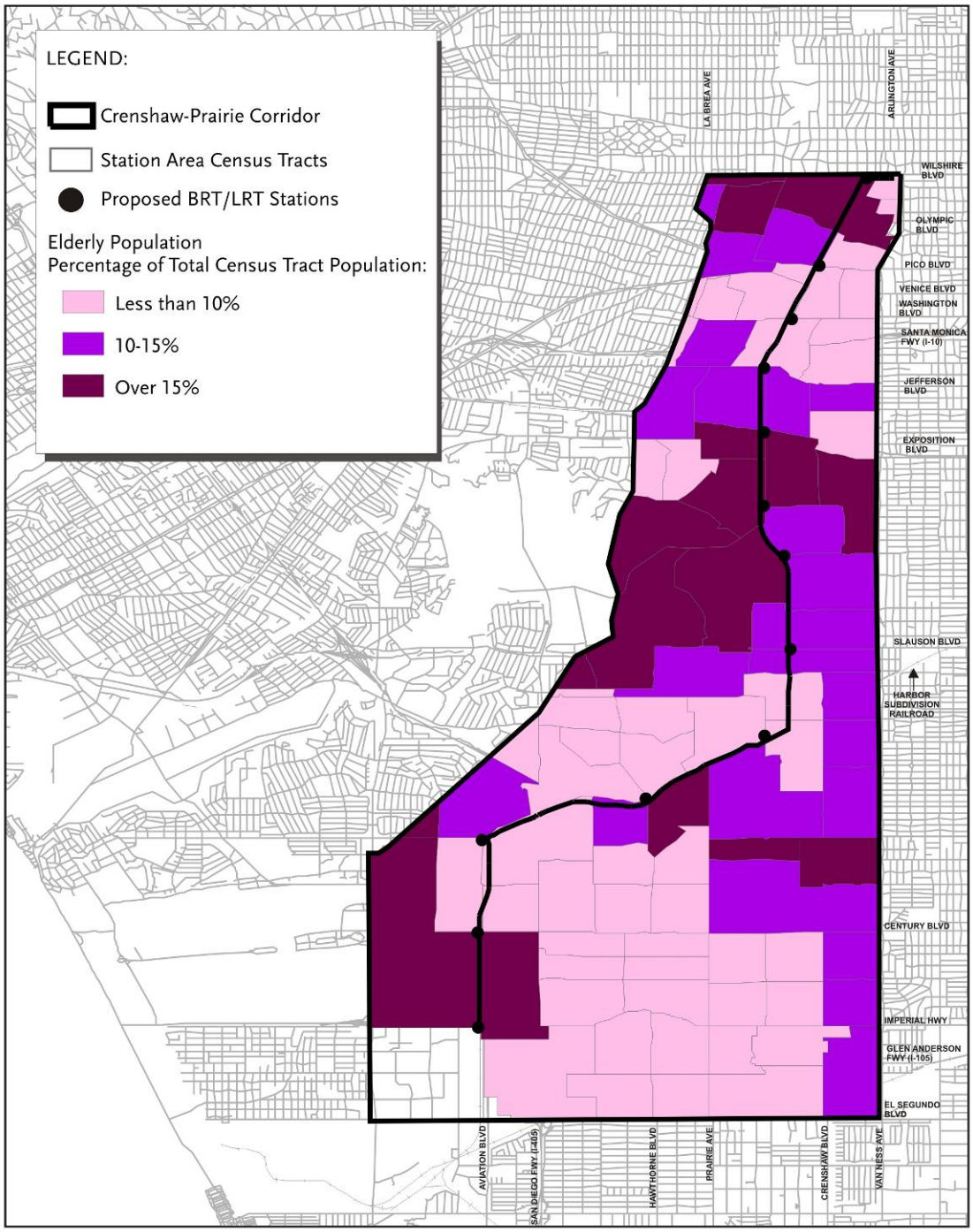
/a/ The Crenshaw Boulevard/Wilshire Boulevard Station area includes one Census tract (2117.01) that is not within the study area, but is within 0.25 mile of the proposed station location.
Source: 2000 U.S. Census.

The density of persons that have identified themselves as White (non-Hispanic), African-American, Asian, and Hispanic within a 0.25-mile from the proposed station areas is shown in Figure 4-55.

4.18.2.4 Elderly Population

According to the 2000 U.S. Census, approximately 8.9 percent of the study area population is elderly (approximately 32,971 persons). The percentage of elderly in the Corridor population is less than the percentage of elderly in the total Los Angeles County population (9.7 percent). The distribution of the elderly population in the Crenshaw Transit Corridor is shown in Figure 4-57.

Figure 4-57. Station Area Elderly Population Distribution



Source: ESRI and TAHA, 2008

4.18.2.5 Limited English Proficiency Population

The 2000 U.S. Census data indicates that approximately 14 percent of the population (50,013 households) in the Crenshaw Transit Corridor is linguistically isolated (i.e., age 5 and older have limited English proficiency). Of this LEP population, approximately 89 percent were Spanish-speaking and approximately 10 percent spoke Asian or Pacific Island languages. The distribution of the LEP population in the Crenshaw Transit Corridor is shown in Figure 4-58.

4.18.3 Public Participation

To ensure opportunities for public participation during the project development process, Metro held three public scoping meetings, after sending 99,400 notices to residences and businesses in the Crenshaw Transit Corridor study area. The public scoping meetings were held:

- October 15, 2007 – Darby Park, City of Inglewood
- October 17, 2007 – Nate Holden Performing Arts Center, Mid-City District of the City of Los Angeles
- October 20, 2007 – Audubon Middle School, Crenshaw District of the City of Los Angeles.

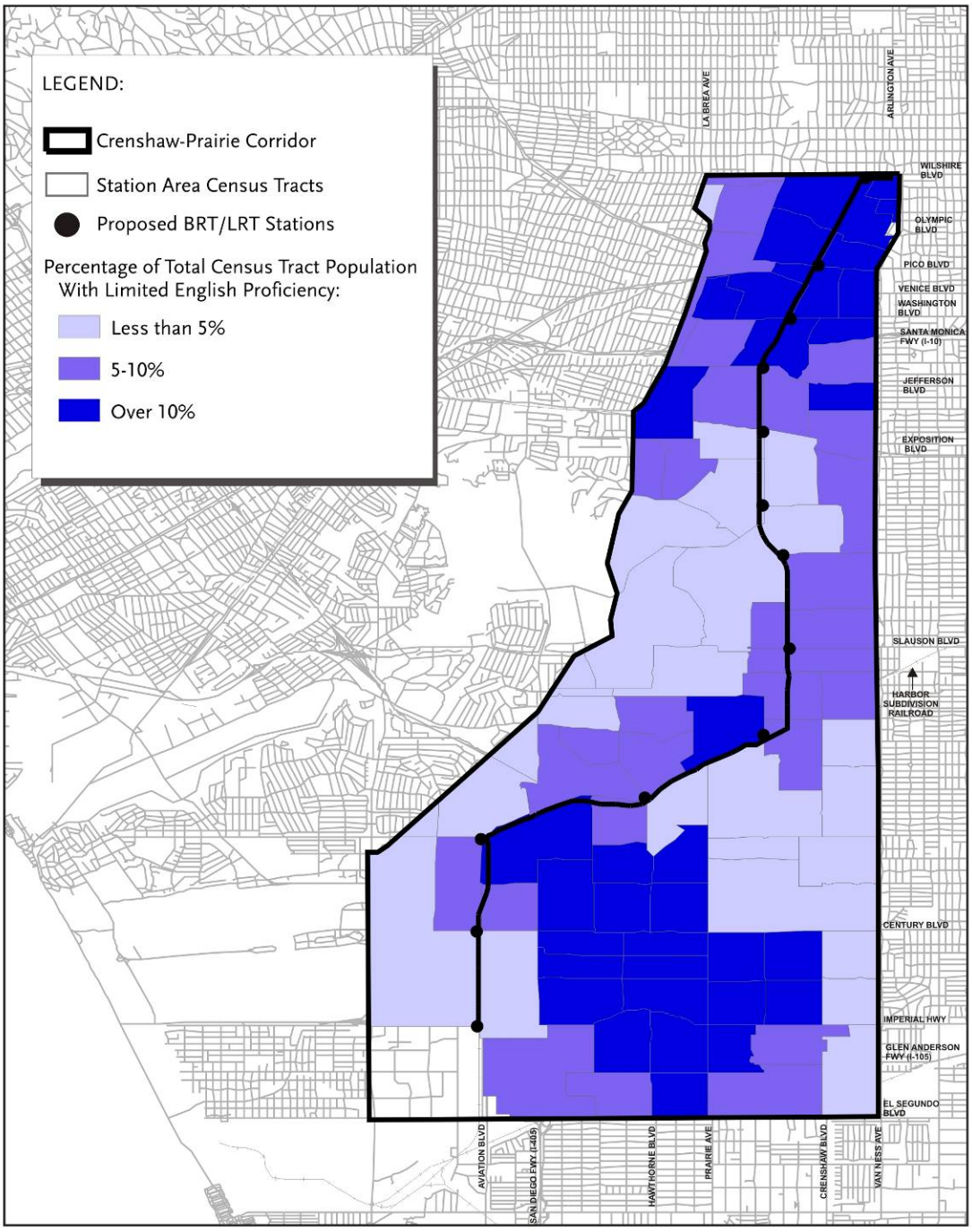
A total of 118 people attended the three meetings to provide comments on the proposed project alignments and/or alternatives.

The public scoping meetings were held in an open house format, which allowed attendees the opportunity to review project information prior to the start of the presentation and/or the comment period. Project team members were present at the display boards to address public questions and/or comments related to the project. Spanish and Korean translators were made available, as appropriate. However, none of the attendees required translation. Following the open house period, a PowerPoint presentation was made to provide attendees with information regarding the purpose of the scoping meeting, and to provide a presentation of the proposed project. Emphasis was placed on the importance of the community providing comments in person at the scoping meetings, or by telephone, fax, postal mail, or e-mail. Following the presentation, the public was given the opportunity to make verbal comments, which were recorded by a transcriber. Even though the National Environmental Policy Act (NEPA) deadline for receiving comments was November 5, 2007, the LACMTA continued to receive comments until November 20, 2007. Metro received a total of 365 comments from public agencies, community organizations, elected officials, and members of the general public.

During the period of environmental analysis, additional public meetings/open houses were held as necessary in order to inform the public of the progress regarding alternatives and modifications to the alignment. These meetings had similar format as the scoping meeting with presentation boards, a PowerPoint presentation, and public oral comments. These public meetings were held:

- February 20, 2008 – Darby Park
- February 21, 2008 – US Bank Community Room

Figure 4-58. Station Area LEP Population Distribution



Source: ESRI and TAHA, 2008

- February 23, 2008 – Nate Holden Performing Arts Center
- February 25, 2008 – Wilshire United Methodist Church

All of the outreach communications tools utilized for the scoping meetings were utilized for the project update meetings. In addition, another 107,000 direct mail invitations were sent to residents and businesses within a quarter mile of proposed alignments, and approximately 3,000 flyers were distributed throughout the corridor, including on Metro buses in the project area. A total of 143 persons attended these project update meetings.

As the environmental and engineering analyses were refined, four working groups were conducted to solicit further involvement from the affected communities regarding the environmental process. These working groups were held:

- August 11, 2008 and September 18, 2008 – Community Build
- August 13, 2008 and September 17, 2008 – Darby Park

The working groups held in August 2008 included all the elements of the previous public meetings held in October 2007 and February 2008, but also included a session where the public commented on elements of the alignment by placing their comments directly on a large-scale poster of the alignment. The second set of working groups held in September 2008 included a PowerPoint presentation and discussion on the urban design aspect of the proposed project. A total of 176 persons attended the public workshops.

During the environmental analysis process, additional stakeholder meetings have been conducted, as listed in Section 6.0 Community Participation. These meetings were held at community churches (Holy Faith Episcopal Church, West Angeles Church of God and Christ, St. John Chrysostom Church, to name a few) and at community centers (Lafayette Square Neighborhood Association, Mid-City Neighborhood Council, Crenshaw Chamber of Commerce, to name a few). The format of the stakeholder meetings were less formal than the scoping and public meetings, and included elements of the working group meetings, such as discussion of alignment elements. Since January 2008, at least 40 stakeholder meetings have been held.

Also, with the addition of design options for the LRT Alternative and supplemental analysis of the BRT Alternative, two additional community workshops were held to discuss the options and update stakeholders on the progress of the project. These working groups were held:

- March 16, 2009 – Transfiguration Church, Los Angeles
- March 19, 2009 – Rogers Park, Inglewood

The format of these two community workshops was similar to the ones conducted in August and September 2008, and included an open-house element where boards with information were set-up, a short PowerPoint presentation, and small group activities that focused on specific issues related to these design options and the evaluation process for the project.[15]

[15] See Section 6.0 Community Outreach.

4.18.3.1 Public Comments Related to Environmental Justice

Of the 365 comments received by the Metro during the three scoping meetings, 25 were directly related to the topic of environmental justice. Twelve of the 25 comments were made by members of the general public. These comments focused on the need to maintain equal standards in the study area, in terms of project development and implementation, especially in relation to other, more affluent communities. Issues of grade-separation and transit technology were also important to members of the general public. A majority of the 12 comments showed a preference for grade-separation, in particular, below-grade or underground alignments, which often correlated to a preference for heavy or light rail transit. Comments that showed a preference for grade-separation also addressed issues of safety and visual aesthetics, which proved to be especially important to members of the community. Some comments also expressed concern regarding a perceived lack of urgency and follow-through for projects located in minority communities. Lastly, a comment regarding community investment and the displacement of minority-owned businesses was also received.

Grade separation for BRT or LRT is typically engineering-driven, and is not dependent on the type of community where it is to be located. For example, where there is an intersection that already operates at capacity, the addition of a dedicated busway or rail signalization would further aggravate operations. Therefore, these intersections are grade separated. As shown in Table 4-95, most of the grade separations that occur in the existing Metro rail system are grade separated at predominately minority and low-income communities. Therefore, the decisions for grade separation in the Crenshaw Transit Corridor were not driven by the type of community, but rather by engineering considerations.

Table 4-95. Existing Metro Rail Grade Separation Characteristics

Transit Line	Percentage of Total Alignment Miles That is Grade Separated /a/							
	In Minority Areas		In Non-Minority Areas		In Low-Income Areas		In Non-Low-Income Areas	
	% of Alignment	% Grade Separated	% of Alignment	% Grade Separated	% of Alignment	% Grade Separated	% of Alignment	% Grade Separated
Red Line and Purple Line	55%	55%	45%	45%	74%	74%	26%	26%
Blue Line	84%	21%	16%	14%	76%	17%	24%	18%
Green Line	81%	81%	19%	19%	44%	44%	56%	56%
Gold Line	53%	39%	47%	28%	47%	39%	53%	29%
Gold Line Eastside Extension	100%	37%	0%	0%	100%	37%	0%	0%
Systemwide /b/	73%	48%	27%	23%	64%	41%	36%	30%

/a/ This calculation is derived from dividing the total number of miles that are grade separated in each specific area by the total alignment miles. Thus, the sums of minority/non-minority percentages and low-income/non-low-income percentages do not necessarily equal 100 percent as there are at-grade segments for all alignments except the Red, Purple, and Green Lines.
/b/ Data for the Exposition Line under construction is not yet available.
Source: Metro, 2008

The required screening process of alternatives takes into account environmental, engineering, and technical considerations, but also takes into account the comments and input from the public at these meetings. As a result, several alternatives were eliminated that could have had adverse and disproportionately adverse impacts on minority and low-income populations. One of these included an alternative that would have added aerial structures adjacent to an existing cemetery, a hospital, and a school. And, because of the risks associated with disturbing cemetery burials during the construction of a below-grade alignment, this alternative was eliminated. The screening process is described in Section 2.0, Alternatives Considered.

4.18.4 Environmental Impacts/Environmental Consequences

4.18.4.1 Methodology

Although there are no established evaluation criteria for the analysis of environmental justice, based on the community concerns discussed above and the goals and objectives of the proposed project, the following considerations were utilized in the environmental justice evaluation to ensure compliance with Executive Order 12898:

- Whether the proposed project would provide transit service equity;
- Whether the proposed project would have any potential adverse impacts that would be disproportionately borne by minority and low-income communities; and/or
- Whether low-income communities have had opportunities to actively participate in the planning of the proposed project.

An analysis of the proposed project, as it relates to minority and low-income communities, must include an evaluation of the potential to create: 1) adverse impacts to human health (such as air quality and noise); 2) adverse environmental impacts to natural and scenic resources; and 3) adverse impacts on the socioeconomic stability of a neighborhood or community. All of these factors must be analyzed to determine if a disproportionate share of the proposed project impacts will be placed on and/or in minority and low-income communities, as compared to other communities.

For environmental justice analysis, the demographics of the Crenshaw Transit Corridor provide a context within which the environmental justice issues were evaluated. The Crenshaw Transit Corridor was considered to exhibit a high percentage of ethnic minorities or low-income persons because the study area has higher than 50 percent ethnic minorities or and a higher percentage of a low- income population in comparison with Los Angeles County.

For purposes of this assessment, 2000 U.S. Census data has been used to identify impacts to areas with high minority, low-income, and LEP communities that may be disproportionately greater than those expected to be experienced by other areas within the corridor. Social and demographic data for the census tracts comprising the study area were examined and analyzed to provide a basis for determining those tracts that are considered high for minority and low-income populations within the context for the corridor's general population characteristics. This was done by comparing the proportion

for the minority population and the median household income reported for census tracts in the study corridor with the overall proportions for Los Angeles County.

4.18.4.2 Effects on Minority and Low-Income Populations

No Build Alternative

The following is a discussion of the effects of the No Build Alternative to environmental justice populations in the Crenshaw Transit Corridor. The No Build Alternative includes the status quo and all fully funded planned highway and transit improvements that are part of the 2008 LRTP.

Transit Service Equity. The Crenshaw Transit Corridor is currently served by Metro Rapid Lines 710 and 740 (Crenshaw Boulevard), Lines 720 and 920 (Wilshire Boulevard), Line 728 (Olympic Boulevard), Line 940 (Martin Luther King Jr. Boulevard), Line 711 (Florence Avenue), Line 705 (Vernon Avenue), and Line 757 (Imperial Highway). The No Build Alternative would maintain Rapid Bus transit in the Crenshaw Transit Corridor, however, it would not include new Rapid Bus lines nor would it invest major capital in mass transit infrastructure and service in a corridor that is predominately minority and low-income. Since congestion in the corridor is anticipated to increase and the No Build Alternative would not include additional transit service, the existing transit service would be impacted by the increased congestion. This would in turn increase commute times and potentially restrict mobility for the transit-dependent population in the Crenshaw Transit Corridor. Therefore, the No Build Alternative would result in disproportionate adverse effects related to transit service equity; if it is assumed that all other projects in the *Long-Range Transportation Plan* are developed.

Traffic Congestion. Traffic congestion is anticipated to increase on a regional level, and as a result, all communities, including minority or low-income, would be impacted. The Crenshaw Transit Corridor specifically would be impacted, as it contains a large population of low-income, transit-dependent residents (Table 4-92). The No Build Alternative would not include additional transit and would not reduce anticipated congestion. The existing transit service would be impacted by the additional congestion and this would decrease the mobility for the transit-dependent population in the Corridor. Therefore, disproportionate adverse impacts associated with traffic congestion and impairment to mobility that are already borne by minority and low-income communities would persist; if it is assumed that all other projects in the *Long Range Transportation Plan* are developed.

Displacements. The No Build Alternative would not include new transit lines. No properties would be acquired or right-of-way leases terminated under the No Build Alternative. No disproportionate adverse impacts associated with displacements are anticipated.

Community and Neighborhoods. The No Build Alternative would not introduce elements, such as street closures, that would result in disproportionate effects related to community cohesion, access, and exclusion. Therefore, no disproportionate adverse impacts associated with communities are anticipated.

Aesthetics. The No Build Alternative would not introduce any visual elements that would result in adverse visual effects. Therefore, no disproportionate adverse impacts associated with aesthetics are anticipated.

Health Issues. The discussion of Health Issues under the No Build Alternative includes the environmental issues of air quality, noise and vibration, water quality, and exposure to contaminated soils.

- *Air Quality.* The No Build Alternative does not include any improvements that would reduce or increase regional criteria pollutant emissions. However, increased congestion is anticipated to also increase these emissions. The minority and low-income populations of the Crenshaw Transit Corridor would be adversely impacted as a result. However, air quality impacts associated with increased congestion are spread over the entire region to all communities, regardless if they are minority or low-income. Therefore, no disproportionate impacts associated with air quality are anticipated. (Section 4.5 Air Quality)
- Noise and Vibration. The only substantial source of future noise levels under the No Build Alternative would be increased automobile traffic on local arterials. Peak-hour noise levels are not expected to increase because traffic in the area is already at or above road capacity. Under these conditions, traffic speeds would be greatly reduced and noise levels would be correspondingly low. Ground-borne vibration levels from the increased number of rubber-tired vehicles would still be below the threshold of human perception because tires and shocks isolate vehicle vibrations from the roadway surface. No disproportionate adverse impacts associated with noise and vibration are anticipated. (Section 4.6 Noise and Vibration)
- Water Quality. The Crenshaw Transit Corridor is heavily urbanized with impervious surfaces. The No Build Alternative would not result in improvements that would result in additional water runoff that could impact water quality in the Corridor. No disproportionate adverse impacts associated with water quality are anticipated. (Section 4.9 Water Resources)
- *Soil Contamination.* The No Build Alternative would not result in improvements that would require the movement or removal of significant amount of soils in the Corridor, which may contain contaminants. Therefore, no disproportionate adverse impacts associated with soil contamination are anticipated. (Section 4.8 Geotechnical/Subsurface/Seismic/Hazardous Materials)

Therefore, the No Build Alternative would not cause disproportionate adverse impacts related to human health issues including air quality, noise and vibration, water quality, and exposure to soils contamination on minority or low-income communities.

Historic, Archaeological, and Paleontological Resources. The No Build Alternative would not include a major transit investment in the Corridor. Because no construction is associated with the No Build Alternative, there is no potential to disturb archaeological or paleontological resources, or to demolish or alter historic or architectural resources. Therefore, no disproportionate adverse impacts associated with historic, archaeological, or paleontological resources are anticipated.

Parklands and Community Facilities. The No Build Alternative would not require the acquisition or use of parklands or community facilities because no major transit investment is anticipated in the Corridor. Therefore, no disproportionate adverse impacts associated with parklands and community facilities are anticipated.

Economic Vitality and Employment Opportunities. The No Build Alternative would not result in diminished or increased economic vitality and employment opportunities relative to the planned operations of Metro because no major physical change to the environment would occur (Section 4.13 Economic and Fiscal Impacts). No disproportionate adverse impacts associated with economic vitality and employment opportunities are anticipated.

Safety and Security. The No Build Alternative would not involve major transportation investment in the Crenshaw Transit Corridor. As such, safety and security measures would remain, as they exist today under the Metro Safety Education and Outreach Program (SEOP), which is intended primarily for schools, but can be adapted to other audiences. The Metro SEOP has several components, including site-specific PowerPoint presentations, informational videos regarding BRT safety, activity books, and field demonstration of safety. As such, no disproportionate adverse impacts associated with safety and security are anticipated.

Construction Impacts. Under the No Build Alternative there is no major capital investment in mass transit in the project area. However, construction may still occur in other areas in and around the Crenshaw-Prairie Transit Corridor. However, each of these projects would require their own environmental assessment and, therefore, no disproportionate adverse impact associated with construction are anticipated.

In summary, the No Build Alternative would not cause disproportionate adverse impacts related to displacements, community cohesion, aesthetics, health issues, historic, archeological, and paleontological resources, parklands and community facilities, economic vitality and employment opportunities, safety and security, and construction. However, the No Build Alternative would have disproportionate adverse impacts related to transit service equity and traffic congestion as there would be no major transit investment in the minority and low-income communities of the Crenshaw Transit Corridor.

TSM Alternative

The following is a discussion of the effects of the TSM Alternative on environmental justice populations in the Crenshaw Transit Corridor. The TSM Alternative builds upon the No Build Alternative by including additional Rapid Bus service in the Crenshaw Transit Corridor.

Transit Service Equity. The TSM Alternative would expand Rapid Bus transit in the Crenshaw Transit Corridor. The expanded Rapid Bus transit would travel in mixed-flow lanes with automobile traffic, which is anticipated to increase in congestion. Therefore, commute times for the transit-dependent population in the Crenshaw Transit Corridor would increase and potentially restrict mobility of low-income residents. However, the TSM Alternative would invest transit resources into a minority and low-income

community and, therefore, no disproportionate impacts associated with transit equity are anticipated.

Traffic Congestion. Traffic congestion is anticipated to increase on a regional level, and as a result, all communities, including minority or low-income, would be impacted. The Crenshaw Transit Corridor specifically would be impacted, as it contains a large population of minority and low-income, transit-dependent residents (Table 4-91). The TSM Alternative includes additional Rapid Bus service that would travel in mixed-flow lanes within the Corridor. Although under the TSM Alternative, the increased Rapid Bus service would create a minimal contribution to the anticipated increased congestion on Crenshaw Boulevard, it would offer increased mobility for the transit-dependent population in the study area. Therefore, no disproportionate impacts associated with traffic congestion are anticipated.

Displacements. The TSM Alternative would include additional transit lines. The additional transit lines would operate within the existing rights-of-way and, therefore, no properties would be acquired or right-of-way leases terminated under the TSM Alternative. No disproportionate adverse impacts associated with displacements are anticipated.

Community and Neighborhoods. The TSM Alternative would include additional transit lines that would operate within the existing rights-of-way. The TSM Alternative would not involve displacement and would not introduce elements, such as street closures or other physical barriers that would result in adverse effects related to community cohesion, access, and exclusion. As such, no disproportionate adverse impacts associated with community cohesion, access, and exclusion are anticipated.

Aesthetics. The TSM Alternative would include elements, such as new bus shelters, that are typical of existing Rapid Bus systems in the Corridor. Although additional shelters would be added as a result of the TSM Alternative, these shelters would be spread out over the entire corridor and would not impact one community more than another. Therefore, no disproportionate adverse impacts associated with aesthetic values are anticipated.

Health Issues. The discussion of Health Issues under the TSM Alternative includes the environmental issues of air quality, noise and vibration, water quality, and exposure to contaminated soils.

- *Air Quality.* The TSM Alternative includes additional transit lines. The TSM Alternative would decrease regional emissions of ROG and NO_x relative to the No Build Alternative, and would not exceed federal standards (Section 4.5 Air Quality). Additionally, like the existing Metro fleet, the additional Rapid buses would be CNG buses, thereby reducing emissions. The TSM Alternative would not result in adverse impacts associated with localized carbon monoxide hotspots, toxic air contaminants, and odors, and have a beneficial impact on global warming. Therefore, no disproportionate impacts associated with air quality are anticipated.
- Noise and Vibration. Under the TSM Alternative, bus service would improve from 10- to 5-minute frequency during peak periods and from 20- to 10-minute frequency during off-peak periods. Existing ambient noise levels are anticipated to mask the

effect of additional buses. Ground-borne vibration levels from rubber-tire vehicles are below the threshold of human perception, because tires and shocks isolate vehicle vibrations from the roadway surface. As such, under the FTA criteria, no noise or vibration impacts are anticipated under the TSM Alternative. Therefore, no disproportionate impacts associated with noise and vibration are anticipated. (Section 4.6 Noise and Vibration)

- Water Quality. The Crenshaw Transit Corridor is heavily urbanized with impervious surfaces. The TSM Alternative would not result in improvements that would result in additional water runoff that could impact water quality in the Corridor. No disproportionate adverse impacts associated with water quality are anticipated. (Section 4.9 Water Resources)
- *Soil Contamination.* The TSM Alternative would not result in improvements that would require the movement or removal of significant amount of soils in the Corridor, which may contain contaminants. Therefore, no disproportionate adverse impacts associated with soil contamination are anticipated. (Section 4.8 Geotechnical/Subsurface/Seismic/Hazardous Materials)

Therefore, the TSM Alternative would not cause disproportionate adverse impacts related to human health issues including air quality, noise and vibration, water quality, and exposure to soils contamination on minority or low-income communities.

Historic, Archaeological, and Paleontological Resources. The TSM Alternative would include additional transit lines in the Corridor that would utilize existing rights-of-way. Because minimal construction is associated with the TSM Alternative, there is no potential to disturb archaeological or paleontological resources, or to demolish or alter historic or architectural resources. Therefore, no disproportionate adverse impacts associated with historic, archaeological, or paleontological resources are anticipated.

Parklands and Community Facilities. The TSM Alternative would not require the acquisition or use of parklands or community facilities because the additional transit investment would utilize existing rights-of-way. Therefore, no disproportionate adverse impacts associated with parklands and community facilities are anticipated.

Economic Vitality and Employment Opportunities. The TSM Alternative would increase bus service in the Crenshaw Transit Corridor, which would translate to more employment opportunities during operations. Minimal infrastructure construction is anticipated, so there would be no additional construction employment. The TSM Alternative would not require closure of lanes or streets or restrict access to businesses during implementation. No adverse impacts associated with diminished economic vitality and employment opportunities are anticipated.

Safety and Security. The TSM Alternative would add bus transit lines in the Crenshaw Transit Corridor. The new bus lines would include the security measures that exist in other Rapid Bus lines. Relative to other forms of mass transit (light-rail and heavy-rail), buses have more pedestrian and motorist related accidents in Los Angeles County (11 fatalities with buses compared to four fatalities with light-rail and zero with heavy-rail). In order to mitigate this, the existing Metro SEOP would be utilized. Additionally, the new bus lines would operate throughout the Corridor under the TSM Alternative, and

service would not be concentrated in minority or low-income communities. Therefore, no disproportionate adverse impacts associated with safety and security are anticipated.

Construction Impacts. There is minimal infrastructure construction associated with the TSM Alternative (signage posts), and the construction equipment and materials that would be used are typical of existing construction throughout the region. Therefore, no disproportionate adverse impacts associated with construction are anticipated.

In summary, the TSM Alternative would not cause disproportionate adverse impacts related to transit service equity, displacements, community cohesion, aesthetics, health issues, historic, archeological, and paleontological resources, parklands and community facilities, economic vitality and employment opportunities, safety and security, and construction. However, the TSM Alternative would have disproportionate adverse impacts related to traffic congestion, as the improved transit would not sufficiently reduce congestion in the minority and low-income communities of the Crenshaw Transit Corridor.

BRT Alternative

The BRT Alternative provides for new transit services in the Crenshaw Transit Corridor, which would travel in mixed-traffic and in exclusive curb lanes. The BRT services would be operated by low-floor, compressed natural gas powered articulated vehicles with multi-door boarding. Enhanced BRT stops and stations would be constructed for passengers to access the system. Persons served by the BRT Alternative are defined as those living within a 0.25 mile radius of proposed station locations. This section compares the population served by stations under the BRT Alternative to the total study area population.

Transit Service Equity. Table 4-96 lists the total population and the minority and low-income populations for the areas within 0.25-mile of proposed BRT stations and the percent of the study area population that this represents, using available 2000 Census data.

Table 4-96. Population Served – Service Equity (BRT Alternative)

Area	Total Population		Minority		Low-Income /a/	
	0.25-Mile from Station	Percent of Corridor Population	0.25-Mile from Station	Percent of Corridor Population	0.25Mile from Station	Percent of Corridor Population
Bus Rapid Transit Alignment	108,263	29	98,975	27	23,909	6
Crenshaw Transit Corridor	370,362	100				

/a/ Low-income is defined as persons below poverty level per the U.S. Census Bureau poverty thresholds.
Source: 2000 Census

Approximately 29 percent of all people residing within the Crenshaw Transit Corridor live within 0.25 mile of the proposed BRT stations under the BRT Alternative. Approximately 27 percent of the Crenshaw Transit Corridor residents that are minorities live within a 0.25-mile of station areas, with Black or African-American and Hispanic or Latino residents comprising the largest proportions of the population (44 percent and 33

percent, respectively). Also, approximately 6 percent of the low-income population of the entire Crenshaw Transit Corridor lives within 0.25- mile of the proposed stations. The BRT Alternative would provide increased mobility options and access within the Crenshaw Transit Corridor as well as to and from low-income and minority communities. Therefore, no disproportionate adverse effects related to transit service equity are anticipated. In fact, positive impacts related to increased mobility for minority and low-income residents are anticipated for the BRT Alternative.

Traffic Congestion. Under the BRT Alternative, the alignment would include sections where the bus would have its own dedicated lane (the Harbor Subdivision from 104th Street to the intersection of Crenshaw Boulevard/Florence Avenue), where there is an exclusive lane with right hand turns allowed (from the intersection of Crenshaw Boulevard/Florence Avenue to the intersection of Crenshaw Boulevard/Exposition Boulevard), and where it runs with mixed traffic (from the Aviation Green Line Station to the Harbor Subdivision at 104th Street and from the intersection of Crenshaw Boulevard/Exposition Boulevard to the intersection of Crenshaw Boulevard/Wilshire Boulevard). Overall, the BRT Alternative would reduce VMT throughout the corridor. Although under the BRT Alternative, the bus service would contribute minimally to the anticipated increased congestion on Crenshaw Boulevard, it would offer increased mobility for the transit-dependent population in the study area. Therefore, no disproportionate adverse impacts associated with traffic congestion are anticipated for minority and low-income communities.

Parking. As part of the BRT Alternative, most of the on-street parking along Crenshaw Boulevard from West 67th Street to Exposition Boulevard (approximately 3.5 miles of the alignment) would be restricted during peak hour operation, although right-hand turns would be allowed. Therefore, no disproportionate adverse impact associated with the elimination of on-street parking along Crenshaw Boulevard from West 67th Street to Exposition Boulevard is anticipated.

Displacement. In order to construct the BRT Alternative, 35 parcels would need to be acquired in part and one parcel in full. Properties would be required for right-of-way widening to accommodate the aerial and at-grade segments of the busway, right-of-way widening to accommodate stations, and required street reconfigurations. The acquisitions range in size from 50 square feet to over 22,000 square feet in area. According to Table 4-6, most of the properties that would be displaced are commercial, industrial, and public. There is one single-family residence that would be displaced. Additionally, there are a total of 190 month-to-month leases and 103 annual or longer leases currently using Harbor Subdivision right-of-way land. These leases will be terminated to accommodate the route alignment, stations, and parking (Section 4.2 Displacement and Relocation of Existing Uses).

Disproportionate adverse impacts associated with displacement would occur if a significant proportion of the displaced properties are minority-owned or leased. This is determined by analyzing whether the rate of uses being displaced in minority and low-income communities is higher than the rate of displacement project-wide. Also, impacts can be disproportionate if the uses that serve specifically minority and low-income communities are displaced at rates that are higher than other uses. At this level of analysis, it is not known how many of the potential displacements are minority owned or

leased by minorities, or the composition of employees. Typically, the choice of properties to displace is based on the alignment and the engineering needs of the station areas and rights-of-way, and not on race or income. Regardless of demographic or socioeconomic character, Metro is required to comply with the Uniform Relocation Act to find adequate relocation sites for the owned-businesses and for the leases that qualify. In terms of displacement, conformity with the Uniform Relocation Act would not result in adverse impacts. No disproportionate adverse impacts associated with displacement of a use that serves minority or low-income communities are anticipated.

Community and Neighborhoods. The BRT Alternative would introduce elements, such as street closures and displacement that can have adverse effects related to community cohesion, access, and exclusion. As part of the BRT Alternative, Redondo Boulevard would be closed and a cul-de-sac would be created at Florence Avenue and the Harbor Subdivision.[16] The Harbor Subdivision is an existing border between communities (Section 4.3 Community and Neighborhood Impacts). As seen in Figure 4-55, Figure 4-57, and Figure 4-58, the Harbor Subdivision is the division between a community that is predominately African-American, has an elderly population of more than 10 percent, and is not linguistically isolated (south) and a predominately Hispanic community that has an elderly population of less than 5 percent with an LEP population of over 10 percent (north). The closing of Redondo Boulevard would not introduce a new border or destroy a link within a community. In addition, pedestrians would still be able to access Florence Avenue from Redondo Boulevard.

Community cohesion can be also be adversely impacted by displacement. As discussed above, there are several parcels that would be displaced as part of the BRT Alternative. However, most of the displacement would be of industrial uses, which are not typically crucial to community cohesion. Additionally, the BRT Alternative would displace some mature trees in the Faithful Bible Church complex. As discussed in Section 4.3 Community and Neighborhood Impacts, the Harbor Subdivision is already a dividing element to the Faithful Bible Church complex. The BRT Alternative would not introduce elements that would further divide the complex. As such, no adverse impacts associated with community cohesion, access, and exclusion are anticipated.

Aesthetics. The discussion of the BRT Alternative with respect to aesthetic impacts is presented in Section 4.4, Visual Quality. For the purposes of environmental justice, disproportionate adverse aesthetic impacts would result if minority or low-income communities would bear the impacts. As part of the BRT Alternative, the elements that would be introduced that do not currently exist in the corridor include: exclusive curbside bus lanes, new bus shelters along Crenshaw Boulevard, bus shelters and platforms along the Harbor Subdivision, illuminated busway along the Harbor Subdivision, removal of landscaping and mature trees along the Harbor Subdivision, and an elevated bus station at Florence Avenue/La Brea Avenue. The new bus shelters would occur along the majority of the alignment. The curbside bus lanes, however, would occur at predominately minority areas. However, these elements are not anticipated to change the visual character of the area.

[16] The City of Inglewood is proposing to realign this intersection as an alternative to closing it. However, at this time the project is not funded, and therefore, not considered for the purposes of this analysis,

The bus shelters and platforms under the BRT Alternative are visual characters that do not currently exist in the study area. However, similar shelters are found along the Metro Orange Line, which is the only existing Metro BRT Line. These shelters are located in an area of mixed income and mixed racial composition in the San Fernando Valley. Thus, the placement of BRT bus shelters and platforms would not be borne solely by minority or low-income communities along the Crenshaw-Prairie Transit Corridor. Therefore no disproportionate adverse impacts associated with the bus shelters are anticipated.

The elevated bus station at the Florence Avenue/La Brea Avenue intersection would introduce a visual element that does not currently exist in that intersection. However, tall structures are present in the vicinity in downtown Inglewood, and the proposed aerial station would not be out of scale with these buildings. In addition, the adjacent area is mostly commercial and it would be located at an established community boundary (the Harbor Subdivision). No disproportionate adverse impacts associated with the aerial bus station are anticipated.

The removal of mature trees along the Harbor Subdivision under the BRT Alternative would drastically change the visual character and remove a significant visual resource in the community, which is predominately low-income, elderly, and has some linguistic isolation. Before mitigation, disproportionate adverse impacts associated with the removal of mature trees along the Harbor Subdivision are anticipated.

Health Issues. The discussion of Health Issues under the BRT Alternative includes the environmental issues of air quality, noise and vibration, water quality, and exposure to contaminated soils.

- *Air Quality.* The impacts of the BRT Alternative on criteria pollutants are discussed in Section 4.5 Air Quality. The BRT Alternative would reduce automobile VMT and increase bus VMT in the transportation system. Additionally, the vehicles that would be used under the BRT Alternative would utilize CNG and, thus, would not contribute to emissions. Therefore, no disproportionate impacts associated with air quality are anticipated.
- *Noise and Vibration.* Under the BRT Alternative, bus service would include 5-minute headways during peak hours and ten-minute headways during off peak hours. Although there is an incremental increase in ambient noise due to the frequency of buses, existing ambient noise levels are anticipated to mask the effect of additional buses. Ground-borne vibration levels from rubber-tire vehicles are below the threshold of human perception, because tires and shocks isolate vehicle vibrations from the roadway surface. Therefore, no disproportionate adverse noise or vibration impacts are anticipated under the BRT Alternative. (Section 4.6 Noise and Vibration)
- *Water Quality.* The Crenshaw Transit Corridor is heavily urbanized with impervious surfaces. The BRT Alternative would include structures that could increase runoff (bridge structure, aerial platform). However, mitigation measures and best management practices have been identified that would result in impacts that are not adverse. No disproportionate adverse impacts associated with water quality are anticipated. (Section 4.9 Water Resources)

- *Soil Contamination.* The BRT Alternative would include excavation of soils for the station platforms, the removal of mature trees, and for the aerial bus station and bridge. Some of the soils encountered have the potential for contamination, particularly at the Harbor Subdivision tracks. As this area is predominately minority, low-income, and elderly, these populations would be affected by the contamination. Mitigation measures are included that would result in impacts that are not adverse. Therefore, no disproportionate adverse impacts associated with soil contamination are anticipated. (Section 4.8 Geotechnical/Subsurface/Seismic/Hazardous Materials)

Therefore, the BRT Alternative would not cause disproportionate adverse impacts related to human health issues such as air quality, noise and vibration, water quality, or exposure to soils contamination to minority or low-income communities.

Historic, Archaeological, and Paleontological Resources. The BRT Alternative would not impact any known archaeological or paleontological resource. However, the BRT Alternative would remove the Carolina Lanes building at Century Boulevard and the Harbor Subdivision. Although the structure is historic, its current use is an adult entertainment venue, which is not considered an asset to the surrounding communities. Therefore, no disproportionate adverse impacts related to historic resources are anticipated.

Parklands and Community Facilities. The BRT Alternative would require the acquisition of part of the Edward Vincent Jr. Park in the City of Inglewood. The area of the park that would be acquired consists of mature trees and other vegetation. Under Section 4F, a *de minimis* impact was found, which would result in no adverse impact. However, parkland is scarce in urban areas of Southern California, particularly in low-income and minority communities. Therefore, the taking of existing parklands without replacing it would result in a disproportionate adverse impact associated with parklands in a minority neighborhood.

Economic Vitality and Employment Opportunities. The BRT Alternative would remove on-street parking along Crenshaw Boulevard where there is to be an exclusive lane. This would affect the businesses that rely solely on on-street parking. However, it would affect them, whether they are minority-owned or not. The BRT Alternative would create employment opportunities during construction and operation of the proposed project. However, these additional jobs may not necessarily cater to the local residents. There is a possibility that the BRT Alternative could stimulate commercial growth at the station areas, which would positively impact the communities around them. However, this potential commercial growth is speculative at this time. No disproportionate adverse impacts associated with diminished economic vitality and employment opportunities are anticipated.

Safety and Security. A discussion of the safety and security issues of the BRT Alternative is discussed in Section 4.14 Safety and Security. Relative to other forms of mass transit (light-rail and heavy-rail), buses have more pedestrian and motorist related accidents in Los Angeles County (11 fatalities with buses compared to four fatalities with light-rail and zero with heavy-rail). In order to mitigate this, the existing Metro SEOP would be utilized. Additionally, the new bus lines would operate throughout the Corridor under

the TSM Alternative, and service would not be concentrated in minority or low-income communities. Additionally, a fence barrier where buses would run at speeds exceeding 35 miles per hour (mainly the Harbor Subdivision) would be erected in order to reduce potential pedestrian safety issues in an area with a high concentration of elderly people. As such, no disproportionate adverse impacts regarding safety and security are anticipated.

Construction Impacts. The construction impacts for each of the topics in the Draft Environmental Impact Assessment/Environmental Impact Report EIS/EIR are discussed in Section 4.15 Construction Impacts. The construction activity associated with the BRT Alternative would be temporary and similar throughout the alignment. The only exception is the intense construction that would occur at the Florence Avenue/La Brea Avenue intersection due to the aerial structure and near Edward Vincent Jr. Park, where the large mature trees would be removed. Both of these areas are predominately minority, low-income, and have a high percentage of elderly and LEP populations. Nevertheless, mitigation measures have been identified for the construction of the aerial structure and the process of the removal of the mature trees that, upon implementation, would result in no substantial adverse effects. Therefore, no disproportionate adverse impacts associated with construction are anticipated.

In summary, the BRT Alternative would not cause disproportionate adverse impacts related to transit service equity, traffic congestion, parking, displacements, community cohesion, health issues, historical, archeological, and paleontological resources, community facilities, economic vitality and employment opportunities, safety and security, and construction. However, the BRT Alternative would have disproportionate adverse impacts related to aesthetics and parklands in the minority and low-income communities of the Crenshaw Transit Corridor.

Base LRT Alternative

The Base LRT Alternative provides for a new mass transit line in the Crenshaw Transit Corridor, which would travel in exclusive lanes, and is in some segments grade-separated. The new services would be operated by high-floor articulated vehicles electrically powered by an overhead wire operating along a new bi-directional, fixed guideway located in a combination of exclusive and semi-exclusive rights-of-way. The alternative would include seven stations, park-and-ride and bus transfer facilities at stations, a vehicle maintenance and operations facility, and traction power substations. Persons served by the Base LRT Alternative are defined as those living within a 0.25 mile radius of proposed station locations. This section compares the population served by stations under the Base LRT Alternative to the total study area population.

Transit Service Equity. Table 4-97 lists the total population and the minority and low-income populations for the areas within 0.25 mile of proposed Base LRT stations and the percent of the study area population that this represents, using available 2000 U.S. Census data.

Approximately 22 percent of all persons residing within the Crenshaw Transit Corridor live within 0.25 mile of the proposed BRT stations under the BRT Alternative. Approximately 20 percent of the Crenshaw Transit Corridor residents that are minorities

Table 4-97. Population Served – Service Equity (Base LRT Alternative)

Area	Total Population		Minority		Low-Income /a/	
	0.25 Mile from Station	Percent of Corridor Population	0.25 Mile from Station	Percent of Total Population	0.25Mile from Station	Percent of Total Population
Base LRT Alignment	81,892	22	75,542	20	18,018	5
Crenshaw Transit Corridor	370,362	100				

/a/ Low-income is defined as persons below poverty level per the U.S. Census Bureau poverty thresholds.
Source: 2000 U.S. Census

live within a 0.25 mile of station areas, with Black or African-American and Hispanic or Latino residents comprising the largest proportions of the population (44 percent and 33 percent, respectively). Approximately 5 percent of the low-income population of the Crenshaw Transit Corridor lives within a 0.25 mile of the proposed stations. The Base LRT

Alternative would provide increased mobility options and access within the Crenshaw Transit Corridor, as well as to and from low-income and minority communities. Therefore, no disproportionate adverse effects related to transit service equity are anticipated. In fact, positive impacts related to increased mobility for minority and low-income residents are anticipated for the Base LRT Alternative.

Traffic Congestion. Under the Base LRT Alternative, the LRT vehicles will always be separated from traffic. The Base LRT alignment would be completely separated from the surrounding street system along the Harbor Subdivision, in Hyde Park (from the intersection of Crenshaw Boulevard/67th Street to the intersection of Crenshaw Boulevard/60th Street), and from the intersection of Crenshaw Boulevard/48th Street to the intersection of Crenshaw Boulevard/39th Street. The LRT vehicles will travel at-grade with surrounding traffic (though not in a traffic lane) from the intersection of Crenshaw Boulevard/60th Street to the intersection of Crenshaw Boulevard/48th Street and from the intersection of Crenshaw Boulevard/39th Street to the intersection of Crenshaw Boulevard/Exposition Boulevard. The Base LRT Alternative would reduce automobile VMT and increase bus and light rail VMT in the transportation system. Although under the Base LRT Alternative, the rail service would contribute to the anticipated increased congestion on Crenshaw Boulevard, it would offer increased mobility for the transit-dependent population in the study area. Therefore, no disproportionate adverse impacts associated with traffic congestion are anticipated for minority and low-income communities.

Parking. As part of the Base LRT Alternative, on-street parking along Crenshaw Boulevard from W. 60th Street to W. 48th Street and from W. 39th Street to Exposition Boulevard would be restricted for operation during peak hours. This type of parking restriction during peak hours is already in place. Therefore, no disproportionate adverse impact associated with the elimination of on-street parking along Crenshaw Boulevard is anticipated.

Displacement. In order to construct the Base LRT Alternative, 50 parcels would need to be acquired in part (15 of which are on Crenshaw Boulevard) and 6 parcels in full (One of which is on Crenshaw Boulevard). The acquisitions range in area from 130 square feet to over 74,000 square feet. As discussed in Section 4.2 Displacement and Relocation of Existing Uses, most of the properties that would be displaced are commercial, industrial, and public. There is one single-family residence that would be displaced. Additionally, there are a total of 190 month-to-month leases and 103 annual or longer leases currently using Harbor Subdivision right-of-way land. These leases will be terminated to accommodate the route alignment, stations, and parking (Section 4.2 Displacement and Relocation of Existing Uses).

Disproportionate adverse impacts associated with displacement would occur if the majority of the displaced properties are minority-owned or leased. This is determined by analyzing whether the rate of uses being displaced in minority and low-income communities is higher than the rate of displacement project-wide. Also, impacts can be disproportionate if the uses that serve specifically minority and low-income communities are displaced at rates higher than other uses. In terms of minority ownership or lease, it is likely that most of the properties that would be displaced are owned or leased by minorities. The choice of properties to displace is based on the alignment and the engineering needs of the station areas and rights-of-way. Metro will comply with the Uniform Relocation Act to find adequate relocation sites for the owned-businesses and for the leases that qualify. In terms of displacement, conformity with the Uniform Relocation Act would not result in adverse impacts. No disproportionate adverse impacts associated with displacement of minority or low-income communities.

Community and Neighborhoods. The Base LRT Alternative would introduce elements, such as street closures and displacement that can have adverse effects related to community cohesion, access, and exclusion. As part of the Base LRT Alternative, Redondo Boulevard would be closed and a cul-de-sac would be created at Florence Avenue and the Harbor Subdivision.[17] The Harbor Subdivision is an existing border between communities (Section 4.3 Community and Neighborhood Impacts). As seen in Figure 4-55, Figure 4-57, and Figure 4-58, the Harbor Subdivision is the division between a community that is predominately African-American, has an elderly population of more than 10 percent, and is not linguistically isolated (south) and a predominately Hispanic community that has an elderly population of less than 5 percent with an LEP population of over 10 percent (north). The closing of Redondo Boulevard would not introduce a new border or destroy a link within a community. In addition, pedestrians would still be able to access Florence Avenue from Redondo Boulevard.

Under the Base LRT Alternative an aerial structure would be constructed in the Hyde Park neighborhood from the Crenshaw Boulevard/W. 67th Street intersection to the Crenshaw Boulevard/W. 59th Street intersection, at a distance of approximately 3,200 feet. As a result, W. 59th Place will be disconnected across Crenshaw Boulevard. This is not a major street, so it is not anticipated to have community cohesion impacts. However, the height of the aerial structure (approximately 36 feet) would introduce a

[17] The City of Inglewood is proposing to realign this intersection as an alternative to closing it. However, at this time the project is not funded, and therefore, not considered for the purposes of this analysis,

conspicuous visual element that does not exist in the community. Although the aerial structure would not physically divide Crenshaw Boulevard, it would traverse the Hyde Park portion of the alignment by passing between two major community facilities, West Angeles Villas and St. John the Evangelist Catholic School, that are currently focal points within an established community. The aerial structure could be considered a perceived barrier in the community. As such, adverse impacts associated with community cohesion are anticipated.

Community cohesion can be also be adversely impacted by displacement. As discussed above, there are several parcels that would be displaced as part of the Base LRT Alternative. Most of the displacement along the Harbor Subdivision would be of industrial uses, which are not typically crucial to community cohesion. However, along Crenshaw Boulevard, displacement would include some commercial areas which may be important to the character of the community.

Aesthetics. The discussion of the Base LRT Alternative with respect to aesthetic impacts is presented in Section 4.4 Visual Quality. As part of the Base LRT Alternative, the elements that would be introduced that do not currently exist in the corridor include: removal of land uses near the Exposition Boulevard/Crenshaw Boulevard intersection, a fixed guideway in the middle of Crenshaw Boulevard with overhead wires and OCS poles, removal of landscape medians and elimination of frontage roads, portal structures on the street median, an elevated structure in the median of Crenshaw Boulevard between W. 59th Street and the Harbor Subdivision, removal of landscaping and mature trees along the Harbor Subdivision, and an elevated station at the Florence Avenue/La Brea Avenue intersection. All of these elements of the Base LRT Alternative would change the visual character of the area and introduce elements of glare and light that do not currently exist. Also, there is the potential for impacts associated with scale and shade and shadows. The areas where the most change in visual character would occur are Hyde Park (aerial structure), Inglewood Civic Center (aerial station), and the Crenshaw District (removed median trees and OCS poles with potential replacement of trees of at the sidewalk). All of these areas are predominately minority, and Hyde Park is predominately low-income and has between 5 and 10 percent LEP population.

- *Aerial Structure at La Brea Avenue/Florence Avenue.* The proposed aerial structure in the City of Inglewood would include a station with a platform level and a mezzanine level that may eventually provide a link via a pedestrian bridge from the station to the nearby Civic Center buildings. The area surrounding this station is composed of mainly commercial and public buildings. There are some residences to the north of the proposed station, however, they are not adjacent to the proposed structure and would not be impacted by shade or shadows. The glare and lighting from the proposed structure would be visible from these residences, though it would be reduced by the proposed walls. The scale of the proposed structure, while large, would be similar to the Civic Center buildings on La Brea Avenue. In this area, at grade separation is required due to traffic congestion issues, and is not based on location within a minority neighborhood. As such, disproportionate adverse impacts are not anticipated.

- *Aerial Structure in Hyde Park.* The aerial structure at Hyde Park would be approximately 36 feet tall and be located on the median of Crenshaw Boulevard from the Harbor Subdivision to W. 59th Street. As discussed in Section 4.4 of this report, the aerial structure has been determined to have adverse impacts on visual character. The entire aerial segment would be located within the Hyde Park community which is both a minority area and an area with a higher percent of households in poverty status. From an environmental justice perspective, the issue is whether the selection of the aerial configuration results in disproportionate impacts to a minority and/or low income community. As presented in the Alternatives Screening Report, the aerial alignment was selected due to a limited right-of-way width on Crenshaw Boulevard that cannot accommodate at-grade light rail operations without expansion of the right-of-way that would displace local businesses and affordable housing stock. This section of alignment is not designated as a scenic corridor as the section of Crenshaw Boulevard between the I-10 Freeway and Slauson Avenue. This section of the alignment had fewer and less prominent historic and aesthetic architectural recourse.

  The Base LRT Alternative includes approximately 0.9 miles of aerial structure. Approximately 0.7 miles are located within the Hyde Park community and 0.1-mile of the remaining 0.2 miles (La Brea Avenue, I-405, Century Boulevard grade separations) are also located in low-income communities (The Imperial Highway grade separation is not located in a low-income area). Approximately 88 percent of the proposed aerial segments are located in communities of concern for environmental justice purposes. By comparison, the entire Metro fixed guideway light rail system either operating or under construction, has approximately 4.85 miles of aerial structures of which 2.0 miles are located in low-income communities (41 percent). When considering this project in isolation, aerial structures are proposed at higher rates in low-income communities than the rate for the whole corridor. The proposed aerial structures within the Crenshaw project would constitute a disproportionate adverse impact, when this project is considered alone.

  It is important to note that systemwide statistics indicate the effects of elevated structures are borne predominantly by *higher* income communities. Sixty-seven percent of the existing aerial structure mileage is located in high-income communities compared to 33 percent for low-income communities. The rate of aerial structures in low-income communities would increase with the Base LRT Alternative. However, the statistics show that even with this addition, the rate of impact to low-income communities is not disproportionate systemwide. In other words, there is no pattern to suggest that low-income communities have higher rates of grade separations that are aerial than high-income communities or the general population.

  The characteristics of the aerial structure are also important in the identification of disproportionate impacts. The aerial section between 60th and 67th Street on the Crenshaw Transit Corridor project LRT Alternative would represent the only elevated fixed guideway segment in the Metro system that would be located in the center of an arterial where there are small-scale commercial businesses on both sides. In some other comparable parts of the Metro system (Douglas Street in El Segundo along the Green

Line, and portions of Alameda Street for the Gold Line and Gold Line Eastside Extension in Chinatown and Little Tokyo, respectively), the aerial alignments are located on one side of the street. The nature of these visual impacts should be considered in the analysis of disproportionality. Because this context is rare, the impact of the aerial section between 60th Street and 67th Street would be disproportionate.

The below-grade segment that traveles along Crenshaw Boulevard from south of Colesium Place to 48th Street also has a limited right-of-way width that cannot accommodate at-grade light rail operations without expansion of the right-of-way that would displace local businesses and affordable housing stock. In cases where Metro selects a below-grade segment over an aerial segment, there are documented reasons for the selection of grade-separation. For the Lemeirt Park below-grade segment, these documented reasons included:

- The historic status of many properties within Lemeirt Park Village
- The scale and density of commercial uses within Lemeirt Park Village
- The Status of Crenshaw Boulevard between I-10 and Slauson Avenue as a designated scenic corridor in the City of Los Angeles General Plan Transportation Element

- *Impacts on Crenshaw Boulevard.* The proposed project would remove mature trees along the median of Crenshaw Boulevard, introduce OCS poles and an electrification system, introduce portals for the underground ingress and egress of the trains, and remove some of the commercial uses at Exposition Boulevard. Although all of these would occur in predominately minority neighborhoods, they would also occur in medium and low-income neighborhoods. Additionally, there are mitigation measures identified that, upon implementation, would reduce adverse impacts to a level of insignificance. Therefore, no disproportionate adverse impacts are anticipated.

Health Issues. The discussion of Health Issues under the Base LRT Alternative includes the environmental issues of air quality, noise and vibration, water quality, and exposure to contaminated soils.

- *Air Quality.* The impacts of the Base LRT Alternative on criteria pollutants are discussed in Section 4.5 Air Quality. The Base LRT Alternative would reduce automobile VMT and increase bus and light rail VMT in the transportation system. Under the Base LRT Alternative, NO_x emissions associated would exceed the federal thresholds. However, these impacts are regional and are not borne disproportionately by minority or low-income communities. Therefore, no disproportionate impacts associated with air quality are anticipated.
- *Noise and Vibration*. Under the Base LRT Alternative, there is the potential for noise and vibration impacts from four sources: passby noise from LRT vehicles, warning signals at grade crossings, areas of special trackwork, and maintenance yards. The impacts for each of these sources are discussed in Section 4.6 Noise and Vibration. Although there is an incremental increase in ambient noise and vibration due to the introduction of LRT service, no adverse impacts associated with noise and vibration are anticipated during operation of the Base LRT Alternative. However, the majority

of the at-grade crossings where the LRT warning signals would be sounded are in minority communities. However, as discussed in Section 4.18.3 above, the decision for grade separation is based on engineering restrictions and is irrespective of location of minority populations. As such, no disproportionate adverse noise or vibration impacts are anticipated under the Base LRT Alternative.

- *Water Quality*. The Crenshaw Transit Corridor is heavily urbanized with impervious surfaces. The Base LRT Alternative would include structures that could increase runoff (bridge structure, aerial platform). However, mitigation measures and best management practices have been identified that would result in impacts that are not adverse. No disproportionate adverse impacts associated with water quality are anticipated. (Section 4.9 Water Resources)
- *Soil Contamination.* The Base LRT Alternative would include excavation of soils for the station platforms, the removal of mature trees, and for the aerial structures. Some of the soils encountered have the potential for contamination, particularly at the Harbor Subdivision tracks. As this area is predominately minority, low-income, and these populations would be affected by the contamination. Mitigation measures are included that would result in impacts that are not adverse. Therefore, no disproportionate adverse impacts associated with soil contamination are anticipated. (Section 4.8 Geotechnical/Subsurface/Seismic/Hazardous Materials)

Therefore, the Base LRT Alternative would not cause disproportionate adverse impacts related to human health issues including air quality, noise and vibration, water quality, or exposure to soils contamination on minority or low-income communities.

Historic, Archaeological, and Paleontological Resources. The Base LRT Alternative would not impact any known archaeological or paleontological resource. However, the Base LRT Alternative would remove the Carolina Lanes building at Century Boulevard and the Harbor Subdivision. Although the structure is historic, its current use is an adult entertainment venue, which is not typically considered an asset to the surrounding communities.

Several mature trees would be removed along Crenshaw Boulevard for the construction of the Base LRT Alternative. These trees are not considered historic and, therefore, disproportionate adverse impacts related to historic resources are not anticipated.

Parklands and Community Facilities. The Base LRT Alternative would require the removal of mature trees along the median on Crenshaw Boulevard. These medians are not considered parklands or recreation areas. Additionally, replacement mature trees are to be planted in the vicinity of the alignment. Therefore, no disproportionate adverse impact associated with parklands is anticipated.

Economic Vitality and Employment Opportunities. The Base LRT Alternative would remove on-street parking along Crenshaw Boulevard and reduce the number of traffic lanes where it travels at-grade. This would affect the businesses that rely solely on on-street parking. However, it would affect them, whether they are minority-owned or not. (It is likely, though, that in this area most of them are.) The long-term operations of the Base LRT Alternative would require more than double the number of additional workers

needed under either the TSM or BRT Alternatives. However, these additional jobs may not necessarily cater to the local residents. There is a possibility that the Base LRT Alternative could increase commercial growth at the station areas, which would positively impact the communities around them. No disproportionate adverse impacts associated with diminished economic vitality and employment opportunities are anticipated.

Safety and Security. Community input regarding environmental justice and equity received by Metro since the inception of the Crenshaw-Prairie Transit Project has consistently emphasized the topic of safety and security of the transit technologies being considered for the corridor. Safety of the at-grade LRT sections is a key community concern. The Base LRT Alternative includes a number of segments of at-grade alignments and at-grade crossings with major and/or secondary highways. During some of the community input received, some members of the public expressed a view of at-grade LRT as "unsafe" compared to grade separating LRT in either underground or elevated configurations. To systematically address the issue of grade separating transit service, Metro developed a Grade Crossing Policy for Light Rail Transit in 2003. Since its adoption by the Metro Board, this policy has been in use as a planning and engineering assistance tool and it requires that rail and highway crossings be analyzed in a sequence of steps at increasing levels of detail. This policy is applied to all Metro project corridors regardless of the socioeconomic status or race/ethnicity of adjacent neighborhoods.[18]

Within the Crenshaw-Prairie Transit Corridor, the Base LRT alignment reflects the results of the application of the grade crossing policy. The grade separations included in the Base LRT alignment are dictated by this analysis. The at-grade segments of the Base LRT alignment occur on Crenshaw Boulevard between Exposition Boulevard and 39th Street and between 48th Street and 60th Street. There are also at-grade crossings in portions of the alignment within the Harbor Subdivision. Each of these at-grade segments and crossings are located within a minority and/or low-income area. Key to the consideration of environmental justice is whether any bias or arbitrary action has influenced the location of these Base LRT at-grade segments that are of concern to the community. Metro uniformly applies its Grade Crossing Policy to all corridors within its jurisdiction. Transit corridors with similar rail frequency headways, crossing traffic volumes, and adjacent pedestrian-generating land uses are treated in the same manner. LRT corridors currently being constructed and considered by Metro, including Exposition Phases I and II, the Gold Line Eastern extension, and the Gold Line Foothill Extension, each include at-grade sections that adjoin neighborhoods of various socioeconomic statuses (Table 4-95). The selection of grade separated locations is dictated by the Grade Crossing Policy as well as by other engineering and land use factors. Ultimately, the California Public Utilities Commission (CPUC) is the final determinant of grade separated locations based on a public hearing and an evidentiary process. With these processes and procedures in place, it is unlikely that there would be a willful and disproportionate safety effect on minority and low-income communities within the Crenshaw-Prairie Transit Corridor. In addition, as noted in the definition of the alternatives, Metro has responded to community concerns regarding safety of at grade sections by including grade separated design options in key sections of the corridor with the exception of the segment on Crenshaw Boulevard from 48th Street to 60th Street

[18]Metro, *MTA Grade Crossing Policy for Light Rail Transit*, 2003.

where LRT operations have been determined to operate safely without the need of a grade separation. This is due to the width of the Crenshaw Boulevard at this point, traffic signal proposed operation modifications, and proposed street geometry changes.

Regarding security, as discussed in Section 4.14 Safety and Security, Metro transit service and transit stations are served by the Los Angeles County Sheriff's Department. There is no distinction made in the level of service provided between transit corridors or routes based on demographic or socioeconomic status. In terms of the design of the Base LRT alternative, community concerns have been raised regarding the elevated structure between 60th Street and the Harbor Subdivision. Community input has focused on existing security and crime issues in the area that is generally called Hyde Park. The proposed elevated structure would obstruct visibility and create shaded areas, which would in turn provide opportunities for graffiti on structural columns. This would result in a disproportionate adverse impact. However, this document considers a design option to depress the LRT alignment in this area to address community security concerns.

There is no evidence that there is a consistent pattern to LRT projects under consideration by Metro to disproportionately place at-grade sections in minority or low income neighborhoods. Therefore, no disproportionate adverse impacts on minority or low income communities regarding safety and security are anticipated.

Construction Impacts. The construction impacts for each of the topics in the Draft EIS/EIR are discussed in Section 4.15 Construction Impacts. The construction activity associated with the Base LRT Alternative would be temporary throughout the alignment. However, the intensity of construction activities would differ in several segments of the alignment. In particular, construction impacts would be more intense where the cut-and-cover tunnel construction occurs (Leimert Park and Crenshaw District) and where the aerial structures/station are to be built (Hyde Park, Inglewood, El Segundo). These areas are comprised predominately by minority populations, a combination of medium- and low-income populations, and have variable populations of elderly and LEP. Mitigation measures have been identified for the construction of these grade separations, and, although there are local businesses along Crenshaw Boulevard, many of which may be owned by minorities, and most of which serve the minority and low-income communities, construction impacts are temporary and intermittent by nature. Although the prolonged construction period that is typical of cut-and-cover tunnel construction and of aerial structures could affect the economic viability of the small businesses (by restricting access and removing on-street parking), the construction of the Base LRT Alternative would not temporarily displace these businesses. Therefore, no disproportionate adverse impacts associated with construction are anticipated for businesses that serve minority and low-income communities.

In summary, the Base LRT Alternative would not cause disproportionate adverse impacts related to transit service equity, traffic congestion, parking, displacements, health issues, historical, archeological, and paleontological resources, parklands and community facilities, economic vitality and employment opportunities, safety and security, and construction. However, the Base LRT Alternative could have disproportionate adverse impacts related to community cohesion and aesthetics in the minority and low-income communities of the Crenshaw Transit Corridor.

Base LRT Alternative Design Options

The LRT Alternative may include the following six design options:

- LRT Alternative Design Option 1: An aerial station at Century Boulevard instead of an at-grade station at LAX.
- LRT Alternative Design Option 2: An aerial crossing instead of an at-grade crossing at Manchester Avenue.
- LRT Alternative Design Option 3: A cut and cover crossing instead of an at-grade crossing at Centinela Avenue.
- LRT Alternative Design Option 4: A cut and cover alignment instead of an aerial alignment between Victoria Avenue and 60th Street.
- LRT Alternative Design Option 5: A below-grade station at Vernon Avenue near Leimert Park.
- LRT Alternative Design Option 6: A below-grade alignment between 39th Street and Exposition with a below-grade station instead of an at-grade alignment north of 39th Street with connection to Exposition and an at-grade station.

The LRT Alternative Design Option 1 would locate an aerial station in an area primarily used for commercial and LAX-associated uses and does not contain a large number of residences. Additionally, the area already contains an aerial structure over Century Boulevard (the Harbor Subdivision), and thus would be consistent with the visual character of the area. Therefore, similar to the at-grade station at LAX of the Base LRT Alternative, the aerial station at Century Boulevard would not have disproportionate impacts on minority or low-income populations.

LRT Alternative Design Option 2 would locate an aerial structure in a primarily commercial and industrial area. The aerial structure would be a new visual element in the area and residents of Westchester, the closest residential area to the aerial structure, would be able to see the structure. However, Westchester is not a primarily minority or low-income area. Therefore, similar to the at-grade crossing at Manchester Avenue of the Base LRT Alternative, this design option would not have disproportionate impacts on minority or low-income populations.

LRT Alternative Design Option 3 would locate a depressed trench in a primarily commercial area. The trench would allow for better traffic and transit circulation on Centinela Avenue compared to the at-grade alternative. The trench at Centinela Avenue would also improve pedestrian safety during operations compared to the at-grade crossing under the Base LRT Alternative. The construction of the grade-separated crossing would be more substantial and lengthy than the at-grade option, and access to community services (church and school) that are utilized by minorities and LEP communities would be disrupted during this period. However, construction impacts are temporary and intermittent by nature. No disproportionate adverse impacts to minority and low-income communities are anticipated.

The LRT Alternative Design Option 4 would no longer create disproportionate aesthetic or community cohesion impacts. The cut and cover crossing would not adversely modify the

existing visual character as an aerial structure would. Unlike the aerial structure, there would be no adverse shade, shadow, and glare impacts and reduced light impacts. Additionally, the cut and cover crossing would not visually divide the community. Therefore, unlike the aerial structure of the Base LRT Alternative from Victoria Avenue to 60th Street, the cut and cover crossing design option would not have disproportionate adverse impacts on minority or low-income populations.

LRT Alternative Design Option 5 is located in an area that has a mix of residential and commercial uses. The addition of an additional underground station would not cause any more disruption than that which would already occur due to the cut and cover construction in this part of the alignment. This design option would displace one commercial property. This would not constitute a disproportionate adverse impact to minority or low-income communities.

LRT Alternative Design Option 6 includes the placement of the tracks and vehicles below ground. This would be a beneficial impact to the surrounding minority and low-income community. There will be less displacement overall and less impacts associated with safety. No disproportionate adverse impacts to minorities and low-income communities are anticipated for this design option.

Maintenance and Operations Facility Sites

A maintenance and operations facility is planned for both the BRT and the Base LRT Alternatives. There are two sites considered for the maintenance and operations facility: Site B, located in the City of Los Angeles, north of Manchester Avenue at the Harbor Subdivision. Site D is located in the City of El Segundo, near Sepulveda Boulevard and Rosecrans Avenue. Neither site is located in a predominately minority or low-income neighborhood. As such, no disproportionate adverse impacts associated with the development of a maintenance and operations facility are anticipated.

4.18.5 Measures to Minimize Harm

No Build Alternative

No feasible mitigation exists to reduce adverse impacts associated with traffic service equity and traffic congestion under the No Build Alternative.

TSM Alternative

No mitigation measures related to environmental justice are required for the TSM Alternative.

BRT Alternative

EJ1 Metro shall provide land of a similar size to replace the parkland that is to be taken from the Edward Vincent Jr. Park in Inglewood for construction of the BRT Alternative. The location of the replacement parkland shall be in a minority and low-income community.

No feasible mitigation exists to reduce adverse impacts associated with aesthetic resources (removal of mature trees along the Harbor Subdivision) under the BRT Alternative.

Base LRT Alternative
Implementation of Mitigation Measures CN2, V1, and V6 from Section 4.3 Community and Neighborhood Impacts and Section 4.4 Visual Quality would reduce the aesthetic and community cohesion impacts of the aerial structure in the Hyde Park community.

Base LRT Alternative Design Options
No mitigation measures related to environmental justice are required for the Base LRT Alternative Design Options.

Maintenance and Operations Facility Sites
No mitigation measures related to environmental justice are required for the Maintenance and Operations Facility Sites.

4.18.6 Impacts Remaining After Mitigation

No Build Alternative
Disproportionate adverse impacts would remain associated with transit service equity and traffic congestion.

TSM Alternative
No disproportionate adverse impacts are anticipated prior to mitigation.

BRT Alternative
No disproportionate adverse impacts associated with parklands would remain upon implementation of Mitigation Measure EJ1.

Disproportionate adverse impacts would remain associated with aesthetic resources (removal of mature trees along the Harbor Subdivision).

Base LRT Alternative
Implementation of Mitigation Measures CN2, V1 and V6 would involve the community in the design process and greatly reduce the aesthetic and community cohesion impacts associated with the aerial structure in Hyde Park. However, some adverse effects may remain.

Base LRT Alternative Design Options
No disproportionate adverse impacts are anticipated prior to mitigation.

Maintenance and Operations Facility Sites
No disproportionate adverse impacts are anticipated prior to mitigation.

THIS PAGE INTENTIONALLY LEFT BLANK