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**Appendix I**  
**Environmental Justice Technical Memorandum**



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**To:** Project File  
**From:** Cavan Noone  
**Date:** May 27, 2015  
**Re:** **TEMPE STREETCAR PROJECT**  
Environmental Justice and Title VI Technical Memorandum

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## 1.0 INTRODUCTION

The purpose of this memo is to evaluate the potential impacts on low-income and minority populations for both the Build Alternative and No-Build Alternative for the proposed Tempe Streetcar project. For a full description of the alternatives considered, refer to Chapter 2 of the Tempe Streetcar EA.

## 2.0 REGULATORY SETTING

Executive Order (EO) 12898, *Federal Actions to Address Environmental Justice (EJ) in Minority Populations and Low-Income Populations*, requires that federal agencies consider and address disproportionately high and adverse environmental effects of proposed federal projects on the health and environment of minority and low-income populations to the greatest extent practicable by law. Following the direction of EO 12898, Federal agencies developed their own guidelines for implementing EJ. The United States Department of Transportation (USDOT) Order 5610.2(a) defines the fundamental principles of EJ as follows:

- Avoid, minimize, or mitigate disproportionately high and adverse human health or environmental effects, including social and economic effects, on minority and low-income populations.
- Ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.
- Prevent the denial of, reduction in or significant delay in the receipt of benefits by minority and low-income populations.

USDOT Order 5610.2(a) requires the following:

- Identifying and evaluating environmental, public health, and interrelated social and economic effects of USDOT programs, policies, and activities

- Proposing measures to avoid, minimize and/or mitigate disproportionately high and adverse environmental and public health effects and interrelated social and economic effects, and providing offsetting benefits and opportunities to enhance communities, neighborhoods, and individuals affected by USDOT programs, policies, and activities, where permitted by law and consistent with EO 12898.
- Considering alternatives to proposed programs, policies, and activities, where such alternatives would result in avoiding and/or minimizing disproportionately high and adverse human health or environmental impacts, consistent with EO 12898.
- Eliciting public involvement opportunities and considering the results thereof, including soliciting input from affected minority and low-income populations in considering alternatives.

### **3.0 EVALUATION METHODOLOGY**

The FTA Circular 4703.1 guidance defines a ‘minority’ as any individual who is a member of any of the following populations groups: American Indian, Alaska Native, Asian, Native Hawaiian and other Pacific Islander, Black or African American, or Hispanic or Latino. Low-income is defined as a person whose median household income is at or below 150 percent of the poverty level as determined by the U.S. Department of Health and Human Services. The methodology for analyzing the effects of the proposed project on EJ populations (any identifiable population group meeting the requirements for minority or low-income) consists of the following steps:

- Define the unit of geographic analysis impacted by the proposed project. The boundaries of the geographic unit should be large enough to include the area likely to experience adverse effects, but not so large as to artificially dilute the minority and/or low-income population.
- Gather the relevant demographic data from a reliable source such as U.S. Census data or American Community Survey (ACS) data at the census tract (CT) or block group (BG) level.
- Analyze the impacts associated with the project alternatives.
- Identify the mitigation to avoid or minimize the impacts.
- Identify the project benefits.
- Determine disproportionately high adverse impacts (if any).

The study area level identified for this analysis is within approximately a half mile of the project alignment and other facilities associated with Tempe Streetcar. Maricopa County has been selected as the unit of geographic analysis for comparison to the study area level as per FTA Circular 4703.1. The County was selected as the unit of comparison because it includes Valley Metro’s transit service area which is one of the geographic

units the FTA circular recommends for comparison, and this unit is not expected to artificially dilute the environmental justice populations that should be considered for comparison purposes. Data used to evaluate both minority and low-income populations within the project corridor is based on 2009-2013 ACS 5-year estimates and is aggregated at the CT level as this was the smallest geographic level at which data for both groups was available. A total of ten CTs fall within the study area and are evaluated in greater detail below. (Note: while a small portion of the CT directly north of downtown falls within the study area, it was excluded from this analysis as the area in question encompasses portions of Papago Park and the SR202 freeway where no population resides).

### ***Determination of Disproportionately High and Adverse Environmental Effects***

USDOT Order 5610.2(a) defines disproportionately high and adverse effects on minority and low-income populations as an adverse effect that:

- Is predominantly borne by a minority populations and/or a low-income population, or
- Will be suffered by the minority population and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the non-minority population and/or non-low-income population.”

The identification and avoidance of whether a project will have disproportionately high and adverse environmental effects on minority and low-income populations depends on a number of factors including: 1) identifying and evaluating environmental, public health, and interrelated social and economic effects; 2) proposing measures to avoid, minimize and/or mitigate the adverse effects and provide offsetting benefits and opportunities to enhance communities, neighborhoods, and individuals impacted; 3) the alternatives considered; and 4) the public involvement process itself. Potential adverse impacts, as identified in this EA, were examined in these critical areas: 1) displacements and relocations; 2) transportation; 3) noise and vibration; 4) community facilities/parklands; and 5) construction impacts.

The identification of environmental justice areas included those CTs where the concentration of environmental justice populations exceeded regional averages or was greater than 50 percent of the total population.

The evaluation summarizes the beneficial and adverse impacts for the No-Build and Build Alternatives, including efforts to solicit input from the public in considering the alternatives. In making determinations of whether a project will have "disproportionately high and adverse environmental effects" on minority and low-income populations, mitigation and enhancement measures that will be incorporated into the project and all off-setting benefits to the affected minority and low-income populations may be taken into account, as well as design, comparative impacts, and the relevant number of similar

existing system elements in non-minority and non-low-income areas. If adverse impacts of the project fall disproportionately on minority and low-income populations, additional mitigation measures beyond those already identified may be required. If strategies cannot be taken to adequately mitigate these impacts, then selection of an alternative with less adverse impacts may need to be considered.

## **4.0 EVALUATION RESULTS**

### **4.1 Do Any Areas Along the Proposed Project Include High Concentrations of Minorities or Low-Income Populations?**

**Yes.** The Tempe Streetcar study area features a relatively high concentration of both minority and low-income populations. In general, minority and low-income populations are found throughout the study area and are not concentrated in specific locations. There are, however, slightly higher percentages of minority and low-income populations located in the southeast portion of the study area (Figures 1 and 2). Seven out of the ten CTs within the study area feature concentrations of minority populations that exceed the 42 percent average for Maricopa County. The percent minority population in the study area CTs ranges from 30 percent to 58 percent (Figure 1 and Table 1). Similarly, all ten of the study area's CTs contain concentrations of low-income populations that exceed the 26 percent average for Maricopa County. The percent of the total population with incomes at or below 150 percent of the Department of Health and Human Services poverty level in these CTs ranges from 28 percent to 71 percent (Figure 2 and Table 1).

No efforts were taken to identify pocket populations of low-income and minority households since most of the CT's feature concentrations of minority populations, and all of the CT's include high concentrations of low-income populations. Therefore, for analysis purposes, the entire CT, and not any specific location within the CT, was considered to be comprised of low-income and minority households.

Table 1 summarizes the evaluation results for minority and low-income populations in the Tempe Streetcar study area.

### **4.2 Will Minority and/or Low-Income Populations Experience Adverse Impacts and Disproportionately High and Adverse Impacts Compared to Others?**

As stated earlier, the evaluation of adverse impacts considered the following: 1) displacements and relocations; 2) transportation; 3) noise and vibration; 4) community facilities/parklands; and 5) construction impacts. The results of this evaluation are summarized in the sections below.

**TABLE 1: MINORITY AND LOW-INCOME POPULATIONS**

	MINORITY			LOW-INCOME		
	Minority Population	Total Population	Percent Minority Population	Low-Income Population <sup>1</sup>	Total Population for which Low-Income Status is Defined <sup>2</sup>	Percent Low-Income Population <sup>1</sup>
<b>Study Area Census Tracts</b>						
CT - 3184	1,842	4,108	45%	1,087	3,898	28%
CT - 3187	1,072	3,140	34%	246	639	38%
CT - 3188	2,829	6,121	46%	2,436	6,047	40%
CT - 3189	2,399	6,408	37%	2,453	6,408	38%
CT - 3190	2,187	7,295	30%	718	2,077	35%
CT - 3191.01	1,511	2,699	56%	1,530	2,268	67%
CT - 3191.03	2,636	4,527	58%	3,206	4,527	71%
CT - 3191.04	3,229	5,529	58%	2,381	5,529	43%
CT - 3192.01	2,673	4,815	56%	2,197	4,815	46%
CT - 3192.02	1,847	3,291	56%	1,623	3,291	49%
<b>Maricopa County</b>	<b>1,624,496</b>	<b>3,889,161</b>	<b>42%</b>	<b>993,917</b>	<b>3,839,007</b>	<b>26%</b>

<sup>1</sup> Low-income is defined as a person whose median household income is at or below 150 percent of the poverty level as determined by the U.S. Department of Health and Human Services

<sup>2</sup> Defined as the population for whom poverty status is determined by the Census Bureau. Excludes persons living in college dormitories and institutional group quarters.

Source: 2013 American Community Survey

#### **4.2.1 Business and Residential Displacements and Relocations**

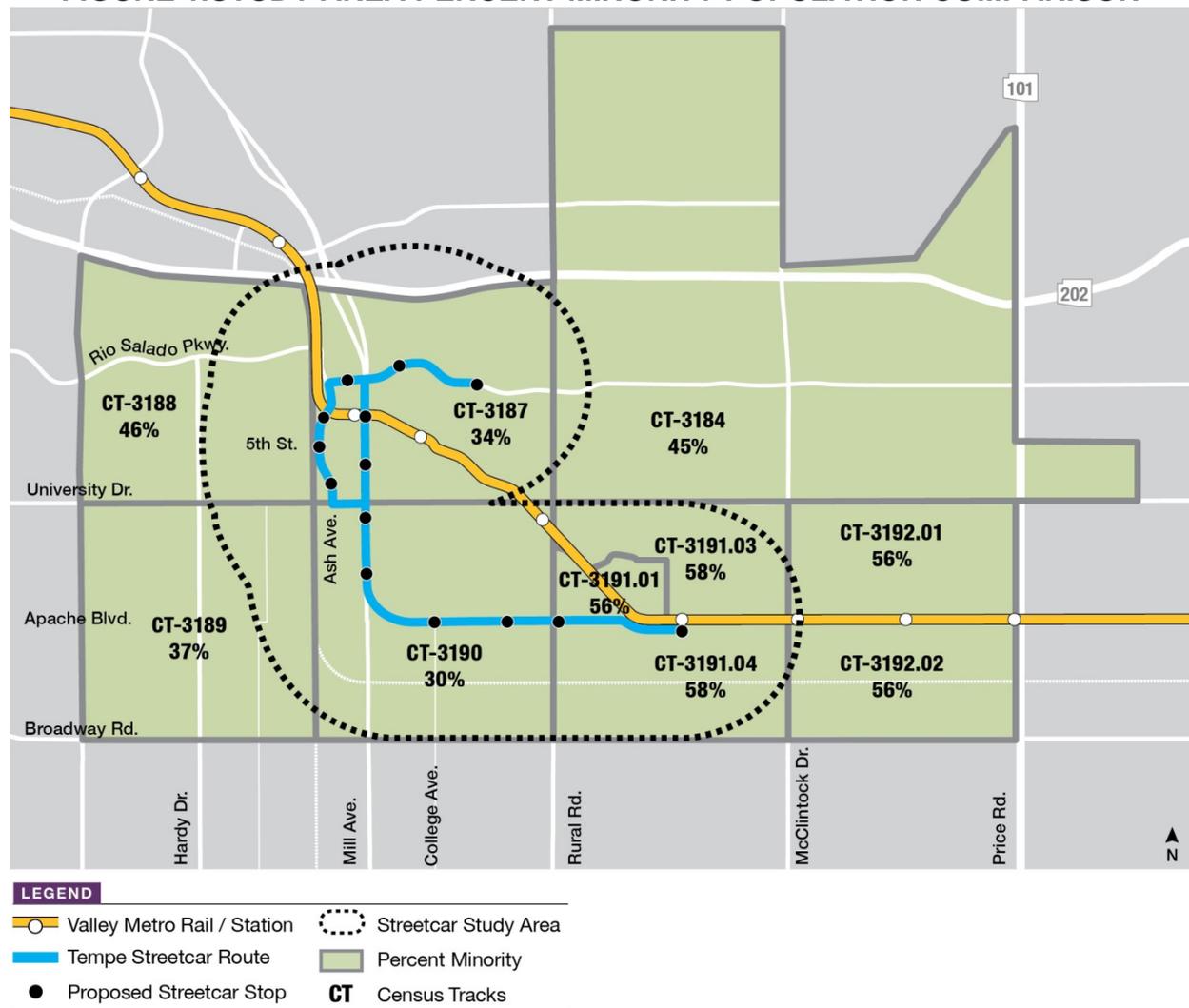
##### ***No-Build Alternative***

The No-Build Alternative would require no property acquisitions or household relocations to accommodate the planned roadway and transit improvements.

##### ***Build Alternative***

The Build Alternative would require small amounts of ROW for the TPSSs, signal houses, and streetcar stops. All of the proposed TPSS sites and signal houses would be located on vacant land and would not require any business or residential relocations. Therefore, the project would not require any displacements or relocations of businesses or residences. As such, the Build Alternative would not result in a disproportionately high and adverse environmental impact to environmental justice populations.

**FIGURE 1. STUDY AREA PERCENT MINORITY POPULATION COMPARISON**

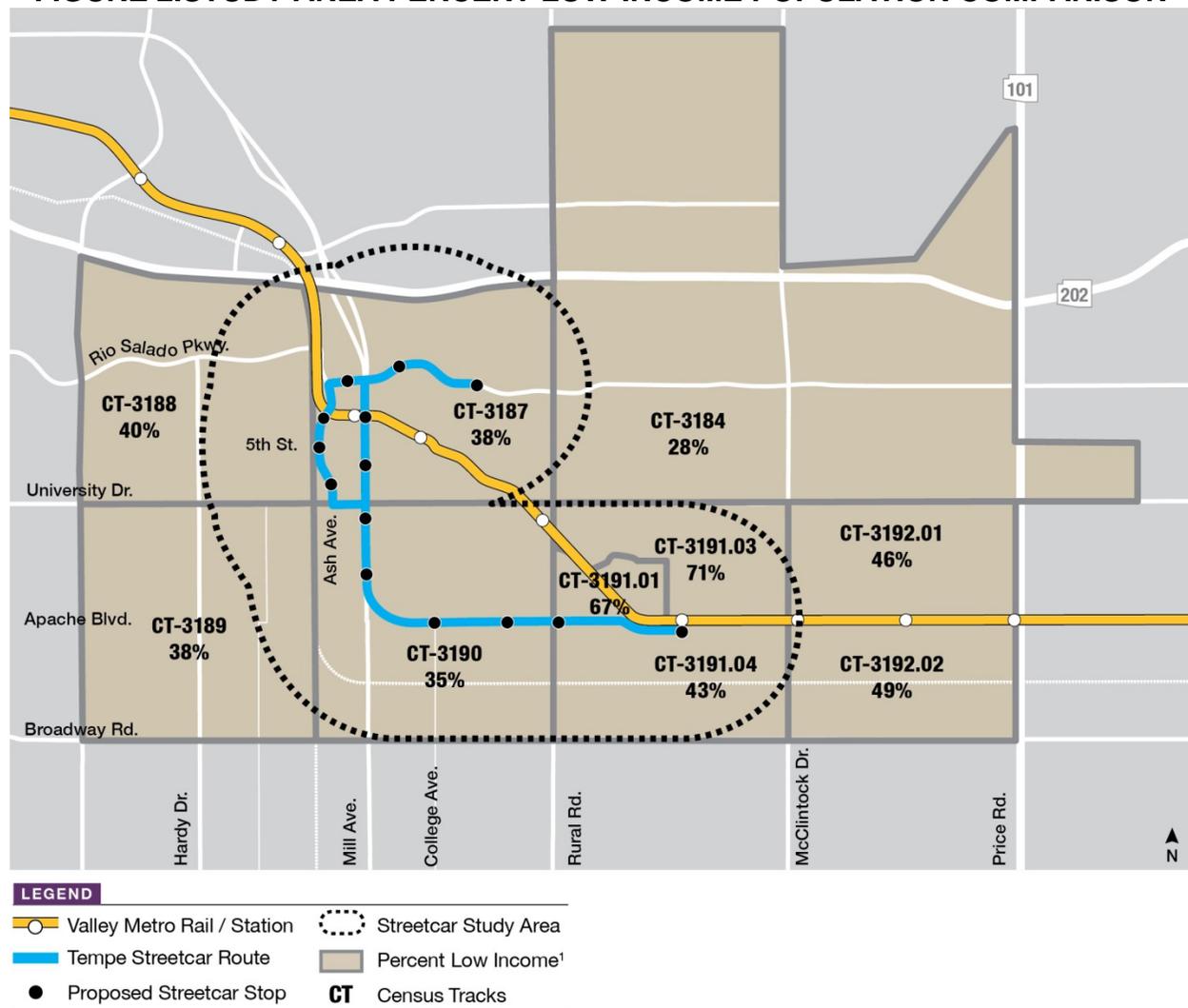


## 4.2.2 Transportation

### ***No-Build Alternative***

The No-Build Alternative would have an adverse effect on one intersection in the study area (Rio Salado Parkway/Rural Road). The No-Build Alternative would have no adverse impacts to on-street or off-street parking; loading zones, sidewalks or the pedestrian environment; existing or planned bicycle facilities; or freight railroads and truck routes.

**FIGURE 2. STUDY AREA PERCENT LOW-INCOME POPULATION COMPARISON**



<sup>1</sup>Low-income is defined as the percent of the total population with incomes at or below 150% of the Department of Health and Human Services poverty level.

**Build Alternative**

The Build Alternative is not anticipated to have an adverse effect on traffic. The Rio Salado Parkway/Rural Road intersection is the only intersection in the study area projected to have an adverse effect and that is a result of regional growth by 2035 and local development and is not as a result of the streetcar project. This intersection is located east of the streetcar route in an area just south of the Rural Road bridge over Tempe Town Lake. The area is surrounded by ASU facilities and land which is currently vacant, but planned for development. The on-street parking losses are anticipated to be minimal and would result in no adverse effect. A total of 4 spaces would be removed

with the losses occurring on Mill Avenue (11 spaces) Ash Avenue (19 spaces) and Apache Boulevard (14 spaces). Visual observations of the existing on-street parking on Ash Avenue indicate that the spaces are not used during most times of the day (non-special-event days), and most drivers parking in this area are more likely to use the free off-street surface parking for the nearby businesses they would be visiting, or they use the covered pay parking garage south of 5th Street. The parking losses along Apache Boulevard occur in areas where there is low utilization and the loss of 14 spaces would not result in an adverse impact. The loss of 11 spaces on Mill Avenue will be more than offset by City of Tempe's plan to convert parallel parking on nearby 5<sup>th</sup> Street to angled parking which will add over 30 spaces to that area.

The displaced loading zone on Mill Avenue between 5th and 6th streets would be relocated to 6th street where between two and four parking spaces would serve as a new loading zone. Through on-street signage and city policy, on-street parking availability may be temporarily restricted at certain locations and times during low-volume travel periods on weekdays to accommodate loading and deliveries for businesses.

There would be no adverse effect on off-street parking, sidewalks or the pedestrian environment, existing or planned bicycle facilities, or freight railroads and truck routes. Refer to Sections 3.6.3 and 3.6.4 of the EA for additional information about transportation impacts. Potential impacts associated with the Build Alternative would result in no adverse effect with implementation of the mitigation measures.

No region-wide transit service or local transit service will be reduced as a result of the proposed Tempe Streetcar project. It is anticipated that access and mobility will be increased for transit-dependent persons and others both within the Tempe Streetcar study area as well as throughout the region's transit service area. Indeed, the MAG Regional Transportation Plan (RTP) 2014 Update, which includes the Tempe Streetcar project, indicates that 94 percent of minority communities will be served by the transit improvements in the RTP versus 74 percent of non-minority communities. Furthermore, 93 percent of low-income communities will be served by the RTP transit improvements versus 76 percent of non-low-income communities. The fare structure for the new transit project would be the same as the existing fares so there would be no impact on local residents with regard to increasing fares for this improved high capacity transit service. In addition, there is no linkage between funding for the Tempe Streetcar project and impacts to service/fare increases that may occur in the future. Local funding for the Tempe Streetcar project is derived from the Proposition 400 sales tax that was previously approved by voters and reserved in the RTP for high capacity transit improvements in the Tempe corridor. These funds do not affect other transit services and funds in the region. As such, with the mitigation measures discussed above, the Build Alternative would not result in a disproportionately high and adverse environmental impact to environmental justice populations.

## ***Mitigation***

As discussed previously, the displaced loading zone on Mill Avenue between 5th and 6th streets would be relocated to 6th street where between two and four parking spaces would serve as a new loading zone. Through on-street signage and city policy, on-street parking availability may be temporarily restricted at certain locations and times during low-volume travel periods on weekdays to accommodate loading and deliveries for businesses. As the streetcar design becomes more refined and the specific project requirements that would lead to potential loss of loading zones are better known, Valley Metro will work with the City of Tempe and business owners to develop an acceptable strategy to compensate for the losses.

### **4.2.3 Noise and Vibration**

The noise and vibration impact analyses for this project are based on the FTA *Transit Noise and Vibration Impact Assessment* guidance manual. Potential noise impacts were assessed for the operation and construction of the project. The key conclusions of the noise impact assessment are summarized below.

#### ***No-Build Alternative***

The No-Build Alternative may result in increased traffic volumes in the study area as projected growth occurs and the traffic projects discussed in Chapter 2 are implemented by 2035. Traffic volumes would need to double by 2035 for noise levels to increase by 3 decibels, the point at which a change is typically discernible to the human ear. This is not likely to occur. Therefore, no adverse noise and vibration impacts would result from the No-Build Alternative.

#### ***Build Alternative***

The proposed project would result in moderate noise impacts at certain locations along the project alignment including four residences on Maple Avenue between University Drive and 9<sup>th</sup> Street. Noise impacts at this location would only occur if the candidate TPSS site along Mill Avenue south of University Drive is selected. While eight potential TPSS sites have been proposed for environmental clearance, only three to four will be needed for the project. Final TPSS locations will be determined in the more refined design stages of the project when the energy loading requirements can be determined.

Additional moderate noise impacts would occur at one single-family residence on 13th Street, four single family residences on Mill Avenue, the Graduate Tempe Hotel, and Hayden Hall (ASU dormitory) near the Gammage Curve. Potential vibration impacts are also likely to occur at the University Inn Suites (five units) and one adjacent single family residence at 9<sup>th</sup> Street and Mill Avenue. Section 3.8.3 of the EA provides additional information about the impacts and locations of the affected sensitive uses relative to the streetcar alignment.

**Mitigation**

Mitigation measures have been identified to reduce all noise and vibration impacts to acceptable levels. As such, the Build Alternative would not result in a disproportionately high and adverse environmental impact to environmental justice populations. The noise and vibration impacts and mitigation measures are summarized in Table 2:

Additional noise and vibration impacts would occur during the construction of the Build Alternative. These construction impacts and identified mitigation measures are summarized in Section 4.2.5 below.

**TABLE 2: NOISE AND VIBRATION MITIGATION MEASURES**

Location of Impact	Impact Type	Mitigation Measure
Four residences on Maple Avenue between University Drive and 9 <sup>th</sup> Street <sup>1</sup>	Noise	Strategically locate the TPSS unit within the parcel to be at least 50 feet from the noise-sensitive receivers and orient so cooling fans face Mill Avenue. If this is not feasible, a sound enclosure should be built around the unit to reduce noise to acceptable levels.
Two single-family residences on 13 <sup>th</sup> Street, one single-family residence on Mill Avenue, the Graduate Tempe Hotel, and ASU's Hayden Hall near the Gammage Curve	Noise	Add friction control in the design to help reduce the occurrence of wheel squeal as it travels around the curve. Friction control may consist of installing lubricators on the rail or using an onboard lubrication system that applies lubrication directly to the wheel. This would reduce the predicted noise levels to below the FTA moderate noise impact threshold at all noise-sensitive receivers.
Five units of the University Inn and Suites and one single-family residence on Mill Avenue	Vibration	Install a low-impact frog such as a monoblock or flange-bearing frog at the track crossover on Mill Avenue between 9 <sup>th</sup> Street and 10 <sup>th</sup> Street to reduce vibration impact to acceptable levels.

<sup>1</sup> Only applicable if TPSS site option along Mill Avenue south of University Drive is selected.

**4.2.4 Communities, Community Character/Cohesion, Facilities, and Parks**

***No-Build Alternative***

The No-Build Alternative would have no impacts on communities, community character/cohesion, facilities, or parks.

***Build Alternative***

Similar to the No-Build Alternative, the operation of the Build Alternative would not disrupt the characteristics listed above because the proposed project would be located almost entirely within existing public street rights-of-way with the exception of minor acquisitions for TPSS sites, signal buildings, streetcar stops, and modifications of the existing curb. Therefore, the project would cause no permanent barriers to the movement of people, goods, and services in the area and no disruption of the community. Furthermore, access to community services and facilities would be

maintained during construction, therefore, it is anticipated that there will be no continuity or community cohesion concerns that will result from the proposed project. The project does not acquire any land from community facilities or parks. The project is designed to enhance access to community destinations, facilities, and services, and will not create any physical barriers that restrict access or divide the surrounding community. As a result, no adverse or disproportionate effects will be borne by environmental justice areas or populations. For further information on temporary disruptions that may occur during construction, refer to Table 3-20 in the EA.

Positive effects from the Build Alternative would include increased mobility and access to the area, business and job growth stimulation, and a reduction in overall VMT. As such, the Build Alternative would not result in a disproportionately high and adverse environmental impact to environmental justice populations.

### ***Mitigation***

No mitigation measures are required.

### **4.2.5 Construction**

#### ***No-Build Alternative***

The No-Build Alternative may result in impacts to air quality, noise, and traffic during construction of programmed roadway projects. The impacts would be temporary and last the period of construction of the project.

#### ***Build Alternative***

The construction of the Build Alternative would likely result in impacts in the areas of air quality, noise, and traffic. However, all adverse impacts would be temporary and would end at the conclusion of construction.

### ***Mitigation***

A summary of the impacts and mitigation measures available to minimize these types of adverse impacts is provided in Table 3. Additional measures are detailed in Section 3.19 of this EA. Although the proposed mitigation measures would lessen the severity of the impacts, some adverse impacts would still exist at times during the construction period. The adverse impacts would be borne equally by all populations, and the mitigation would be applied throughout the project as needed and would not be concentrated in any particular area.

**TABLE 3: CONSTRUCTION RELATED IMPACTS/MITIGATION MEASURES<sup>1</sup>**

Mitigation Measures By Type of Potential Impact
<b>Traffic, Pedestrians, Bicycles</b>
<p>The project would result in temporary disruptions to automobile, truck, bus, pedestrian, and bicycle traffic along the streetcar route. A traffic control plan would be developed in concert with the City of Tempe and those property and business owners most affected, and would conform with local, state, and federal policies to minimize traffic impacts and maintain access to residences, business, community facilities and services, and local streets. The traffic control plan would include measures per City of Tempe, Valley Metro master specifications, and MAG standards such as:</p> <ul style="list-style-type: none"> <li>• Maintain a minimum of one traffic lane in each direction on Mill Ave. (south of University Dr.), Ash Ave., Rio Salado Pkwy., University Dr., Apache Blvd., and on intersecting streets where construction activities may also occur near the streetcar route. There may be short duration (weekend or night) full closures for construction of trackwork at intersections. Evaluation of such full closures versus longer construction in stages at each intersection would be evaluated during project development. For Mill Ave. (north of University Dr.), on-street parking could be temporarily removed to allow trackway construction so that northbound and southbound traffic could continue to travel in both directions on the southbound side of the street.</li> <li>• Temporary closure of sidewalks and crosswalks are possible. Detours would be established to safely guide pedestrians until the sidewalks and crosswalks are restored per ADA accessibility guidelines.</li> <li>• Temporary closure of bike lanes may be required and detour routes provided. Proper wayfinding signs and pavement markings would be used to safely guide cyclists through the detours and temporary routes.</li> <li>• Include methods to minimize adverse impacts on bus travel. Methods to minimize impacts could include installing alternative temporary bus stop locations where needed; avoiding construction during peak transit travel times; and implementing community outreach to notify transit providers and passengers of upcoming changes to bus stop locations or detours.</li> <li>• The Standard Specifications and/or Special Provisions for the contractor would require the contractor to coordinate their activities with the fire and police departments so these emergency services would be aware of what is being done during construction that could affect them.</li> </ul>
<b>Noise</b>
<p>Construction activity has the potential to result in adverse, yet temporary, increases in local noise levels along the corridor. The contractor would comply with the noise control ordinance for the City of Tempe. Listed below are some typical approaches to reducing noise levels associated with the construction phase of major projects.</p> <ul style="list-style-type: none"> <li>• If nighttime construction is required, the contractor would apply for a variance permit from the City of Tempe as required by their noise ordinance.</li> <li>• Use specialty equipment with enclosed engines and/or high-performance mufflers.</li> <li>• Locate equipment and staging areas as far from noise-sensitive receptors as possible.</li> <li>• Limit unnecessary idling of equipment.</li> <li>• Install temporary noise barriers. This approach can be particularly effective for stationary noise sources such as compressors and generators.</li> <li>• Reroute construction-related truck traffic away from local residential streets.</li> </ul>
<b>Air Quality</b>
<p>Construction activities associated with the Tempe Streetcar project would produce air pollutants from two types of sources: exhaust emissions from construction equipment and fugitive dust emissions associated with clearing and grading of the project site. The emissions associated with construction activities are of short-term duration and would cease when the project is built.</p> <p>Contractors would be required to conform to all applicable local and regional air quality regulations during construction. A dust control plan would be developed and implemented per Rule 310 for Fugitive Dust of the Maricopa County Air Quality Department. The contractor must also conform to MAG's <i>Uniform Standard Specifications for Public Works Construction</i>, Section 225, as well as with Valley Metro's master specifications for dust control, applicable City of Tempe construction specifications, and the approved Erosion and Sediment Control Plan or Program as applicable. These regulations and specifications require implementation of Best Management Practices to control fugitive dust from various activities, such as land clearing, earthmoving, and other construction site activities.</p> <ul style="list-style-type: none"> <li>• Specific Best Management Practices that may be implemented include, but may not be limited to:             <ul style="list-style-type: none"> <li>- Minimize area of land disturbance.</li> <li>- Use watering trucks to minimize dust.</li> <li>- Cover trucks when hauling dirt or transferring materials.</li> </ul> </li> </ul>

#### Mitigation Measures By Type of Potential Impact

- Stabilize surface of dirt piles if not removed immediately.
- Use windbreaks to prevent any accidental dust pollution.
- Limit vehicular paths and stabilize these temporary roads.
- Pave all unpaved construction roads and parking areas to road grade for a length no less than 50 feet where such roads and parking areas exit construction site to prevent dirt from washing onto paved roadways.
- Use dust suppressants on traveled paths which are not paved.
- Minimize dirt track-out by washing or cleaning trucks before leaving construction site.
- Reduce use, trips, and unnecessary idling of heavy equipment.
- Employ periodic, unscheduled inspections to limit unnecessary idling and to ensure that construction equipment is properly maintained and tuned.
- Prohibit tampering with engines and require adherence to manufacturers' recommendations.
- Whenever possible, use alternative fuels such as natural gas and electric.
- Prepare an inventory of all equipment prior to construction and identify the suitability of add-on emission control devices for each piece of equipment before groundbreaking.
- Identify where implementation of mitigation measures is rejected based on economic infeasibility.
- Identify sensitive receptors in the project area, such as daycare centers, senior housing, and hospitals, and specify how impacts to them would be minimized.
- Best Management Practices for post construction that may be implemented include, but may not be limited to:
  - Revegetate any disturbed land not used.
  - Remove unused material.
  - Remove dirt piles.
  - Revegetate all vehicular paths created during construction to avoid future off-road vehicular activities.

<sup>1</sup>For additional information, refer to Section 3.19 of this EA.

For the initial Valley Metro Light Rail LRT line and the Central Mesa LRT Extension Project, Valley Metro implemented specific programs to help minimize the impacts of construction, which they intend to continue for construction of the Tempe Streetcar project. Examples of these programs include:

- Business outreach: Valley Metro and its member cities, including Tempe, offered a variety of business outreach programs that included:
  - Low interest loan programs in partnership with financial institutions.
  - A-frame signs or banners to let customers know businesses are open.
  - METRO (now Valley Metro) Max discount card program. Businesses listings are free on the Valley Metro web site.
  - Postcard marketing program for businesses to advertise to customers.
  - Maps to inform customers of the best routes to reach businesses
- Community Advisory Board (CAB) Program: Composed of citizens, property owners and business owners directly impacted by LRT construction. The group met monthly to evaluate construction contractors with regard to: 1) traffic management; 2) contractor response; 3) property restoration; and 4) public outreach.
- Construction Outreach Support: During construction a Valley Metro public involvement coordinator was on-call 24 hours a day, seven days a week. The

coordinator provided day-to-day contact with businesses and residents, answered construction questions, and helped to solve construction-related problems.

Although the proposed standard construction practices would lessen the severity of the impacts, some adverse impacts would still exist during the construction period, but would be temporary. The impacts would be borne equally by all populations along the proposed route, and the standard construction practices would be applied throughout the construction activity area as needed and would not be concentrated at any particular area. Therefore, environmental justice populations would not be disproportionately adversely affected.

### **4.3 Project Benefits**

The proposed project would provide improved transit access to major local destinations such as Downtown Tempe, Tempe Beach Park, Gammage Auditorium, the forthcoming State Farm Headquarters at Marina Heights, and ASU. In addition, the project would provide more convenient and reliable transit access to regional destinations through its connection to the existing Valley Metro light rail system that now serves portions of west Mesa, Tempe, and Phoenix. The Valley Metro light rail line serves many of the major regional employment centers, higher educational institutions, health care services, and other significant activity centers in the region. With a high volume of regular pedestrian traffic and linkages to regional transit networks in Downtown Tempe, the streetcar would capitalize on the rapid urban development currently occurring, foster future growth and urban intensification, and greatly improve urban circulation throughout Downtown Tempe. As such, the proposed Tempe Streetcar project is anticipated to have positive economic affects for minority and low-income populations, the City of Tempe at large, and the region as whole.

The proposed project is anticipated to have positive effects on both commercial and residential development located near its alignment and stops. It is anticipated that new development in the study area would capture an increasing share of residential and employment growth as densities increase. As a result, some of the growth that would have occurred elsewhere in the City or the region will be drawn to the project corridors. This growth can help lead to more local opportunities for employment for low-income and minority populations residing in the project area. Economic redevelopment may have the effect of increasing property values, which would be a positive benefit for those who currently own property in the study area, but may also have a negative effect on those who rent and who may not be able to afford the higher rents that often accompany higher land values.

However, a new Sustainable Communities Development Fund, developed through regional collaboration, will lend money for transit-oriented projects with a special emphasis on affordable housing. The Local Initiatives Support Corporation and the Raza Development Fund each is investing at least \$10 million in the fund. The

sustainable-communities fund will be available for developments that will revitalize the areas around transit stations, such as affordable housing, grocery stores and child-care facilities.

The separate economic impacts evaluation memo that is included as an appendix to the EA provides additional discussion of the potential benefits of the proposed project.

#### **4.4 Public Engagement**

The public involvement program has been designed and executed to reach the affected population, including the environmental justice populations in the area. Public meetings included means to ensure access and understanding for non-English speakers with interpreters available and bilingual reading materials provided. Handouts and reading materials were made available in both English and Spanish, and Valley Metro is ready to provide materials in other languages upon request. All public meetings have been held in transit-accessible locations, including the Tempe Transportation Center, served by Tempe's Orbit circulator, local fixed-route buses, and light rail.

Valley Metro held meetings with various City of Tempe and MAG board and committee meetings and community stakeholder meetings that were open to the general public and accessible to minority and low-income members of the community (See Chapter 4 of the EA for additional information). Following the approval of the initial Build Alternative in 2010, Valley Metro and the City of Tempe established a Community Working Group comprised of 23 members representing property owners, business owners, residents, community groups and other interested parties (See Section 4.6 of Chapter 4 of the EA for additional information). The purpose of the CWG was to provide input regarding track alignment, stop locations, traction power substation locations and urban design concepts associated with a streetcar on Mill Avenue. The CWG met monthly from January 2010 to January 2012 to discuss each of these project components.

Public notification of these meetings was widely publicized through:

- The Project Information Brochure available on Valley Metro's website.
- Individual outreach to key businesses, residents, government officials and other stakeholders.
- Group outreach to community groups, government agencies, chambers of commerce, churches, schools and neighborhood/homeowner's groups.
- Media outreach through press releases in local media including Wrangler News, Arizona Republic, East Valley Tribune, and Spanish language publications LaVoz, Latino Perspectives, Monitor Hispano, Prensa Hispana.
- Valley Metro [websites](#) which post public meeting and project details.

On May 21, 2013, a public meeting was held to discuss potential changes to the initial Build Alternative alignment. The potential changes included extensions along Rio Salado Parkway and Apache Boulevard as well as an alignment on Mill Avenue which truncated at Apache Boulevard instead of Southern Avenue. The changes are discussed in more detail in Chapter 2 of the EA. The public was notified of the meeting using similar methods for the previous public meetings.

On December 1, 2014 a public scoping meeting was held to present recommendations on the Tempe City Council-approved modified streetcar route (the Build Alternative evaluated in this EA), stop locations, and street configuration, and to seek public input on the scope of issues to be addressed in the EA. Approximately 8,000 door hangers were distributed to homes and businesses located in an area from the Loop 202, the railroad tracks (between Apache Boulevard and Broadway Road), and from Roosevelt Street to Dorsey Lane. An additional distribution area was also included from Don Carlos Avenue to Spence Avenue and Dorsey Lane to McClintock Drive. Notification for the meeting was also published on the project web site; advertised in the Arizona Republic newspaper; and e-mailed to the streetcar distribution list of 545 people. Prior to the meeting, a press release was also sent to local media outlets.

As this project moves forward through the environmental process and into design and construction, Valley Metro will continue to work with the community through meetings at public venues accessible to all members of the community including minority and low-income households and businesses, and populations with limited English proficiency.

Refer to Chapter 4 of the EA for additional information on public outreach.

#### **4.5 Determination of Whether Environmental Justice Populations Would Be Subjected to Disproportionately High and Adverse Impacts**

As discussed in Section 4.1, minority and low-income residents are present throughout the half mile area around the proposed project. The impacts evaluation and mitigation measures for adverse impacts presented in Section 4.2 indicate that with the proposed mitigation measures, potential impacts associated with the Build Alternative would result in no long-term adverse effects with implementation of the mitigation measures specified in this EA. The proposed mitigation measures would also minimize short term impacts associated with the project's construction. The adverse impacts would be borne equally by all populations, and the mitigation would be applied throughout the project as needed and would not be concentrated in any particular area.

In view of the mitigation measures identified, considerable project benefits, and local support for implementing a high capacity transit alternative in the project corridors in Tempe, there would be no disproportionately high and adverse impacts to low-income or minority populations in accordance with EO 12898 or USDOT Order 5610(a).