

City of Phoenix

Title VI Policy

**Major Service Change Equity Evaluation
Procedures Manual**

October 2014



City of Phoenix Public Transit Department



Introduction

The purpose of this document is to document guidelines and procedures used by the City of Phoenix Public Transit Department for evaluating potential bus service changes in the City of Phoenix (includes both service operated by the City of Phoenix and service purchased by the City of Phoenix) and bus service operated by the City of Phoenix in other jurisdictions.

Title VI of the Civil Rights Act of 1964 prohibits discrimination on the basis of race, color, or national origin in programs and activities receiving federal financial assistance. Federal law requires the City of Phoenix to evaluate service changes and proposed improvements at the planning and programming stages to determine whether those changes have a discriminatory impact. This manual will be utilized to evaluate bus services in an objective manner to identify the potential for adverse, disproportionately high, or disparate impacts to minority and/or low income populations.

Guidelines

The City of Phoenix Title VI Policy is guided by two documents: City of Phoenix Title VI Ordinance adopted in 1990 (Attachment 1) and Valley Metro Title VI Procedures Manual adopted in 2013 (Attachment 2).

City of Phoenix Title VI Ordinance

The Ordinance adopted by the Council of the City of Phoenix in 1990 stated that public comment will be solicited for all fare increases and substantial transit service changes. Substantial service changes are defined as follows:

1. When there is any change in service of:
 - a. 25 percent or more of the number of transit route miles of a route; or
 - b. 25 percent or more of the number of transit revenue vehicle miles of a route computed on a daily basis for the day of the week for which the change is made.
2. A new transit route is established.
3. Exceptions:
 - a. Headway adjustments of up to 5 minute peak hour and 15 minute non-peak hour service.
 - b. Standard seasonal variations.
 - c. An emergency situation, unless the emergency change will remain in effect for more than 180 days.
 - d. Experimental service changes that will be instituted for 180 days or less. If the experimental service is to remain in effect for more than 180 days and meets the requirement for a public hearing, a hearing may be held anytime before the end of the 180 day period.



4. Public hearing requirements;

- a. Prior to the institution of a fare increase or substantial service change, two notices of a public hearing shall be published in a newspaper of general circulation in the urbanized area. The notices shall also be published in newspapers oriented to specific groups or neighborhoods that may be affected.
- b. The first notice shall be published at least 30 days prior to the public hearing.
- c. The notices shall contain: (1) a description of the contemplated substantial services change and/or the fare increase as appropriate, and (2) the date, time and place of the hearing.

5. Applicability to Third Party Contract Requirements.

Any agency or firm which operates public transit service within the Phoenix urbanized area utilizing Federal Transit Grant Funds provided by the City of Phoenix, shall follow the above process to solicit and consider public comment prior to any fare increase or substantial service change.

Valley Metro Title VI Procedures Manual – City of Phoenix Exceptions

The Valley Metro Title VI Procedures Manual was adopted by the Valley Metro Regional Public Transit Agency (RPTA) Board in 2013. The City of Phoenix Public Transit Department adheres to the guideline and procedure provided by the Manual with the following exceptions:

- a. **Use of the Origin/Destination Survey as an Evaluation Method - Step 3:** *Socioeconomic Data Collection and Summation (Page 9 of Attachment 2)*. For the demographic profile of residents near proposed service changes, the Valley Metro Title VI Procedures Manual recommends using U.S. Census Data or the Transit On-Board Origin-Destination Survey (O/D Survey). The City of Phoenix Public Transit Department will only use the U.S. Census Data as the source of demographic information for Title VI analysis. The following is the revised *Table 1. Service Change Equity Analysis Data Sources*

Category	Action	Sub Action	Evaluation Method
Service Span	Reduction	N/A	O/D Census Data
	Expansion	N/A	
Service Headway	Reduction	N/A	O/D Census Data
	Expansion	N/A	
Route Length	Reduction	N/A	O/D-Census Data
	Expansion	N/A	
Route Alignment	Reduced Alignment	N/A	O/D-Census Data
	Expanded Alignment	N/A	Census Data
	Modified Alignment	Eliminated Segment(s)	O/D-Census Data
		Segment(s) to New Areas	Census Data
New Route	New Route	N/A	Census Data

O/D: Origin/Destination Survey Data

The Census Data accounts for the demographic characteristics of the entire population whereas the O/D survey only considers current transit riders. Utilizing U.S. Census Data for demographic information instead of using O/D survey would allow



the City of Phoenix to evaluate the impact of proposed changes to the transit riders and the entire population residing within a half mile of the impacted area.

b. **Valley Metro Service Area Average:** *Step 3: Socioeconomic Data Collection and Summation (Page 10 of Attachment 2)*

For evaluating if a proposed service change would have a disproportionate impact to minority populations and/or have a disparate impact to a low-income population, the Valley Metro Title VI Procedures Manual recommends comparing the percentage of minority/low income population within half-mile of the impacted segments to the Valley Metro Service Area average.

The City of Phoenix Public Transit Department will compare the percentage of minority/low-income population within half-mile of the impacted segments to the Maricopa County average.

The Maricopa County averages of minority/low-income population are lower than the Valley Metro Service Area average. Comparing the impacted area to the Maricopa County average would allow City of Phoenix to be more stringent on identifying impacts to minority/low income populations.

c. **Title VI Analysis by Jurisdiction or Geographic Area:** *Step 5: Determination of Findings, Reporting, and Mitigation (Page 13 of Attachment 2)*

Under 4.1.1 Special Circumstances, the Valley Metro Title VI Procedures Manual stated that “an analysis of equity impacts may be considered to determine whether the proposed service modification adversely affects population residing within a specific jurisdiction or geographic area.”

The City of Phoenix does not view Title VI analysis by jurisdiction or geographic area as optional. Any Title VI equity impacts analysis by the City of Phoenix will evaluate the route as a whole and by jurisdiction. Thus an equity analysis will evaluate potential service changes for a particular route specifically by jurisdiction in addition to the overall route. This will insure maximum protection for low income and/or minority populations.

Attachment 1

City of Phoenix Title VI Ordinance

15
1990 OCT -8 PH 1-59

GREEN — CITY CLERK
 WHITE — CITY ATTORNEY
 BLUE — CITY MANAGER
 PINK — ACCOUNTS NOTIFICATION
 CANARY — DEPARTMENT NOTIFICATION
 BUFF — DEPARTMENT FILE COPY

CITY OF PHOENIX, ARIZONA

CITY CLERK DEPARTMENT REQUEST FOR COUNCIL ACTION

ALL RCA'S MUST BE IN THE CITY MANAGER'S OFFICE BY NOON ON THE TUESDAY, SEVEN DAYS BEFORE THE FORMAL CITY COUNCIL MEETING WITH ALL REQUIRED SIGNATURES. COMPLETE THIS FORM PER M.P. 1.906.

1. To the City Manager:

DATE October 3

19 90

THE FOLLOWING COUNCIL ACTION IS HEREBY REQUESTED: ORDINANCE RESOLUTION FORMAL ACTION.

CITYWIDE

RESOLUTION ESTABLISHING A FORMAL, LOCALLY ADOPTED PROCESS FOR THE SOLICITATION AND CONSIDERATION OF PUBLIC COMMENT PRIOR TO TRANSIT FARE INCREASES AND SUBSTANTIAL SERVICE CHANGES

A Resolution is requested to establish a formal, locally adopted process for the solicitation and consideration of public comment prior to transit fare increases and substantial service changes. The Urban Mass Transportation Act of 1964, as amended, requires that a formal locally adopted process be established by recipients of federal transit grant funds.

Public comment will be solicited for all fare increases and substantial transit service changes. Substantial service changes are defined as follows:

1. When there is any change in service of:

(a) 25 percent or more of the number of transit route miles of a route; or

(b) 25 percent or more of the number of transit revenue vehicle miles of a route computed on a daily basis for the day of the week for which the change is made.

2. A new transit route is established.

3. Exceptions:

(a) Headway adjustments of up to 5 minutes peak hour and 15 minutes non-peak hour service.

(b) Standard seasonal variations.

(c) An emergency situation, unless the emergency change will remain in effect for more than 180 days.

(Continued)

2. Bid Bond (Surety) Required?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	3. Bond submitted by low bidder?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	4. Performance Bond (Surety) Required?
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NO
\$ _____

5. SOURCE OF FUNDS:

INDEX CODE	SUBOBJECT	PROJECT
<input type="checkbox"/> BUDGETED	<input type="checkbox"/> SUPPLEMENTAL	<input type="checkbox"/> CONTINGENCY

12. Recommended by:

Department/ Function Public Transit Department

Division Head Signature

Department Head Signature *W.M. Maniske*
Acting Public Transit Director

6. Emergency Clause?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	7. Requested by:	Phone #:	13. Approved as to availability of funds:
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IF LESS THAN FIVE COUNCIL MEMBERS ARE PRESENT:

 CONTINUE ONE WEEK ADOPT WITHOUT EMERGENCY CLAUSE

Al Villaverde 27242

8. WP Document #:

0201j

MANAGEMENT & BUDGET DIRECTOR

9. Desired Agenda Date:	14. Approved:
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10-17-90

14. Approved:

G. Hallinan W. W.

Assistant to the

CITY MANAGER

59

10. Formal contract required?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	11. Requisition #:
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Previous contract #	12. Approved as to availability of funds:
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15. Council action taken:	RESOLUTION NO. 17773 ORDINANCE NO. DATE 10/17 19 90
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Formal action:

RESOLUTION NO. 17773 ORDINANCE NO. _____

DATE 10/17 19 90

CONTRACT NO. _____

2822

F-011

CITY CLERK'S FILE NO.

- d) Experimental service changes that will be instituted for 180 days or less. If the experimental service is to remain in effect for more than 180 days and meets the requirements for a public hearing, a hearing may be held anytime before the end of the 180 day period.

4. Public hearing requirements:

- a) Prior to the institution of a fare increase or substantial service change, two notices of a public hearing shall be published in a newspaper of general circulation in the urbanized area. The notices shall also be published in newspapers oriented to specific groups or neighborhoods that may be affected.
- b) The first notice shall be published at least 30 days prior to the public hearing.
- c) The notices shall contain: (a) a description of the contemplated substantial service change and/or the fare increase as appropriate, and (b) the time and place of the hearing.

5. Applicability to Third Party Contract Requirements

Any agency or firm which operates public transit service within the Phoenix urbanized area utilizing federal transit grant funds provided by the City of Phoenix, shall follow the above process to solicit and consider public comment prior to any fare increase or substantial service change.

RESOLUTION NO. 17773

A RESOLUTION ESTABLISHING A FORMAL, LOCALLY ADOPTED PROCESS FOR THE SOLICITATION AND CONSIDERATION OF PUBLIC COMMENT PRIOR TO TRANSIT FARE INCREASES AND SUBSTANTIAL SERVICE CHANGES.

WHEREAS, the Urban Mass Transportation Act of 1964, as amended, requires that a formal, locally-adopted process be established by recipients of Federal Transit Grant Funds;

NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF PHOENIX as follows:

That the following formal, locally-adopted process for the solicitation and consideration of public comment prior to transit fare increases and substantial services changes be, and it is hereby, adopted. The process for the solicitation and consideration of public comment shall be as follows:

Public comment will be solicited for all fare increases and substantial transit service changes. Substantial service changes are defined as follows:

1. When there is any change in service of:
 - a. 25 percent or more of the number of transit route miles of a route; or
 - b. 25 percent or more of the number of transit revenue vehicle miles of a route computed on a daily basis for the day of the week for which the change is made.
2. A new transit route is established.

3. Exceptions:

- a. Headway adjustments of up to 5 minutes peak hour and 15 minutes non-peak hour service.
- b. Standard seasonal variations.
- c. Emergency changes that will remain in effect for 180 days or less. If the emergency change is to remain in effect for more than 180 days and meets the requirements for a public hearing, a hearing shall be held at anytime prior to the end of the 180 day period.
- d. Experimental service changes that will be instituted for 180 days or less. If the experimental service is to remain in effect for more than 180 days and meets the requirements for a public hearing, a hearing shall be held at anytime prior to the end of the 180 day period.

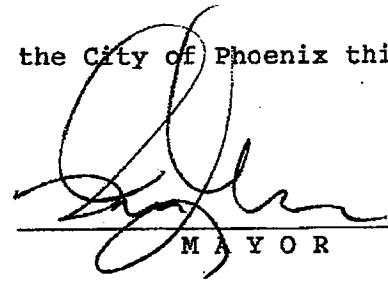
4. Public hearing requirements:

- a. Prior to the institution of a fare increase or substantial service change, two notices of a public hearing shall be published in a newspaper of general circulation in the urbanized area. The notices shall also be published in newspapers oriented to specific groups or neighborhoods that may be affected.
- b. The first notice shall be published at least 30 days prior to the public hearing.
- c. The notices shall contain: (1) a description of the contemplated substantial services change and/or the fare increase as appropriate, and (2) the date, time and place of the hearing.

5. Applicability to Third Party Contract Requirements.

Any agency or firm which operates public transit service within the Phoenix urbanized area utilizing Federal Transit Grant Funds provided by the City of Phoenix, shall follow the above process to solicit and consider public comment prior to any fare increase or substantial service change.

PASSED by the Council of the City of Phoenix this 17
day of October, 1990.


M A Y O R

ATTEST:

Vicky Mai, City Clerk

APPROVED AS TO FORM:

Mark J. Murphy ACTING
City Attorney

REVIEWED

Shay L. Kelley, Asst.
City Manager

1990 OCT 17 PM 12:39
CITY CLERK DEPT.

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Resolution No. _____

Attachment 2

Valley Metro Title VI Procedures Manual

Valley Metro

Title VI Procedures Manual

May 2013





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1.0 INTRODUCTION

This document is intended to provide guidance on the procedures used to evaluate service and fare adjustments considered by Valley Metro. In addition, the document includes a review of the regulatory framework for Title VI and specifies the performance metrics and thresholds Valley Metro has established to ensure equity in the delivery of public transportation services in the greater Phoenix metropolitan region.

2.0 TITLE VI STATUTES AND AUTHORITIES

Title VI of the Civil Rights Act of 1964 (as amended) provides that "no person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subject to discrimination under any program or activity receiving federal financial assistance" (23 CFR 200.9 and 49 CFR 21). The Civil Rights Restoration Act of 1987 broadened the scope of Title VI by expanding the definition of terms "programs or activities" to include all programs or activities of Federal Aid recipients, sub-recipients, and contractors, whether such programs and activities are federally assisted or not (Public Law 100-259 [2.557] March 22, 1988). In 1994, Executive Order 12898 extended protections similar those defined in the Civil Rights Act of 1964 to low-income populations.

The intent of Valley Metro's Title VI program and policies is to define the roles and responsibilities of agency departments to the public with respect to the delivery of transit services to ensure full compliance with Title VI. As a sub-recipient of federal-aid funds for transit services and capital projects, Valley Metro is subject to the statutes and regulatory requirements of Title VI. It is the mission of Valley Metro to promote the equitable allocation of agency resources and to prevent discrimination in the production of regional public transportation services. As the greater Phoenix metropolitan region's primary transit agency providing service to Maricopa County, fourteen incorporated municipalities, and millions of area residents and annual visitors, Valley Metro is responsible for demonstrating that public transportation services, capital improvement programs, and agency service policies adhere to the non-discrimination principals of Title VI, and that the benefits of services or capital programs are to be distributed equitably to all populations. Further, it is the intent of these service policies and standards to ensure that capital improvements or changes to services be objectively evaluated to identify the potential for adverse, disproportionately high, or disparate impacts to minority and/or low-income populations.



Valley Metro takes an interdisciplinary approach to Title VI by involving all agency departments. Working with state and federal agencies, regional and local governments, community organizations, and the public at-large, Valley Metro seeks to implement plans, programs, and service delivery policies that follow the intent of Title VI to address the interests and diverse needs of all populations in the transportation planning and service delivery process. In addition to federal Title VI compliance requirements, Valley Metro promotes public involvement policies and strategies to include minority and/or low-income communities in the decision-making process related to transit service programs and activities. Valley Metro's Title VI analysis efforts, the procedures for which are defined in this document, are intended to:

- Improve transportation decisions to meet the needs of all people.
- Improve data collection, monitoring, and analysis processes to assess the needs of and understand potential impacts to minority and/or low-income populations.
- Promote collaboration with local public agencies, community-organizations, and private businesses to leverage Valley Metro agency resources and the needs of specific communities in order to achieve a common vision for transportation services to area communities.
- Avoid, minimize, or mitigate identified disproportionate and/or disparate impacts with early identification of community concerns in the planning process.
- Promote context-sensitive design solutions for existing and future transportation facilities that fit aesthetically and harmoniously into surrounding communities, reflecting the diversity of greater Phoenix metropolitan region.
- Counterbalance initiatives and enhancement measures to benefit communities and neighborhoods affected by project or policy actions.

Providing the public with early, continuous, and meaningful access to the transportation planning, project development, and capital improvement program decision-making processes is a fundamental principle of Title VI. Valley Metro embraces this concept, and through the creation of this document, outlines the procedural steps for evaluating equity as part of the decision-making process when considering transit service changes or adjustments to transit fares. The following sections detail Valley Metro's approach to data collection and analysis methods in the determination of potential impacts, along with actions to mitigate, offset, or eliminate equity impacts.



3.0 TITLE VI PROGRAM ADMINISTRATION AND RESPONSIBILITIES

This section outlines the organizational structure of Valley Metro's Title VI program, defining the roles and responsibilities of agency departments, and the responsibilities of the Title VI Coordinator with respect to the delivery of transit services, policies, and programs to ensure full compliance with Title VI of the Civil Rights Act of 1964 (as amended).

3.1 TITLE VI DELEGATION CHART

The implementation, administration, and continuing oversight of Valley Metro's Title VI program and policies are the responsibility of Valley Metro's Chief Executive Officer (CEO). With the assistance of Valley Metro staff members and/or project consultants (as necessary) the CEO is responsible for ensuring Title VI compliance in the planning, project development, and service delivery activities of Valley Metro. Subsequently, the CEO has delegated the responsibilities for day-to-day oversight of Title VI program to the Planning and Development Department. This department has been designated the as the lead division responsible for providing oversight authority for Valley Metro's Title VI program. This department is responsible for reviewing, evaluating, and identifying potential Title VI issues, and ensuring that all Title VI reporting requirements are fulfilled. The Planning and Development Department is also responsible for communicating with other agency departments on the implementation of Valley Metro's Title VI program.

Within the Planning and Development Department a Title VI Coordinator is responsible for the management of Valley Metro's Title VI program, and serves as the Title VI Liaison Officer with the region's designated recipient of federal funds (the City of Phoenix). The day-to-day administration of the Title VI program lies with the coordinator, under the supervision of the Director of the Planning and Development Department. Figure 1 provides an organizational chart for Valley Metro's Title VI program, identifying the responsibilities by department.

Figure 1. Valley Metro Title VI Program Organizational Chart

CEO					
Chief of Staff					
General Counsel					
Organizational Management	Communications	Capital Programs	Finance	Operations	Planning and Development
					Title VI Coordinator



As an institution-wide compliance requirement, Title VI must be incorporated into the operating plans and programs of all agency departments responsible for producing and administering public goods that use federal dollars. Under supervision of the Title VI Coordinator, Valley Metro staff may be periodically asked to accept or share responsibility for day-to-day administration of the Title VI program, including implementation of the Title VI plan and compliance, program monitoring and reporting, and education within an applicable program area. Because this document is focused on the procedural methods used to analyze service and fare adjustments, the roles and responsibilities of individuals within each department of Valley Metro for Title VI will be outlined in a separate document.

3.2 TITLE VI COORDINATOR RESPONSIBILITIES

The Title VI Coordinator shall be responsible for coordinating the day-to-day administration of Valley Metro's Title VI program, plan, and procedures. The Title VI Coordinator serves under the supervision of the Director of the Planning and Development Department within Valley Metro. The Title VI Coordinator is responsible for supervising activities pertaining to Title VI regulations and procedures set forth in Federal guidance and in accordance with Valley Metro's Title VI Service and Fare Equity Procedures Manual. In support of this, the Title VI Coordinator shall be responsible for the following:

- Identify, investigate, and work to eliminate discriminatory practices in the provision of public transportation services when determined to exist.
- Review and process Title VI complaints received by Valley Metro.
- Meet with appropriate staff members to monitor and discuss progress, implementation, and compliance issues related to Valley Metro's Title VI program.
- Periodically review the agency's Title VI program to assess whether administrative procedures are effective, staffing is appropriate, and adequate resources are available to ensure compliance.
- Work with Valley Metro staff involved with consultant contracts to resolve any deficiency status found, and write a remedial action if necessary, as described in the Consultant Contracts section of this plan.
- Disseminate information on Valley Metro's Title VI program and policies to agency employees, contractors, and beneficiaries as well as the general public.
- Review important Title VI-related issues with Valley Metro's Chief Executive Officer, and other officers of the agency, as needed.



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- Assess communications and public involvement strategies to ensure adequate participation of impacted Title VI-protected groups and address additional language needs when needed.
 - Serve as the Title VI Liaison Officer with the region's designated recipient of federal funds.

4.0 PROCEDURES FOR ANALYZING TRANSIT SERVICE AND FARE ADJUSTMENTS

In order to remain in compliance with FTA Circular 4702.1B, Valley Metro must conduct a review of proposed service changes and any proposed fare adjustments to determine if the changes have a discriminatory impact to protected populations. The following section details the analysis procedures the Title VI Coordinator (or their designee) will be responsible for administering to evaluate transit service changes or fare adjustments with regard to social equity.

4.1 TRANSIT SERVICE CHANGES

Participating municipalities that contract with Valley Metro for transit services propose changes to some existing services, or may propose new transit services. Adjustments to existing services are made to accommodate changes in ridership demand, to promote enhanced connections between bus, rail, and other transit services, or may be based on funding fluctuations. Service changes are initially proposed by member municipalities, and coordinated with Valley Metro service development staff. Proposed changes may also be based on input from customers, employees, service design studies, requests from other local operators, and performance monitoring results.

Changes to existing transit services may occur in a variety of formats. Transit routes (bus, train, or other specialized services) may be shortened or extended in total length, re-routed to serve new streets or geographic areas, or eliminated from service. However, changes to transit services can have significant consequences for system users who rely on public transportation for basic mobility. Therefore, service changes are measured in the indices of discrimination to ensure that any changes made to transit services are equitable under the compliance requirements of Title VI and Executive Order 12898.

Prior to approval, proposed service changes must undergo a technical evaluation conducted or overseen by the Title VI Coordinator. Federal requirements for meeting Title VI standards obligate recipients and sub-recipients of federal funds to collect and maintain data used for socioeconomic analyses. These data are useful in the



determination of whether or not protected populations reside within the area of analysis, whether adverse, disparate, or disproportionate impacts and/or burdens could occur as the result of a project, service or fare change,

The purpose of the evaluation is to define and evaluate the potential impacts on riders to develop appropriate mitigation measures (as necessary).

The research and determination process of the equity analysis will follow the steps listed below:

1. Notification of Transit Service Changes to Valley Metro
2. Identification of "Major Service Changes"
3. Data Collection and Summation
4. Analysis Process
5. Determination of Findings, Reporting, and Mitigation

Step 1: Notification of Transit Service Changes to Valley Metro

All fixed-route bus and rail transit service modifications proposed are required to be evaluated for potential Title VI impacts during the planning process. All potential transit service modifications shall be submitted to the Valley Metro System and Service Development Manager no earlier than five (5) months prior to the proposed implementation date to provide adequate time to conduct a Title VI analysis and associated public outreach activities. For example, potential transit service changes proposed for implementation on July 1st must be submitted to Valley Metro's Title VI Coordinator no later than February 1st. Likewise, transit service changes proposed for January 1st must be submitted no later than August 1st. If service changes are submitted by municipalities after the specified dates for submittal, the requested service changes will not be considered for implementation until the next round of service changes. For example, service changes submitted after February 1st requesting implementation on July 1st will be considered for service changes. The municipality requesting the change will be responsible for funding the existing service until it may be changed in the next round of service adjustments.

Note: The schedule for when proposed service modifications must be submitted to Valley Metro is predicated by the time necessary to analyze the proposed modifications for equity, conduct a public engagement process to notify the public of planned service changes and receive feedback, re-evaluate proposed service modifications (as deemed necessary) and consider necessary mitigation measures to offset potential effects, and submit the proposed modifications to the respective Valley Metro Boards of Directors



(both the Valley Metro Rail, Inc. Board of Directors and the Regional Public Transportation Authority Board of Directors) for approval.

Step 2: Identification of a “Major Service Change”

Following the submission of requested service changes, Valley Metro’s Title VI Coordinator will conduct a review of the proposed service changes to identify whether any of the changes (individually) qualify as “Major Service Changes”. Valley Metro has established a threshold of 25% for determining whether proposed changes to transit services are considered “Major Service Changes”.¹

The following types of service changes are considered “Major Service Changes”, and will be evaluated in accordance with the regulatory requirements set forth in FTA Circular 4702.1B:

1. Route-Level Service Reduction or Elimination

- Reducing an existing route by more than 25% of weekday route revenue miles¹, or
- Reducing an existing route by more than 25% of Saturday route revenue miles¹, or
- Reducing an existing route by more than 25% of Sunday route revenue miles¹, or
- Reducing the number of route directional miles more than 25%¹, or
- A change in a route alignment resulting in a 25% or greater variance from the existing route alignment¹.

2. Route-Level Expansion or Addition of a New Route

- Adding a new route, or
- Expansion of an existing route that increases weekday route revenue miles by more than 25%¹, or
- Expansion of an existing route that increases Saturday route revenue miles by more than 25%¹, or
- Expansion of an existing route that increases Sunday route revenue miles by more than 25%¹, or
- Expanding the number of route directional miles more than 25%¹, or

¹ A change of 25% in weekly route revenue miles and/or route directional miles is the current City of Phoenix threshold for determining whether a potential transit service change qualifies as a major service change (or “substantial” service change) according to the City of Phoenix resolution (1990). This percentage is generally an industry-wide percentage threshold used by peer transit systems throughout the United States. The City of Phoenix resolution also specifies that a public comment period will be initiated when a change in transit service of 25% or more is determined.



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- A change in a route alignment resulting in a 25% or greater variance from the existing route alignment¹.

As an example of what constitutes a “Major Service Change,” if Route A is ten (10) miles in total length, and is proposed to be changed by three (3) miles, this change would result in a 30% change in route length, and therefore qualify as a “Major Service Change.” As a result of achieving a service change above the 25% threshold, this would trigger the need to conduct a formal Title VI review of the proposed change as it relates to transportation equity.

Conversely, if Route A is proposed to be changed by only one (1) mile, this would amount to a 10% change in total length, and therefore not be considered a “Major Service Change”. As a result, a formal Title VI analysis is not necessary. The Title VI Coordinator should document this finding, and may move forward without any further action on this service change, concentrating only on those changes that are identified as a “Major Service Change”.

While the above example presents a simple example of a service change, there are other forms of service changes that could constitute a “Major Service Change” that must also be evaluated for equity. Changes in service span, frequency (headways), or route alignment can all result in changes to existing service that are greater than 25%. For example, if Route A currently operates at 10 minute frequencies, and is proposed to change to 12 minute frequencies, this would result in one less trip per hour. This would not be a major service change, because the difference amounts to a 16% change. However, if the same route were reduced to 15 minute frequencies, the resulting number of trips would be four (4) per hour as compared to six (6) currently. This amounts to a 33% difference in the number of trips, above the 25% change threshold. The Title VI Coordinator shall be responsible for determining the appropriate course of action for evaluating service changes based on the type of change proposed.

It is important to note that Valley Metro may conduct a formal Title VI evaluation for potential service modifications based on local knowledge of a transit route’s ridership demographic or the demographic characteristics of the route’s service area. Specifically, there may be instances when proposed changes to a bus route may not result in being a “Major Service Change”, but it is known that the route is predominantly used by minority and/or low-income populations, or serves a geographic area that is predominantly populated by minority and/or low-income populations. These circumstances are discussed further in the section entitled “Special Circumstances” below.

The complete adopted service change equity policy is provided in Appendix A.



Step 3: Socioeconomic Data Collection and Summation

Once a transit service change has been identified as being a “Major Service Change,” the Title VI Coordinator shall collect the appropriate demographic data to complete a ridership profile of system users along the route the service change is being considered. To identify minority and/or low-income populations in the service area, the Title VI Coordinator will gather data from the U.S. Census Bureau and the most recently complete, statistically valid Transit On-Board Origin-Destination Survey (O/D Survey) shall be collected and reviewed. Demographic data to be collected may include information on the race and ethnicity, national origin, linguistic isolation and English proficiency, household and per capita income and employment, and poverty information (among other sources of data as deemed appropriate). Table 1 provides an outline of the data sources to be used for each type of transit service change.

Table 1. Service Change Equity Analysis Data Sources

Category	Action	Sub Action	Evaluation Method
Service Span	Reduction	N/A	O/D ^a profile data of affected route
	Expansion	N/A	
Service Headway	Reduction	N/A	O/D ^a profile data of affected route
	Expansion	N/A	
Route Length	Reduction	N/A	O/D ^a Data
	Expansion	N/A	Census Data
Route Alignment	Reduced Alignment	N/A	O/D ^a Data
	Expanded Alignment	N/A	Census Data
	Modified Alignment	Eliminated Segment(s)	O/D ^a Data
		Segment(s) to New Areas	Census Data
New Route	New Route	N/A	Census Data

^aOrigin/Destination Survey Data

The FTA recommends the use of on-board survey data to evaluate equity when considering service modifications to existing routes, including route length reductions, span of service changes, or service headway modifications that do not affect a transit route's alignment. The on-board survey produces the most accurate information available on existing route patronage, and is therefore a useful tool in assessing potential equity implications related to proposed service modifications. Similarly, the use of decennial Census data is important toward setting the geographic context of the service area a route provides service too. When existing routes are proposed to be extended to serve new geographic areas, or entirely new routes are proposed, Census data provide the best review of existing demographic characteristics of the area to be served as on-board survey data are not available. Coupled together, both the Transit



On-Board Origin-Destination Survey and the Census data provide two data sources that offer the most accurate portrayal of both a transit route and the transit system's demographic composition of system users.

Note: In order to maintain consistency with the datasets used in an equity analysis, the percentage of minority and low-income populations will be determined using either US Census data or origin/destination survey data, and dependent on the type of analysis being conducted. More specifically, US Census data provides a geographic portrait of demographic characteristics within the Valley Metro service area. The service area percentage is derived by selecting all of the Census tracts (or other Census geographic units) within the service area and determining the minority and low-income populations relative to the entire population of the service area. The service area is different from the system-wide percentage that refers to the percentage of minority and/or low-income passengers currently using available transit services. The system-wide percentage is determined based on the current ridership data available through the Valley Metro Origin/Destination Survey. Therefore, when conducting an analysis of whether a "Major Service Change" has the potential to result in equity impacts, if the proposed service modification extends service to a new geographic area currently not served by transit, the analysis will compare the data for the new Census units served (per Table 1 above) with the minority and low-income population percentages for the Valley Metro service area. If the proposed service modification results in shortening a route or eliminating a route segment, the analysis will use the Valley Metro Origin/Destination Survey data (because this route is already in operation), and compare the minority and/or low-income ridership data of the affected route to the Valley Metro system-wide percentage of existing users. Table 2 provides the current minority and low-income population percentages for both the Valley Metro service area and the system (2010-2011). This table is for example purposes only, and will need to be periodically modified with the issuance of updated demographic data.

**Table 2. Valley Metro Minority and Low-Income Population Percentages
(2010-2011)**

Data Set	Minority	Low-Income
Valley Metro Service Area (Census)	45.6%	15.8%
Valley Metro System-Wide Percentage (O/D Survey)	56.2%	50.6%

When collecting and interpreting Census data for route extensions or new routes, data will be collected using a one-half (1/2) mile radial buffer surrounding the proposed extension. The Title VI Coordinator (or designated analyst) will buffer the proposed route extension in the new geographic region served. Any Census unit that is either fully or partially located within the buffered area will be included as part of the analysis. The



analysis will not be conducted on a proportional basis, only the total populations of minority and low-income persons will be considered.

For bus routes identified as express services (including fixed-route express buses and City of Phoenix RAPID services), a one-half mile radial buffer will be established around the morning inbound route stops. This approach is used because unlike local fixed-route services, express buses offer point-to-point service over a longer distance, and do not pick-up or drop-off passengers when operating on arterial roads or regional highways. While most express routes provide service to park-and-ride facilities that often have a travel shed of five (5) miles or more, a one-half mile buffer will still be used. Typically, park-and-rides are located in areas where the geographic size of Census units is sufficiently large enough to cover the travel shed of commuters who park-and-ride transit services. Note: stops in downtown Phoenix will not be evaluated. Several express bus routes make two stops in downtown: one stop at Central Station to connect passengers with local bus services, and a second stop at the State Capitol complex. While some passengers may board an express route bus at Central Station to reach the State Capitol complex (thereby treating an express service as if it were a local service), the number of these boardings is very small and do not reflect the profile of typical users along the route.

Step 4: The Analysis Process

Having established which service changes proposed are deemed "Major Service Changes", and collecting the appropriate demographic data, the analysis now seeks to identify the equity implications associated with making the proposed service changes. An overall baseline ridership profile for each individual existing route will be developed using the Transit On-Board Survey data. For proposed new routes, the decennial Census data will be used. Refer to Table 1 to determine the appropriate data source for each unique type of service change that may be proposed.

Using the baseline information, the Title VI Coordinator will develop a profile of the ridership along an affected route by affected population groups. The percentage of minority and/or low-income populations using the route will be compared to the percentage of minority and/or low-income populations using the entire regional transit system. The determination of a disparate burden will be based on meeting both of the following criteria:

- For service level or service area reductions, if the percentage of minority passengers on an affected route is greater than the transit system's minority ridership (within the appropriate dataset's margin of error) by transit classification



(local, express, neighborhood circulators, and rural bus)² a determination of a minority disparate impact will be determined.

- If a service level expansion or service area expansion is considered that coincides with a reduction in transit service on the same route or other routes, and the route(s) considered for service expansion predominantly serve non-minority geographic areas while the route(s) considered for reduction predominantly serve minority geographic areas, then a disparate burden may be determined.

The determination of a disproportionate burden will be based on meeting both of the following criteria:

- If the percentage of low-income passengers on an affected route considered for service reduction is greater than the transit system's low-income ridership percentage (within the appropriate dataset's margin of error) by transit classification (local, express, neighborhood circulators, and rural bus)², and
- If the percentage of low-income passengers on an affected route considered for service expansion is less than the transit system's low-income ridership percentage (within the appropriate dataset's margin of error) by transit classification (local, express, neighborhood circulators, and rural bus).²

Referring to the earlier example of Route A, the determination of a Title VI impact rests in a combination of the major service change determination and the demographics of the route. For example, if Route A is ten (10) miles in total length, and is proposed to be changed by three (3) miles (a 30% reduction in route length), and the ridership of Route A is 55% minority versus the system-wide minority average of 50%, the proposed change in route length would therefore be considered an equity impact to minority populations, resulting in a Title VI impact.

Conversely, if Route A is ten (10) miles in total length, and is proposed to be changed by three (3) miles (a 30% reduction in route length), and the ridership of Route A is 42% minority versus the system-wide minority average of 50%, the proposed change in route length would therefore not result in an equity impact to minority populations.

² Local routes include local fixed-route bus, light rail, LINK bus, local limited stop bus. Express routes include express bus and RAPID bus. Circulator routes will be evaluated similarly to local routes for fare adjustments and major services changes, but will be considered separately from local and express services when considered in the context of a region- or system-wide Title VI analysis. Circulator bus services are provided by the municipalities they serve and not the regional transit agency.



Step 5: Determination of Findings, Reporting, and Mitigation

Following the analysis and determination of whether proposed service changes that are deemed “Major Service Changes” will have positive or negative effects to minority and/or low-income populations, the Title VI Coordinator will prepare a concise memorandum or report of the analysis findings. The findings will describe the process and data sources used to evaluate equity implications, results of the analysis, and make recommendations on any mitigation measures that may be appropriate to resolve equity issues. Appendix C to this report contains an example of a Title VI review of proposed service changes for reference.

Should the analysis findings determine that disparate or disproportionate impacts exist, and all reasonable accommodations have been made to offset these impacts, Valley Metro may move forward with the service changes as proposed provided it may be demonstrated that without the proposed changes further undue hardship on the transit system is unavoidable. The FTA’s Circular 4702.1B provides transit agencies with the flexibility to implement service changes, even if those changes would have a disparate or disproportionate impact to protected populations. However, it must be clearly demonstrated that without the changes in service, severe consequences to operations would result that would have a detrimental affect to transit service for the community at-large.

4.1.1 Special Circumstances

In certain cases proposed service modifications could result in changes to transit services that operate through geographic areas which have traditionally been populated by minority and/or low-income communities. The proposed service modification may not qualify as a “Major Service Change”, and the route(s) being considered for a service modification may or may not be identified as minority or low-income route. However, an analysis of equity impacts may be considered to determine whether the proposed service modification adversely affects populations residing within a specific jurisdiction or geographic area.

In cases where service modifications are made within a jurisdiction, neighborhood, or other specialized geographic location that do not result in a change of 25%, but the Title IV Coordinator (or designated analyst) believes an analysis is warranted given the demographic characteristics of area populations, an analysis using both U.S. Census Bureau and the Transit On-Board Origin-Destination Survey will be conducted. Data from the Transit On-Board Survey will produce statistics on current ridership trends among minority and/or low-income populations. This data will be considered in the context of U.S. Census Bureau data that provides a geographic assessment of



surrounding corridor populations. If the Census data suggest that 25% or more of the Census units surrounding the location of the proposed service modification are predominately minority and/or low-income (defined as having a higher percentage of minority and/or low-income residents than the regional transit service area average), an evaluation of equity impacts will be conducted. Using both datasets in support of one-another will help to ensure equity is considered from all available quantitative and qualitative aspects.

4.2 CHANGES TO TRANSIT FARES

Periodically, it is necessary for Valley Metro to increase fares to offset operating cost increases. Fares are adjusted when it is determined that changes to transit services (as described above) alone can no longer sufficiently reduce operating expenses. In addition to service changes, fare structures are monitored in the indices of discrimination for disparate treatment because fare adjustments could cause minority and/or low-income riders to bear a higher average fare burden than non-minority and/or non-low-income riders. The purpose of the evaluation is to define and evaluate the potential impacts on riders and to develop appropriate mitigation measures (as necessary).

The research and determination process of the fare equity analysis will follow the steps listed below:

1. Notification of Transit Fare Changes to Valley Metro
2. Data Collection and Summation
3. Analysis Process
4. Determination of Findings, Reporting, and Mitigation

Step 1: Notification of the Proposed Fare Adjustments

All potential fare adjustments (increases or decreases) are required to be evaluated for Title VI impacts during the planning process. If it is determined that adjustments to transit fares must be made, all potential fare adjustments shall be submitted to the Valley Metro Title VI Coordinator no earlier than nine (9) months prior to the proposed implementation date to provide adequate time to conduct a Title VI analysis and associated public outreach activities. For example, transit fare adjustments planned for implementation on July 1st would need to be submitted to Valley Metro's Title VI Coordinator no later than October 1st of the previous year. Similarly, transit fare adjustments planned for implementation on January 1st must be submitted to Valley Metro's Title VI Coordinator no later than April 1st of the previous year. This schedule is necessary to evaluate the proposed fare adjustments for equity and to consider any



mitigation measures (if applicable), conduct a public engagement process, and submit the proposed fare adjustments to the respective Valley Metro Boards of Directors (both the Valley Metro Rail, Inc. Board of Directors and the Regional Public Transportation Authority Board of Directors) for approval. Should the fare adjustments be approved by the respective Boards of Directors, a subsequent public engagement process will begin to notify the public of the date planned fare adjustments will go into effect.

Step 2: Socioeconomic Data Collection and Summation

The Title VI Coordinator will collect the necessary demographic and farebox data for the analysis of fare adjustments. Demographic data may be collected from sources including the decennial Census, American Community Survey (ACS) (provide by the U.S. Census Bureau), and the most recent statistically valid Transit On-Board Survey. The analysis of fare adjustments as they relate to existing system users and current fare media will use origin/destination data obtained from the Transit On-Board Survey. For the spatial consideration of where minority and/or low-income communities are located within the Valley Metro service area (to determine the distribution of off-board fare outlets for example) Census data will be used. Table 3 outlines the data resources for assessing fare adjustments.

Table 3. Fare Adjustment Equity Analysis Data Sources

Category	Action	Sub Action	Evaluation Method
Fare	Adjustment	N/A	O/D profile data of affected fare category and/or Census data

In addition to considering data from the O/D Survey, the Title VI Coordinator may need to retrieve data from non-traditional sources or other agencies to supplement the analysis. For example, large employers maintain data on the number of employees who have access to subsidized transit passes. The Title VI Coordinator may need to obtain this data periodically to evaluate the number of minority and/or low-income passengers with access to these passes, as compared to non-minority and non-low-income passengers.

Step 3: The Analysis Process

Two initial steps will be conducted at the start of the analysis process. These steps may be conducted concurrently, or one step may be completed first followed by the next step.

- Similar to the analysis of proposed service changes, a demographic profile of system users and the service area will be constructed (if a ridership profile was



not created previously should no service changes exist and only a fare adjustment is proposed). This profile will serve as the baseline condition by which the proposed fare adjustment(s) will be evaluated to determine potential impacts based on socioeconomic characteristic. The profile will be constructed using available socioeconomic data from the U.S. Census Bureau and/or the most recently completed, statistically valid Transit On-Board Survey.

- The proposed fare adjustment(s) will be categorized into corresponding fare categories (local and express) and fare media (cash, multi-day or monthly passes). The percentage change in each fare category or media will be calculated, showing the percentage difference between the current fare and the proposed fare structure. Currently, Valley Metro identifies fares for local fixed-route bus, LINK service, and light rail as local fares, while express bus and City of Phoenix RAPID bus services are considered express fares. Table 4 below demonstrates the calculation of percentage change.

Table 4. Example Proposed Fare Structure with Percentage Change

Fare Type	Current Fare	Proposed Fare	Percentage Change
Local Bus, LINK, and Light Rail – Standard Fare			
1-Ride	\$1.75	\$2.00	14.3
All-Day Off-Board	\$3.50	\$4.00	14.3
All-Day On-Board	\$5.25	\$6.00	14.3
3-Day	\$10.50	-	Eliminated
7-Day	\$17.50	\$20.00	14.3
15-Day	-	\$33.00	New Fare Media
31-Day	\$55.00	\$64.00	16.4
Express Bus and RAPID – Standard Fare			
1-Ride	\$2.75	\$3.00	9.1
All-Day Off-Board	\$5.50	\$6.00	9.1
All-Day On-Board	\$7.25	\$9.00	24.1
31-Day	\$85.00	\$96.00	12.9
Reduced Local Fares - Local Bus, LINK, and Light Rail			
1-Ride	\$0.85	\$1.00	17.6
All-Day Off-Board	\$1.75	\$2.00	14.3
All-Day On-Board	\$2.60	\$3.00	15.4
3-Day	\$5.25	-	Eliminated
7-Day	\$8.75	\$10.00	14.3
15-Day	-	\$16.50	New Fare Media
31-Day	\$27.50	\$32.00	16.4
ADA Dial-a-Ride Fare			
1-Ride	\$3.50	\$4.00	14.3
Rural Connector Fare			
1-Ride	\$3.25	\$4.00	23.1



With these two steps completed, the third step in the analysis process is to consider the percentage point variance (or difference) between local and express fare categories. The following threshold shall be used for determining if a fare adjustment will result in a minority disparate impact or low-income disproportionate impact:

- If a planned transit fare adjustment results in minority and/or low-income populations bearing a fare rate change of greater than 4 percentage points as compared to non-minority and/or non-low-income populations and, the resulting effect will be considered a minority disparate impact or low-income disproportionate burden respectively.

By example, referring back to Table 3, the one (1) ride local cash fare is slated to increase by 14.3%, while the one (1) ride express cash fare would increase by 9.1%. The variance between these two fares is 5.2 percentage points ($14.3\% - 9.1\% = 5.2$ percentage points). Valley Metro has adopted a Title VI fare policy specifying that the variance between fares charged for local and express transit services can be no greater than 4 percentage points. In the case of this example, a difference of 5.2 percentage points would be above the 4 percentage point threshold, and therefore the one (1) ride cash fare for express service would either have to be raised, or the one (1) ride cash fare for local service would need to be lowered. This process helps assure equity in the pricing of transit fares to ensure that the burden of operating costs is shared more equitably across modes and services.

Using the ridership profile and the assessment of changes between the existing and proposed transit fares, the Title VI Coordinator will consider the financial impact of the proposed fare adjustment by dollar impact and percent. If a new fare media is proposed, the affordability and availability of the media must be evaluated for affected populations compared to the overall transit system ridership. The following information may be obtained and reported (as the analyst sees fit) from available data to help illustrate potential impacts with changes in fares or fare media:

- Overall transit ridership compared to ridership by race and income
- Method of payment used by different population groups
- Average boardings by fare media by population group and mode
- Frequency of transit use by population group and mode
- Average fare per boarding by fare category and fare media shown by race and income
- Location of off-board fare media outlets

Based on the current ridership profile of existing local and express route riders, over 50% of local riders are minorities, and over 45% are low-income. By comparison, 29%



of express bus riders are minority, and only 10% are low-income. Referring to the example given above, if local riders experience a fare increase of more than 5 percentage points above express riders, this would result in both a disparate and disproportionate impact to local riders, who are predominantly minority and low-income as compared to express riders.

As noted, it will also be important for the Title VI Coordinator to assess the distribution of off-board fare media outlets across the region. This assessment may be accomplished through a measure of density. Specifically, using the economic data retrieved from the decennial Census or ACS, a Geographic Information Systems (GIS) shapefile of minority and/or low-income populations may be made to illustrate congregations of minority and low-income populations as compared to non-minority and non-low-income populations. Overlaying this shapefile with a shapefile displaying the off-board fare outlets will allow the Title VI Coordinator to visualize the distribution of off-board fare outlets in predominantly minority and low-income areas relative to non-minority and non-low-income areas. Further, a density test may be conducted to determine the density of off-board fare outlets in locations by different user groups. This will allow Valley Metro to determine where investments in off-board fare vending locations must be made to ensure equal access to off-board fares versus on-board fares.

The complete adopted fare equity policy is provided in Appendix B.

Step 4: Determination of Findings, Reporting, and Mitigation

The information gathered and analyzed will provide the basis to determine if discriminatory impacts on minority and/or low-income populations result from the proposed fare adjustment(s). The determination will be consistent with the adopted Valley Metro policy. The conclusions will be considered for each affected population group defined by fare media, fare category, and mode of transit.

Following the analysis and determination of whether proposed fare adjustments will have positive or negative effects to minority and/or low-income populations, the Title VI Coordinator will prepare a concise memorandum or report of the analysis findings. The findings will describe the process and data sources used to evaluate equity implications, results of the analysis, and make recommendations on any mitigation measures that may be appropriate to resolve equity issues.

If a disparate or disproportionate impact is determined, Valley Metro will assess appropriate mitigation measures to avoid, minimize, or eliminate the impact. As noted above, if the percentage point variance between fare categories for local and express



services is greater than four (4) percentage points, this would result in a disparate and/or disproportionate impact based on user group (minority and/or low-income). Proposed fares for express routes may be raised, or proposed fares for local routes may be lowered to help ensure equity.

It is important to consider the fare level for each mode that would be needed to reach Valley Metro's revenue targets given the estimated ridership loss if fares are increased. Traditional fare elasticity models indicate that increases in transit fares result in decreases in total use. However, given the existing and anticipated future ridership characteristics for the greater Phoenix metropolitan region, it is likely that ridership losses will be negligible, and over time ridership levels will return or exceed the level of ridership prior to implementing a new fare increase. However, it will be important for the Title VI Coordinator to work with the finance personnel to determine an appropriate fare structure to ensure adequate farebox recovery to cover operating costs.

Appendix A: Valley Metro Adopted Service Change Equity Policy



MAJOR SERVICE CHANGE & SERVICE EQUITY POLICY

Purpose of the Policy

The purpose of the Major Service Change and Service Equity Policy is to define thresholds for determining major service changes and whether potential changes to existing transit services will have a disparate impact based on race, color, or national origin, or whether potential service changes will have a disproportionately high or adverse impact on minority and/or low-income populations.

Basis for Policy Standards

Federal law requires the City of Phoenix and Valley Metro to evaluate changes to transit services, as outlined in FTA Circular 4702.1B, effective October 1, 2012. In order to comply with 49 CFR Section 21.5(b)(a), 49 CFR Section 21.5 (b)(7) and Appendix C to 49 CFR part 21, recipients shall “evaluate significant system-wide service and fare changes and proposed improvements at the planning and programming stages to determine whether those changes have a discriminatory impact. For service changes, this requirement applies to ‘major service changes’ only. The recipient should have established guidelines or threshold for what it considers a ‘major’ change to be.”

Major Service Change Policy

A. Major Service Change

The following is considered a major service change (unless otherwise noted under Exemptions), and will be evaluated in accordance with the regulatory requirements set forth in FTA Circular 4702.1B:

1. Route-Level Service Reduction or Elimination

- Reducing an existing route by more than 25% of weekday route revenue miles¹, or

¹ A change of 25% in weekly route revenue miles and/or route directional miles is the current City of Phoenix threshold for determining whether a potential transit service change qualifies as a major service change (or “substantial” service change) according to the City of Phoenix resolution (1990). This percentage is generally an industry-wide percentage threshold used by peer transit systems throughout the United States. The City of Phoenix resolution also specifies that a public comment period will be initiated when a change in transit service of 25% or more is determined.



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- Reducing an existing route by more than 25% of Saturday route revenue miles¹, or
 - Reducing an existing route by more than 25% of Sunday route revenue miles¹, or
 - Reducing the number of route directional miles more than 25%¹, or
 - A change in a route alignment resulting in a 25% or greater variance from the existing route alignment¹, or
 - In situations where service would be reduced or eliminated in jurisdictions where minority and/or low-income populations exceed the transit system service area average.

2. Route-Level Expansion or Addition of a New Route

- Adding a new route, or
- Expansion of an existing route that increases weekday route revenue miles by more than 25%¹, or
- Expansion of an existing route that increases Saturday route revenue miles by more than 25%¹, or
- Expansion of an existing route that increases Sunday route revenue miles by more than 25%¹, or
- Expanding the number of route directional miles more than 25%¹, or
- A change in a route alignment resulting in a 25%¹ or greater variance from the existing route alignment.

B. Minority Disparate Impact Policy (Service Equity Analysis)

When conducting a service change equity analysis, the following thresholds will be used to determine when a service change would have a disparate impact on minority populations:

1. Route-Level Service Reduction or Elimination

- Service Level and Service Area Reduction:



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- If the percentage of minority passengers² on an affected route is greater than the transit system's minority ridership (within the appropriate dataset's margin of error) by transit classification (local, express, neighborhood circulators, and rural bus).³

2. Route-Level Expansion or Addition of a New Route

- Service Level Expansion or Service Area Expansion (includes addition of new routes):
 - If a service level expansion or service area expansion is considered that coincides with a reduction in transit service on the same route or other routes, and the route(s) considered for service expansion predominantly serve non-minority and/or non-low-income geographic areas while the route(s) considered for reduction predominantly serve minority and/or low-income geographic areas, then a disproportionate burden may be determined. The determination of a disproportionate burden will be based on meeting both of the following criteria:
 - If the percentage of minority passengers² on an affected route considered for service expansion is less than the transit system's minority ridership percentage (within the appropriate dataset's margin of error) by transit classification (local, express, neighborhood circulators, and rural bus),³ **AND**
 - If the percentage of minority passengers² on an affected route considered for service reduction is greater than the transit system's minority ridership percentage (within the appropriate dataset's margin of error) by transit classification (local, express, neighborhood circulators, and rural bus).³

C. Low-Income Disproportionate Burden Policy (Service Equity Analysis)

When conducting a service change equity analysis, the following thresholds will be used to determine when a service change would have a disproportionate burden on low-income populations:

² The determination of the transit system and an affected route's minority and/or low-income population will be derived from the most recently completed, statistically valid regional on-board origin and destination survey.

³ Local routes include local fixed-route bus, light rail, LINK bus, local limited stop bus. Express routes include express bus and RAPID bus. Circulator routes will be evaluated similarly to local routes for fare changes and major services changes, but will be considered separately from local and express services when considered in the context of a region- or system-wide Title VI analysis. Circulator bus services are provided by the municipalities they serve and not the regional transit agency.



1. Route-Level Service Reduction or Elimination

- If the percentage of low-income passengers² on an affected route is greater than the transit system's low-income ridership (within the appropriate dataset's margin of error) by transit classification (local, express, neighborhood circulators, and rural bus).³

2. Route-Level Expansion or Addition of a New Route

- Service Level Expansion or Service Area Expansion (includes addition of new routes):
 - If a service level expansion or service area expansion is considered that coincides with a reduction in transit service on the same route or other routes, and the route(s) considered for service expansion predominantly serve non-minority and/or non-low-income geographic areas while the route(s) considered for reduction predominantly serve minority and/or low-income geographic areas, then a disproportionate burden may be determined. The determination of a disproportionate burden will be based on meeting both of the following criteria:
 - If the percentage of low-income passengers² on an affected route considered for service expansion is less than the transit system's low-income ridership percentage (within the appropriate dataset's margin of error) by transit classification (local, express, neighborhood circulators, and rural bus),³ **AND**
 - If the percentage of low-income passengers² on an affected route considered for service reduction is greater than the transit system's low-income ridership percentage (within the appropriate dataset's margin of error) by transit classification (local, express, neighborhood circulators, and rural bus).³

Equity Analysis Data Sources

Category	Action	Sub Action	Evaluation Method
Fare	Adjustment	N/A	O/D ^a profile data of affected fare category and/or Census Data
Service Span	Reduction	N/A	O/D ^a profile data of affected route
	Expansion	N/A	
Service Headway	Reduction	N/A	O/D ^a profile data of affected route
	Expansion	N/A	
Route Length	Reduction	N/A	O/D ^a Data
	Expansion	N/A	Census Data
Route Alignment	Reduced Alignment	N/A	O/D ^a Data
	Expanded Alignment	N/A	Census Data
	Modified Alignment	Eliminated Segment(s) Segment(s) to New Areas	O/D ^a Data Census Data
New Route	New Route	N/A	Census Data

^a Origin/Destination Survey Data

Exemptions

The major service change thresholds exclude any changes to service that are caused by the following:

- Discontinuance of Temporary or Demonstration Services – The discontinuance of a temporary transit service or demonstration service that has been in effect for less than 180 days.
- Headway Adjustments – Headways for transit routes may be adjusted up to 5 minutes during the peak hour periods, and 15 minutes during non-peak hour periods.
- New Transit Service “Break-In” Period – An adjustment to service frequencies and/or span of service for new transit routes that have been in revenue service for less than 180 days.



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- Other Service Providers or Agencies – Actions of other service providers or public agencies providing/administering transit services that are not the responsibility of Valley Metro.
 - Natural or Catastrophic Disasters – Forces of nature such as earthquakes, wildfires, or other natural disasters, or human-caused catastrophic disasters that may force the suspension of scheduled transit service for public safety or technical reasons.
 - Auxiliary Transportation Infrastructure Failures – Failures of auxiliary transportation infrastructure such as vehicular bridges, highway bridge overpasses, tunnels, or elevated highways that force the suspension transit service.
 - Overlapping Services – A reduction in revenue miles on one line that is offset by an increase in revenue miles on the overlapping section of an alternative transit route (an overlapping section is where two or more bus routes or rail lines share the same alignment, stops, or stations for a short distance).
 - Seasonal Service and Special Events – Changes to bus service levels on routes which occur because of seasonal ridership changes and event activities served by dedicated temporary bus routes or increased service frequencies.
 - Temporary Route Detours – A short-term change to a route caused by road construction, routine road maintenance, road closures, emergency road conditions, fiscal crisis, civil demonstrations, or any uncontrollable circumstance.

Public Participatory Procedures

For all proposed major service changes, City of Phoenix and/or Valley Metro will hold at least one public hearing, with a minimum of two public notices prior to the hearing in order to receive public comments on the potential service changes. The first meeting notice will occur at least 30 days prior to the scheduled hearing date, with the second notice being made at least 10 days prior to the scheduled hearing date. Public materials will be produced in English and Spanish (the metropolitan region's two primary languages), or in other languages upon request, in order to ensure Limited English Proficient (LEP) populations within the transit service area are informed of the proposed service changes and can participate in community discussions. Valley Metro and/or the City of Phoenix will conduct a service equity analysis for the Valley Metro Board of



Directors, the City of Phoenix City Council, and the public's consideration prior to any public hearings associated with the proposed service changes.

Definitions

Designated Recipient – The City of Phoenix is the designated recipient for federal funds contributing to transit system capital programs and operations in the greater Phoenix metropolitan region.

Disparate Impact – A facially neutral policy or practice that has a disproportionately excluding or adverse effect on the minority riders or population of the service area.

Disparate Treatment – An action that results in a circumstance in which minority riders or populations are treated differently than others because of their race, color, national origin and/or income status.

Disproportionate Impact – A facially neutral policy or practice that has a disproportionately excluding or adverse effect on the low-income riders or population of the service area.

Express Transit Service – Includes Valley Metro designated express bus and RAPID bus services.

High-Capacity Transit (HCT) – A transit facility or service that operates at a consistent, high frequency of service.

Local Transit Service – Includes Light Rail Transit (LRT), and local fixed-route bus, local limited stop bus, LINK bus routes, and circulator/shuttle bus services.

Low-income Populations & Areas – Low-income populations are those persons with an income of 80 percent or less of the national per capita income. “Low-income Areas” are residential land use areas within census tracts where the average per capita income is 80 percent or less of the national per capita income.

Minority Populations & Areas – Minority populations include those persons who self-identify themselves as being one or more of the following ethnic groups: American Indian and Alaska Native, Asian, Black or African American, Hispanic or Latino, Native Hawaiian and Other Pacific Islander, as defined in the FTA Title VI Circular. “Minority Areas” are residential land use areas within Census tracts where the percentage of minority persons is higher than the Valley Metro service area average.

Route-Level – Refers to the geographic level of analysis at the route alignment level by which the performance of a transit route is measured for equity.



Route-Service Area – A three-quarter mile radial buffer on either side of a transit route's alignment. A three-quarter mile radial buffer is used to ensure compliance with the American's with Disabilities Act guidelines.

Service Level – Refers to the span of service (hours of operation), days of operation, trips, and headways (service frequencies) for a transit route or the regional transit system.

Service Area – According to 49 CFR 604.3, geographic service area means “the entire area in which a recipient is authorized to provide public transportation service under appropriate local, state, and Federal law.”

Service Span – The span of hours over which service is operated (e.g., 6 a.m. to 10 p.m.). The service span may vary by weekday, Saturday, or Sunday.

Sub-recipient – Valley Metro is a designated sub-recipient of federal funding for capital projects and service operations. Funding is passed onto Valley Metro from the designated recipient, the City of Phoenix.

System-wide – Refers to the geographic level of analysis by which the performance of the entire transit system is measured for equity.

Transit System – A coordinated urban network of scheduled public passenger modes including fixed-route local and express buses, light rail transit, bus rapid transit, and circulator bus services that provide mobility for people from one place to another.

Appendix B: Valley Metro Adopted Fare Equity Policy



PROPOSED FARE EQUITY POLICY

Purpose of the Policy

The purpose of the Fare Equity Policy is to define a threshold for determining whether potential changes to existing transit fares will have a discriminatory impact based on race, color, or national origin, or whether a potential fare adjustment will have a disproportionately high or adverse impact on minority and/or low-income populations.

Basis for Policy Standards

Periodically, the City of Phoenix and Valley Metro make adjustments to transit fares in order to generate revenues to help sustain transit service operations. Federal law requires the City of Phoenix and Valley Metro to prepare and submit fare equity analyses for all potential transit fare adjustments, as outlined in Federal Transit Administration (FTA) Circular 4702.1B, effective October 1, 2012.

Proposed Policy

The following are proposed City of Phoenix and Valley Metro policies for determining if a fare adjustment will result in a minority disparate impact or low-income disproportionate impact.

A. Minority Disparate Impact Policy (Fare Equity Analysis)

If a planned transit fare adjustment results in minority populations bearing a fare rate change of greater than 4 percentage points as compared to non-minority populations, the resulting effect will be considered a minority disparate impact.

B. Low-Income Disproportionate Burden Policy (Fare Equity Analysis)

If a planned transit fare adjustment results in low-income populations bearing a fare rate change of greater than 4 percentage points as compared to non-low-income populations, the resulting effect will be considered a low-income disproportionate burden.



Equity Analysis Data Sources

Category	Action	Sub Action	Evaluation Method
Fare	Adjustment	N/A	O/D ^a profile data of affected fare category and/or Census Data
Service Span	Reduction	N/A	O/D ^a profile data of affected route
	Expansion	N/A	
Service Headway	Reduction	N/A	O/D ^a profile data of affected route
	Expansion	N/A	
Route Length	Reduction	N/A	O/D ^a Data
	Expansion	N/A	Census Data
Route Alignment	Reduced Alignment	N/A	O/D ^a Data
	Expanded Alignment	N/A	Census Data
	Modified Alignment	Eliminated Segment(s) Segment(s) to New Areas	O/D ^a Data Census Data
New Route	New Route	N/A	Census Data

^a Origin/Destination Survey Data

Public Participatory Procedures

For all proposed fare changes, City of Phoenix and/or Valley Metro will hold at least one public hearing, with a minimum of two public notices prior to the hearing in order to receive public comments on the proposed fare changes. The first meeting notice will occur at least 30 days prior to the scheduled hearing date, with the second notice being made at least 10 days prior to the scheduled hearing date. Public materials will be produced in English and Spanish (the metropolitan region's two primary languages), or in other languages upon request, in order to ensure Limited English Proficient (LEP) populations within the transit service area are informed of the proposed service changes and can participate in community discussions. Valley Metro and/or the City of Phoenix will conduct a fare equity analysis for the Valley Metro Board of Directors, the City of Phoenix City Council, and the public's consideration prior to any public hearings associated with the proposed fare changes.

Definitions

Designated Recipient – The City of Phoenix is the designated recipient for federal funds contributing to transit system capital programs and operations in the greater Phoenix metropolitan region.



Disparate Impact – A facially neutral policy or practice that has a disproportionately excluding or adverse effect on the minority riders or population of the service area.

Disparate Treatment – An action that results in a circumstance in which minority riders or populations are treated differently than others because of their race, color, national origin and/or income status.

Disproportionate Impact – A facially neutral policy or practice that has a disproportionately excluding or adverse effect on the low-income riders or population of the service area.

Express Transit Service – Includes Valley Metro designated express bus and RAPID bus services.

High-Capacity Transit (HCT) – A transit facility or service that operates at a consistent, high frequency of service.

Local Transit Service – Includes Light Rail Transit (LRT), and local fixed-route bus, local limited stop bus, LINK bus routes, and circulator/shuttle bus services.

Low-income Populations & Areas – Low-income populations are those persons with an income of 80 percent or less of the national per capita income. “Low-income Areas” are residential land use areas within census tracts where the average per capita income is 80 percent or less of the national per capita income.

Minority Populations & Areas – Minority populations include those persons who self-identify themselves as being one or more of the following ethnic groups: American Indian and Alaska Native, Asian, Black or African American, Hispanic or Latino, Native Hawaiian and Other Pacific Islander, as defined in the FTA Title VI Circular. “Minority Areas” are residential land use areas within Census tracts where the percentage of minority persons is higher than the Valley Metro service area average.

Route-Level – Refers to the geographic level of analysis at the route alignment level by which the performance of a transit route is measured for equity.

Route-Service Area – A three-quarter mile radial buffer on either side of a transit route’s alignment. A three-quarter mile radial buffer is used to ensure compliance with the American’s with Disabilities Act guidelines.

Service Level – Refers to the span of service (hours of operation), days of operation, trips, and headways (service frequencies) for a transit route or the regional transit system.



Service Area – According to 49 CFR 604.3, geographic service area means “the entire area in which a recipient is authorized to provide public transportation service under appropriate local, state, and Federal law.”

Service Span – The span of hours over which service is operated (e.g., 6 a.m. to 10 p.m.). The service span may vary by weekday, Saturday, or Sunday.

Sub-recipient – Valley Metro is a designated sub-recipient of federal funding for capital projects and service operations. Funding is passed onto Valley Metro from the designated recipient, the City of Phoenix.

System-wide – Refers to the geographic level of analysis by which the performance of the entire transit system is measured for equity.

Transit System – A coordinated urban network of public passenger modes including fixed-route local and express buses, light rail transit, bus rapid transit, and circulator bus services that provide mobility for people from one place to another.

Appendix C: Example Title VI Memorandum

Valley Metro

Title VI Assessment of Proposed Service Changes for July 2013

May 2013





1.0 Introduction

This memorandum defines the proposed general service modifications considered for several Valley Metro system routes, and considers whether the proposed service modifications qualify as "Major Service Changes" in accordance with Valley Metro's adopted service equity policies and Federal Title VI regulations. The memorandum includes an evaluation of potential effects to minority and/or low-income populations using or residing near the routes considered for service modifications. Maps displaying the percentages of minority and low-income populations surrounding each bus route considered for service modifications are provided at the back of this memorandum.

2.0 Summary of Service Modifications

Table 1 outlines the bus routes proposed for service changes, the percentage change, and whether the change qualifies as a Major Service Change. It is important to note that several routes included multiple service modifications, and the proposed modifications were therefore considered independently. Additional detail on the proposed service modifications is provided below.

Table 1. Summary of Service Modifications and Major Service Changes

Route	Percentage Change	Major Service Change	Disparate/Disproportionate Impact Determination
Route 56 (Route Reduction)	37.0%	Yes	Potential disparate impact; Offset by modifications to Route 108
Route 56 (Modified Alignment)	4.4%	No	None
Route 108 (Modified Alignment)	20.0%	No	None
Route 108 (Headway Expansion)	65.8%	Yes	None
Route 156 (Modified Alignment)	2.6%	No	None
Route 511 (Modified Alignment)	1.1%	No	None
Route 571 (Headway Expansion)	33.0%	Yes	None

3.0 General Service Modifications

The proposed general service modifications to the following routes are defined below. The service modifications considered include elimination of service along specific streets, extensions of routes to serve new geographic areas, and enhancements to service frequencies.

- Route 56 (Priest Drive) – Route Length Reduction/Modified Alignment (Segments to New Areas) – Two service changes are proposed for Route 56. The first would be the elimination of service between Priest Drive/Elliot Road and 48th Street/Chandler Boulevard (a reduction of approximately 4.11 route miles). The second change would be the extension of service from Priest Drive/Elliot Road to 48th Street/Ray

Road (via Priest Drive), and extension of service to McDowell Road/68th Street. These service changes will be evaluated separately.

- Route 108 (Elliot Road) – Route Length Expansion/Service Headway Expansion – Two service changes are proposed for Route 108. The route's western end is proposed to be extended by approximately 5.25 miles to 48th Street/Frye Road, with designated peak hour trips to the 40th Street/Pecos Road Park-and-Ride. In addition to the extension of the route, the cities of Mesa, Gilbert, and Chandler are planning to increase service operations along Route 108 to match the operating characteristics of the service in Tempe. These service changes will be evaluated separately.
- Route 156 (Chandler Boulevard) – Route Length Expansion – The western end of the route is proposed to be extended by approximately 0.5 miles to the intersection of 48th Street/Chandler Boulevard.
- Route 511 (Tempe/Scottsdale Airpark Express) – Modified Alignment – This express route is modified to end at the McClintock/Apache Boulevard Park-and-Ride to connect passengers with local bus and light rail services.
- Route 571 (Grand Avenue Express) – Service Headway Expansion – Two additional service runs are proposed, one morning and one afternoon peak period trip, increasing the total number of trips from six to eight.

4.0 Determination of Major Service Changes

In accordance with Valley Metro's policy for determining whether the proposed service modifications to the aforementioned routes qualify as Major Service Changes, each of the route modifications were evaluated independently. In order to be considered a Major Service Change, the route length, alignment, or the route's operating characteristics must exceed a cumulative change threshold of 25%.

- Route 56 (Priest Drive) – Route Length Reduction – The proposed reduction in route length represents a loss of 4.11 route miles, amounting to a 37% reduction of the route's current total length. This percentage change is above the 25% threshold. Additionally, the elimination of service between the intersections of Priest Drive/Elliot Road and 48th Street/Chandler Boulevard would require passengers to transfer to a different route to connect with destinations currently served between these intersections along Elliot Road and 48th Street. No frequency or service span changes are planned. This service modification is therefore considered a Major Service Change.
- Route 56 (Priest Drive) – Modified Alignment (Segments to New Areas) – While a portion (described above) of Route 56 would be eliminated, the northern and southern ends of the route would be extended to serve new areas. The northern terminus would be extended from Van Buren Street/Priest Drive to McDowell Road/68th Street (approximately 1.9 miles), and the southern terminus at Priest Drive/Elliot Road would be extended to 48th Street/Ray Road (via Priest Drive) (approximately 3 miles). No frequency or service span changes are planned. These

route extensions amount to a 4.4% gain in route length (when compared to the existing route length). Cumulatively, when considering the eliminated segment and the new areas served by extension of the Route 56, the change amounts to a difference of -10.1% in total route length (or a loss of only 1.4 miles in route length) when compared to the existing route alignment and length. The modified alignment of Route 56 with service to new areas is not a Major Service Change.

- Route 108 (Elliot Road) – Route Length Expansion – The proposed extension of Route 108 would result in a net gain of 4.7 route miles, amounting to a 20% increase in total route length above the route's current alignment. This extension would operate along the existing alignment of the Route 56 proposed for elimination, helping to offset the loss of service along 48th Street by the restructuring of Route 56. While passengers from the Route 56 would have to transfer to the Route 108 at Priest Drive/Elliot Road (or at 48th Street/Ray Road, assuming the Route 56 alignment is modified), they would still be able to reach destinations along the Elliot Road and 48th Street corridors west of Priest Drive currently served by the Route 56. The proposed service modification is not a Major Service Change.
- Route 108 (Elliot Road) – Service Headway Expansion – In addition to the planned extension of the route, changes are also planned for the service frequency of Route 108. Currently the route makes 13 trips through the cities of Tempe, Chandler, Mesa, and the Town of Gilbert. The proposed frequency changes would result in the service operating in Mesa, Chandler, and Gilbert matching the service in Tempe, where the route currently operates at 30-minute headways (unlike Mesa, Chandler, and Gilbert, where the route operates at 60 minute headways currently) making 38 total trips. This change amounts to adding 25 additional daily trips. This amounts to an increase of 259,055.73 additional annual revenue miles. In total, the additional 25 trips amounts to an increase in service of approximately 65.8%. Therefore, the proposed service modification is a Major Service Change.
- Route 156 (Chandler Boulevard) – Route Length Expansion – The proposed route modification would extend the western end point of Route 156 from 54th Street to 48th Street. This amounts to a route extension of approximately 0.5 miles. No frequency or service span changes are planned. This service modification amounts to a change of approximately 2.6% increase in route length. Therefore, the proposed service modification is not considered a Major Service Change.
- Route 511 (Tempe/Scottsdale Airpark Express) – Modified Alignment – The route is proposed to be shorted by 1.1%, simplifying the turnaround at the Scottsdale Airpark to link with a future circulator service.
- Route 571 (Grand Avenue Express) – Service Headway Expansion – This route currently makes three morning and three afternoon peak period trips. The addition of two full service runs (one during the morning and one during the afternoon peak periods) would increase the total number of services runs from six to eight. Cumulatively, the addition of two trips along a route that currently makes six total trips (morning and afternoon) would result in a 33% increase in the total number of trips. This service modification would be a major service change.



Table 2 summarizes the service modifications deemed to qualify as Major Service Changes.

Table 2. Summary of Service Modifications and Major Service Changes

Route	Percentage Change	Major Service Change
Route 56 (Route Reduction)	37.0%	Yes
Route 56 (Modified Alignment)	4.4%	No
Route 108 (Modified Alignment)	20.0%	No
Route 108 (Headway Expansion)	65.8%	Yes
Route 156 (Modified Alignment)	2.6%	No
Route 511 (Modified Alignment)	1.1%	No
Route 571 (Headway Expansion)	33.0%	Yes

5.0 Route Demographic Profile Information

A review of available demographic data was conducted to evaluate the current ridership socioeconomic characteristics of the existing routes, and/or the population and income characteristics of populations residing in areas where new service would be provided. The evaluation was based on Valley Metro's policies for service changes. For service changes affecting route lengths or headways, a review of available origin/destination survey data was conducted. For extensions of routes to new geographic areas where service is currently not provided, 2010 Census data were used to profile the demographic characteristics of the new service area.

- Route 56 (Priest Drive) – Route Length Reduction – According to data from the origin/destination survey, 59.2% of the route's ridership are minority passengers. The data suggest that approximately 29.9% of current passengers are low-income.
- Route 56 (Priest Drive) - Modified Alignment (Segments to New Areas) – Census demographic data suggests that the extensions north and south along Priest Drive to McDowell Road/68th Street and 48th Street/Ray Road would serve areas below the Valley Metro service area threshold for being considered minority or low-income areas.
- Route 108 (Elliot Road) – Route Length Expansion – According to Census demographic data, the proposed extension of Route 108 would serve a geographic area along Elliot Road and 48th Street in southeast Phoenix that are below the Valley Metro service area thresholds for being considered minority or low-income areas.
- Route 108 (Elliot Road) – Service Headway Expansion - According to the most recent Transit On-Board Origin/Destination Survey, 57.5% of the Route 108 riders are minorities, and 29.8% are low-income riders, with incomes below \$25,000, the threshold used to characterize low-income populations.
- Route 156 (Chandler Boulevard) – Route Length Expansion – According to the Census demographic data, the proposed extension of Route 156 would serve a

geographic area along Chandler Boulevard that is below the Valley Metro service area thresholds for being considered minority or low-income areas.

- Route 511 (Grand Avenue Express) – Service Headway Expansion – According to the origin/destination survey data, approximately 26.3% of passengers using Route 511 are minorities. Approximately 0.0% of existing passengers self-identified themselves as having incomes below \$25,000.
- Route 571 (Grand Avenue Express) – Service Headway Expansion – According to the origin/destination survey data, approximately 29.6% of passengers using Route 571 are minorities. Approximately 10.5% of existing passengers self-identified themselves as having incomes below \$25,000.

Table 3 below provides a summary of 2010 decennial Census data representing the minority and impoverished populations residing in census tracts that are directly affected by each of the proposed service modifications. The table is split to show the minority and low-income percentages first along the existing routes, and then along the portions of each route slated to change.

Table 3. Census Demographic Data for Current and Proposed Route Alignments

Current Route Alignment Demographics (Census)	Minority	Low-Income
Route 56	45.6%	16.5%
Route 108	28.0%	7.5%
Route 156	39.7%	8.7%
Route 511	28.7%	15.6%
Route 571	55.7%	23.9%
Service Modification Demographics	Minority	Low-Income
Route 56 (Route Length Reduction) (O/D Survey ¹)	59.1%	29.9%
Route 56 (Modified Alignment) (Census)	38.8%	11.0%
Route 108 (Route Length Expansion) (Census)	35.8%	8.5%
Route 108 (Service Headway Expansion) ² (O/D Survey ¹)	57.5%	29.8%
Route 156 (Route Length Expansion) (Census)	41.4%	7.2%
Route 511 (Modified Alignment) (O/D Survey ¹)	26.3%	0.0%
Route 571 (Service Headway Expansion) ² (O/D Survey ¹)	29.6%	10.5%
Valley Metro Service Area (Census)	45.6%	15.8%
Valley Metro System-Wide Percentage (O/D Survey ¹)	56.2%	50.6%

¹ The most recent Transit On-Board Origin/Destination Survey was conducted at the 95% confidence level, with a margin of error of +/- 1%. Refer to Appendix B of the O/D Survey.

² As service frequency changes, the demographic characteristics of Routes 108 and 571 do not change from their current characteristics.

6.0 Public Outreach

The City of Tempe held two public meetings on February 6th and 9th 2013 to seek input on proposed changes to routes 56 and 108.



The City of Phoenix held several public meetings on March 12th, 13th, 14th, 18th, and 20th 2013 to seek input on proposed changes to routes 56, 108, 156, and 571. The City of Phoenix also held a public hearing on these proposed changes on April 8, 2013.

Valley Metro will hold a public hearing on May 29, 2013 in the Town of Surprise to discuss the proposed changes to Route 571.

7.0 Conclusions

Of the proposed service modifications outlined above that qualify as "Major Service Changes", only the Route 56 has the potential to result in a disparate and disproportionate impact on minority and low-income populations. Currently, 59.1% of Route 56 riders are minorities, 2.9 percentage points above the Valley Metro system-wide percentage of minority users (56.2%) based on the Transit On-Board Survey (2010-2011). Low-income populations account for 29.9% of the route's ridership, 20.7 percentage points below the Valley Metro system-wide percentage of low-income users (50.6%), based on the Transit On-Board Survey. The elimination and re-alignment of service along portions of the Route 56 would result in the need for current Route 56 passengers to transfer between bus routes to access destinations along Elliot Road and 48th Street. All passengers would still have access to destinations served by the current alignment of Route 56 if the Route 108 is modified to serve 48th Street and the 40th Street/Pecos Road park-and-ride (select peak-period trips only). Therefore, the potential disparate impact to Route 56 is offset by the modification of Route 108 as described above. None of the proposed service changes, regardless of whether they are "Major Service Changes" or not, are anticipated to have a disproportionate impact to low-income populations.

In the case of the frequency enhancements to Route 108 and Route 571, the enhancements to service are anticipated to benefit all communities. Therefore, the proposed change in frequency will not result in a disparate or disproportionate impact to minority or low-income population.

Table 4 summarizes the analysis results by route and the determination of whether a disparate or disproportionate impact would result as an outcome of the changes as proposed. It is important to remember that the service modifications proposed are either changes to the route alignments and/or route lengths, or are service frequency changes. The type of service modification determines the data to be used for analyzing whether the proposed change will result in a disparate or disproportionate impact. Changes to existing route alignments or service frequencies are evaluated using origin/destination survey data, while extensions of bus routes to serve new geographic areas are evaluated using Census data. The minority and low-income percentages shown are based on the type of data used to evaluate the proposed service change for equity implications. Each of the routes has been identified as to whether the proposed service modification would qualify as a "Major Service Change". Because there were multiple changes proposed for both the Route 56 and Route 108, these changes were



considered separately. The determination of whether an adverse, disparate, or disproportionate impact occurs is based on the following:

1. The proposed service modification qualifies as a Major Service Change. If the service modification is not deemed a "Major Service Change", it is determined that the proposed change would not have an adverse, disparate, or disproportionate impact to any community.
2. The percentage of minority or low-income populations is above the Valley Metro Service Area threshold (shown at the bottom of the table). The percentages shown for minority and low-income populations reflect the population percentages for the portion of the route that is changing, or type of service modification. For example, the minority percentage for the route length reduction proposed for Route 56 reflects the percentage of minorities currently using the route based on the origin/destination survey data.
3. Improvements to service (e.g. extensions of routes to serve new areas or frequency improvements) that provide a benefit to all users do not constitute an adverse, disparate, or disproportionate impact.

Table 4. Summary of Service Modifications and Equity Impact Assessment

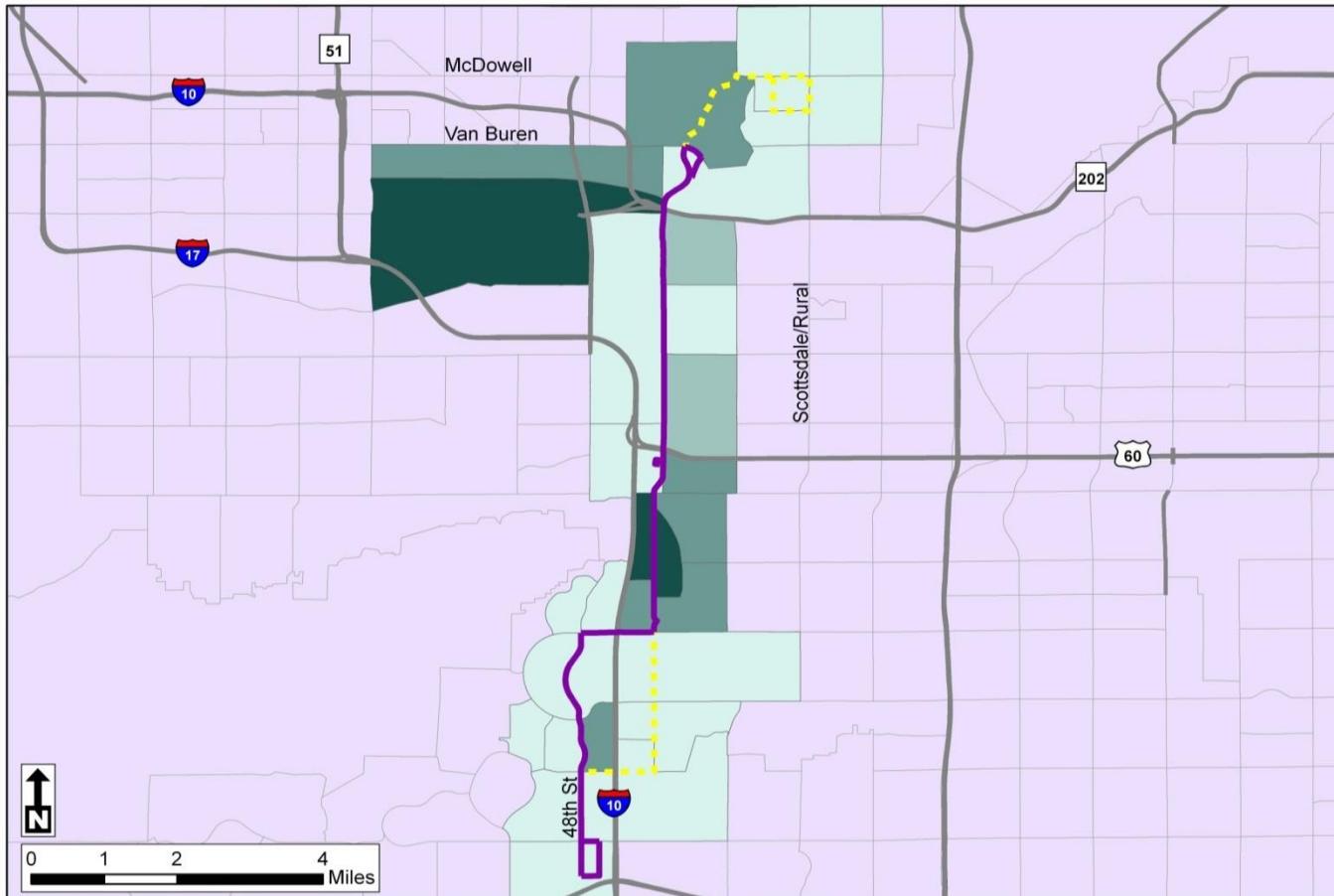
Route	Major Service Change	Type of Change	Minority Percentage	Low-Income Percentage	Disparate/Disproportionate Impact Determination
Route 56	Yes	Length Reduction ¹	59.1%	29.9%	Potential disparate impact; Offset by modifications to Route 108
Route 56	No	Modified Alignment ²	38.8%	11.0%	None
Route 108	No	Length Expansion ²	35.8%	8.5%	None
Route 108	Yes	Headway Expansion ¹	57.5%	29.8%	None
Route 156	No	Length Expansion ²	41.4%	7.2%	None
Route 511	No	Modified Alignment ²	26.3%	0.0%	None
Route 571	Yes	Headway Expansion ¹	29.6%	10.5%	None
Valley Metro Service Area	N/A		45.6%	15.8%	N/A
Valley Metro System-Wide Percentage (O/D Survey)			56.2%	50.6%	

¹ Transit On-Board Origin/Destination Survey Data, 2010-2011

² 2010 Census Data, U.S. Census Bureau

PROPOSED SERVICE CHANGES AND DEMOGRAPHIC MAPS

Route 56 - Proposed Service Modification & Minority Percentage



Legend

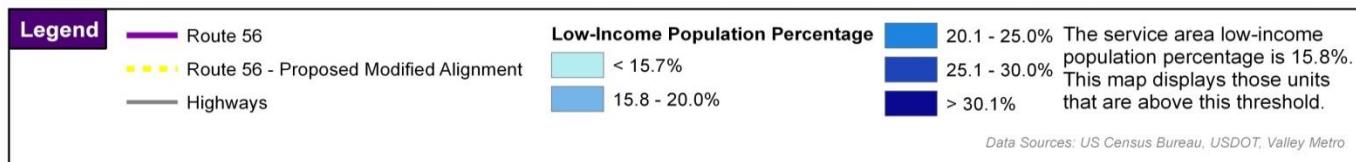
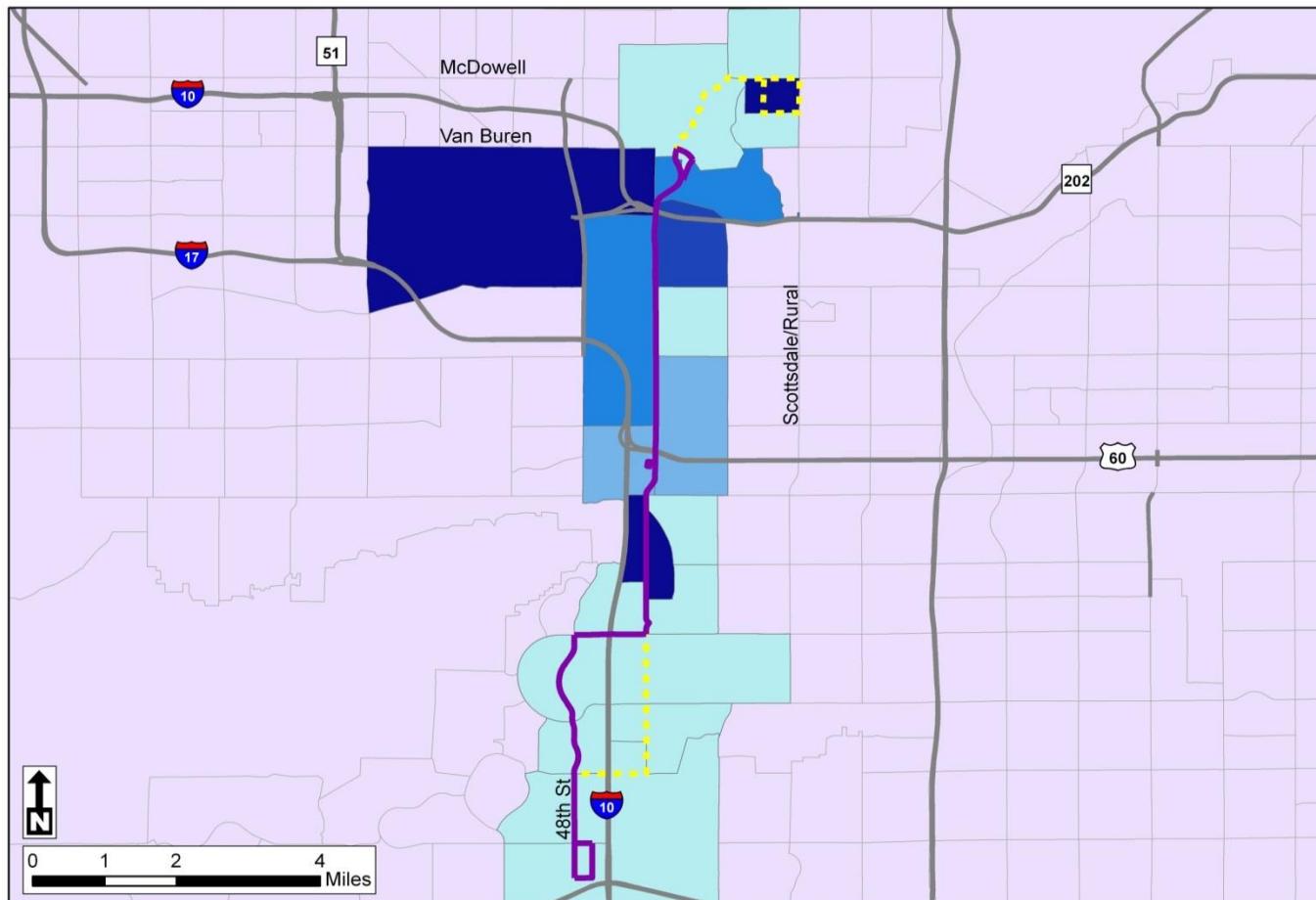
- Route 56
- Route 56 - Proposed Modified Alignment
- Highways

Minority Population Percentage
< 45.5%
45.6 - 50.0%
50.1 - 65.0%
65.1 - 80.0%
> 80.1%

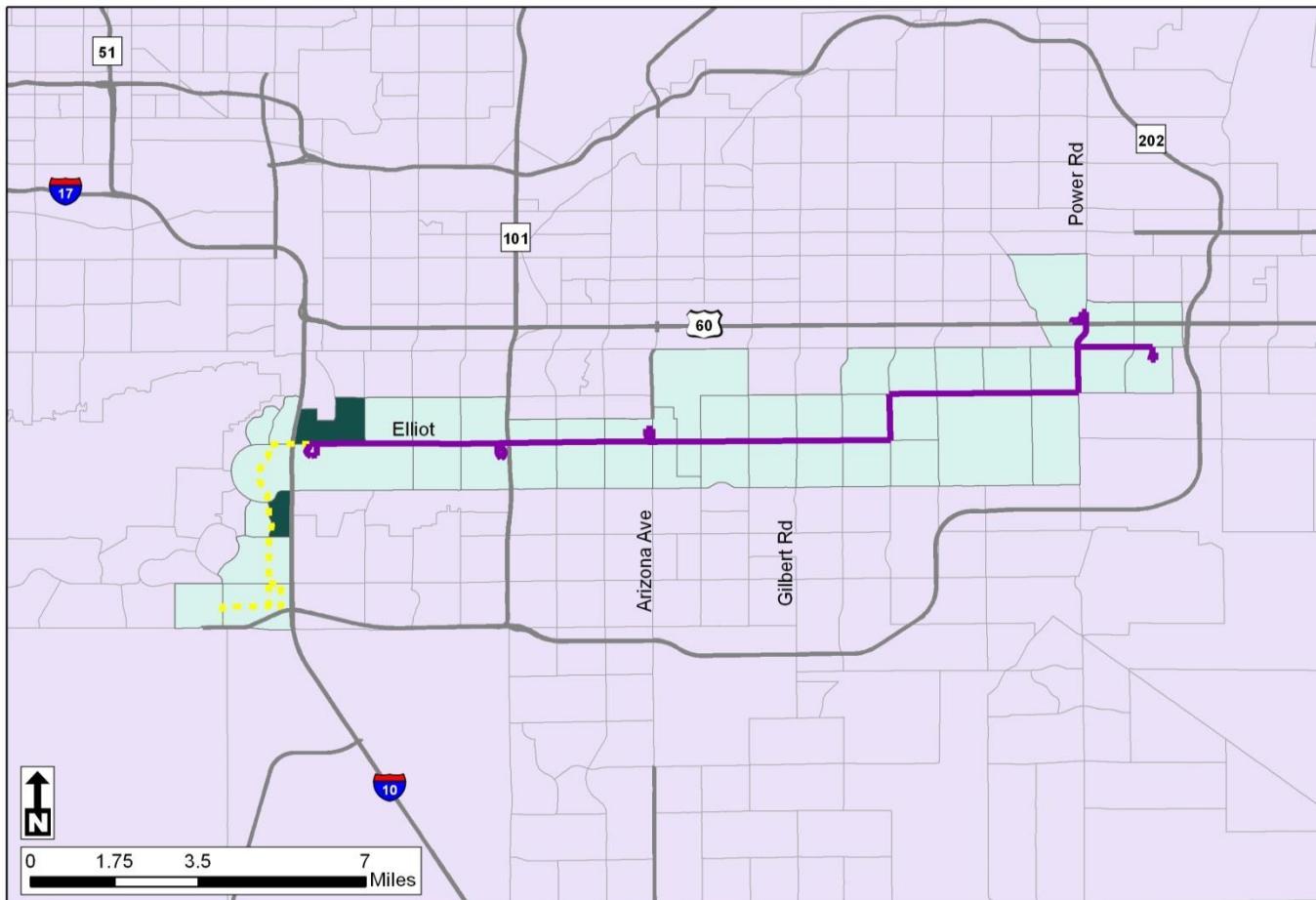
The service area minority population percentage is 45.6%. This map displays those units that are above this threshold.

Data Sources: US Census Bureau, USDOT, Valley Metro

Route 56 - Proposed Service Modification & Low-Income Percentage



Route 108 - Proposed Service Modification & Minority Percentage



Legend

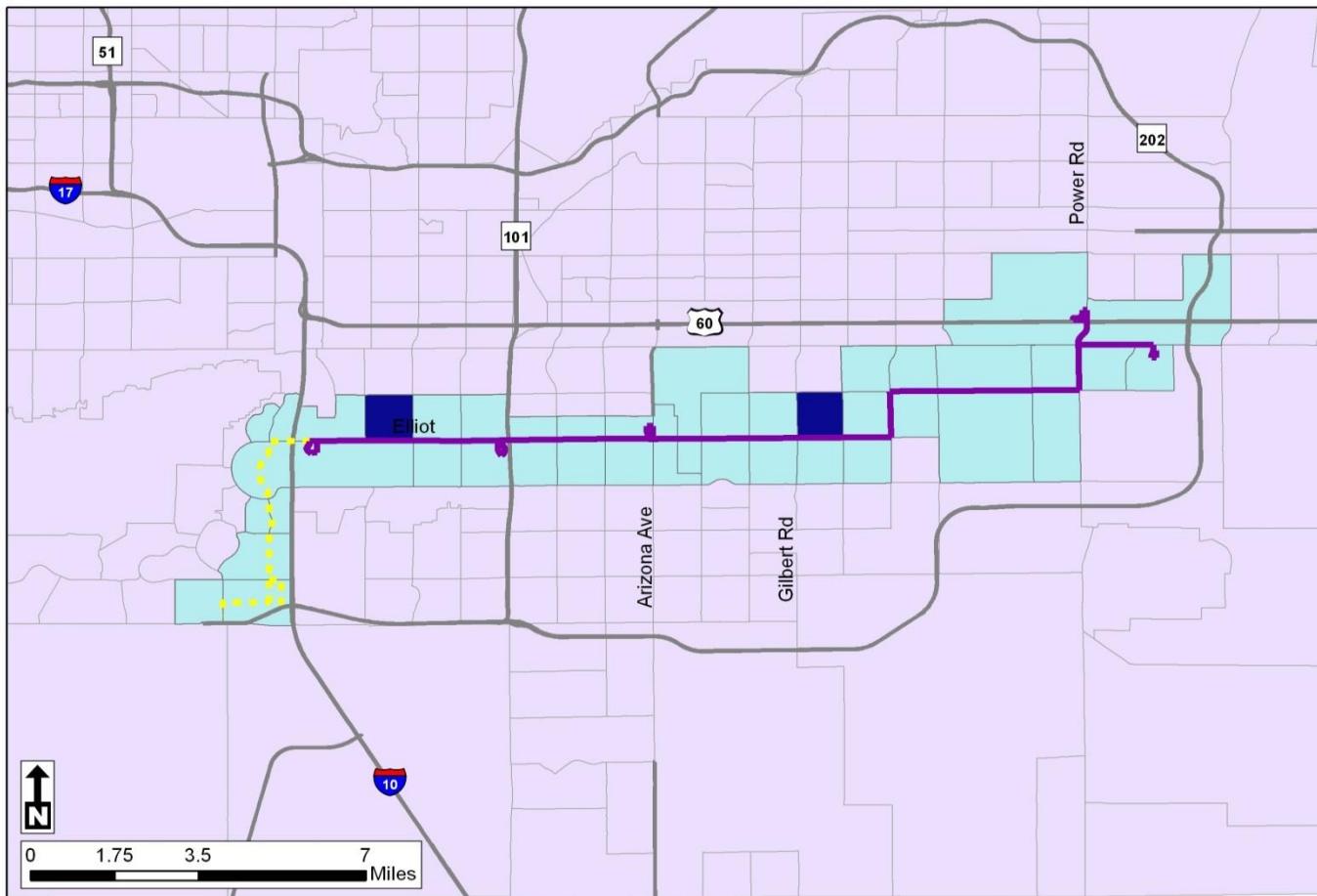
- Route 108
- Route 108 - Proposed Modified Alignment
- Highways

- Minority Population Percentage
- | Color | Minority Population Percentage Range |
|--------------|--------------------------------------|
| Light Green | < 45.5% |
| Medium Green | 45.6 - 50.0% |
| Dark Green | >50.1% |

The service area minority population percentage is 45.6%. This map displays those units that are above this threshold.

Data Sources: US Census Bureau, USDOT, Valley Metro

Route 108 - Proposed Service Modification & Low-Income Percentage



Legend

— Route 108

··· Route 108 - Proposed Modified Alignment

— Highways

Low-Income Population Percentage

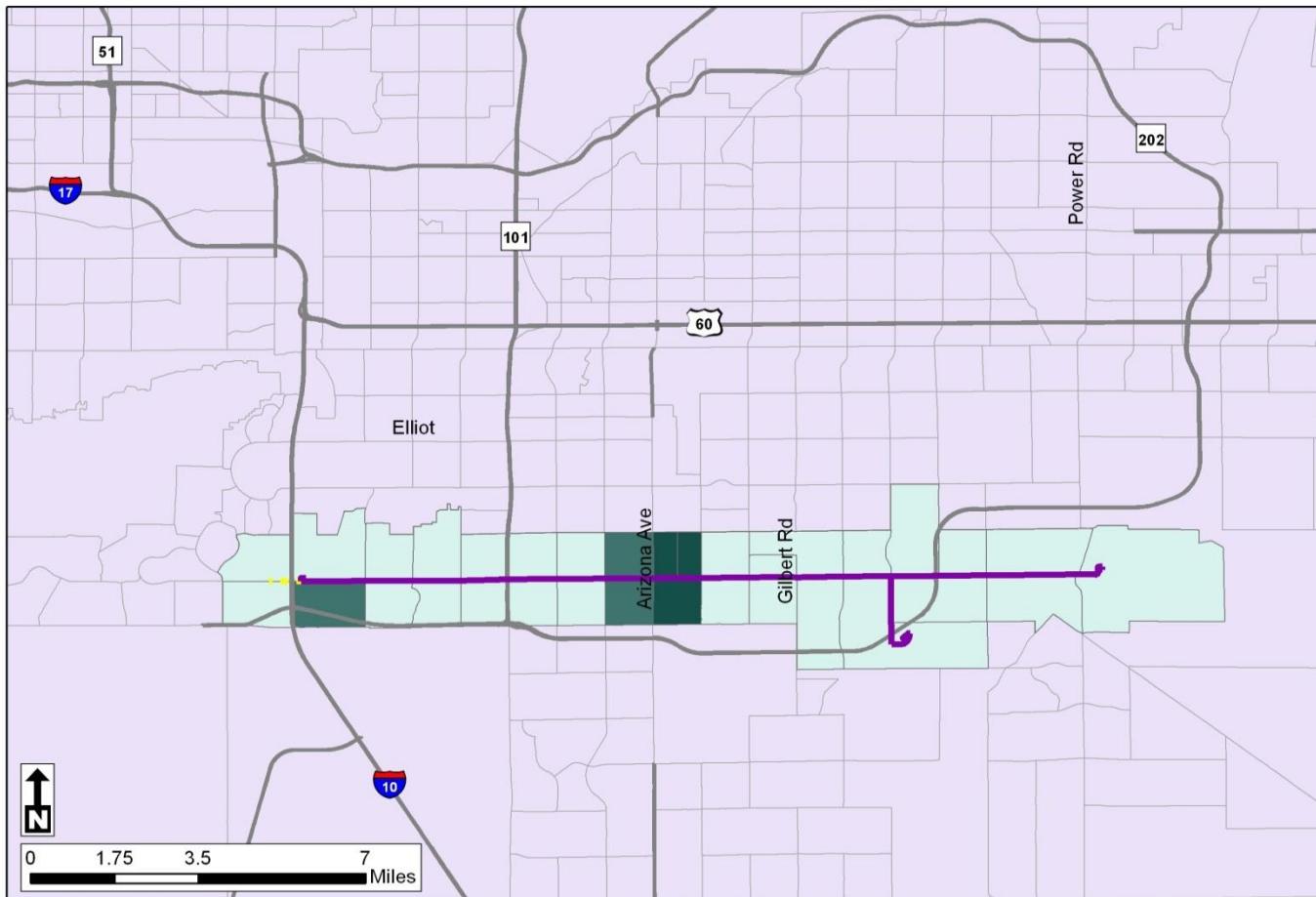
< 15.7%

> 15.8%

The service area low-income population percentage is 15.8%. This map displays those units that are above this threshold.

Data Sources: US Census Bureau, USDOT, Valley Metro

Route 156 - Proposed Service Modification & Minority Percentage



Legend

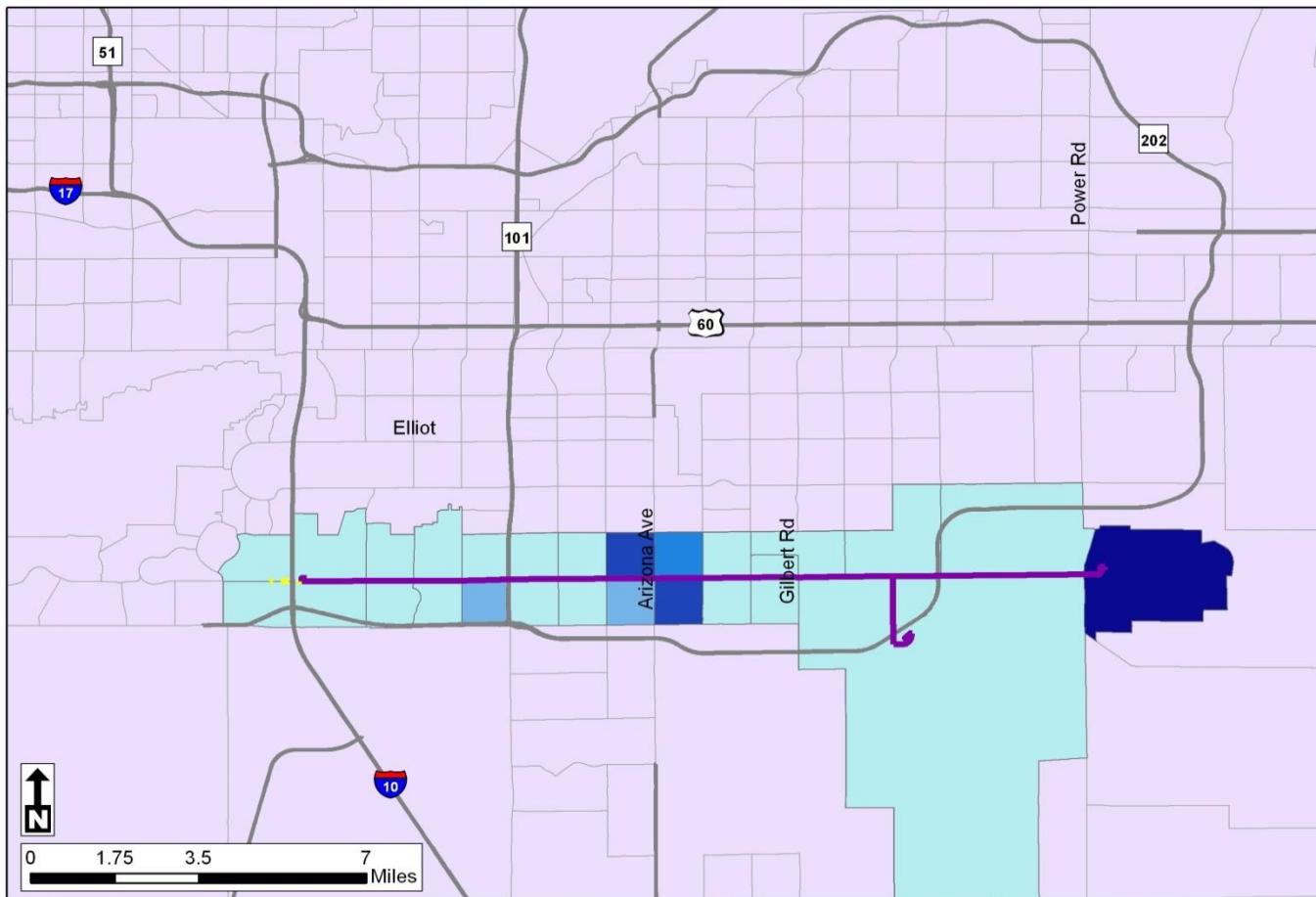
- Route 156
- Route 156 - Proposed Modified Alignment
- Highways

Minority Population Percentage	
< 45.5%	50.1 - 60.0%
45.6 - 50.0%	60.1 - 70.0%
	> 70.1%

The service area minority population percentage is 45.6%. This map displays those units that are above this threshold.

Data Sources: US Census Bureau, USDOT, Valley Metro

Route 156 - Proposed Service Modification & Low-Income Percentage



Legend

- Route 156
- Route 156 - Proposed Modified Alignment
- Highways

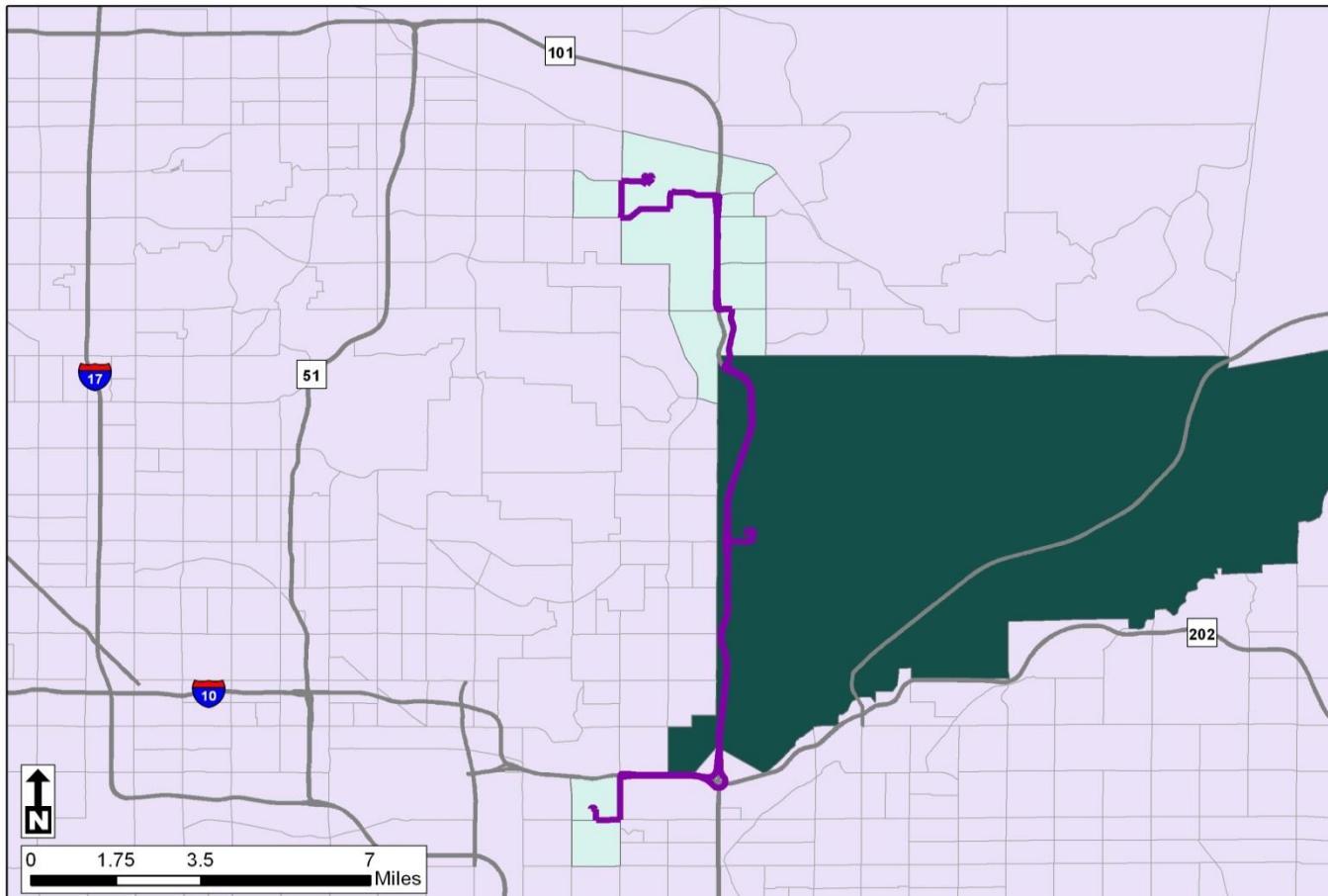
Low-Income Population Percentage

< 15.7%	20.1 - 25.0%
15.8 - 20.0%	25.1 - 30.0%
	> 30.1%

The service area low-income population percentage is 15.8%. This map displays those units that are above this threshold.

Data Sources: US Census Bureau, USDOT, Valley Metro

Route 511 - Proposed Service Modification & Minority Percentage



Legend

Route 511
Highways

Minority Population Percentage

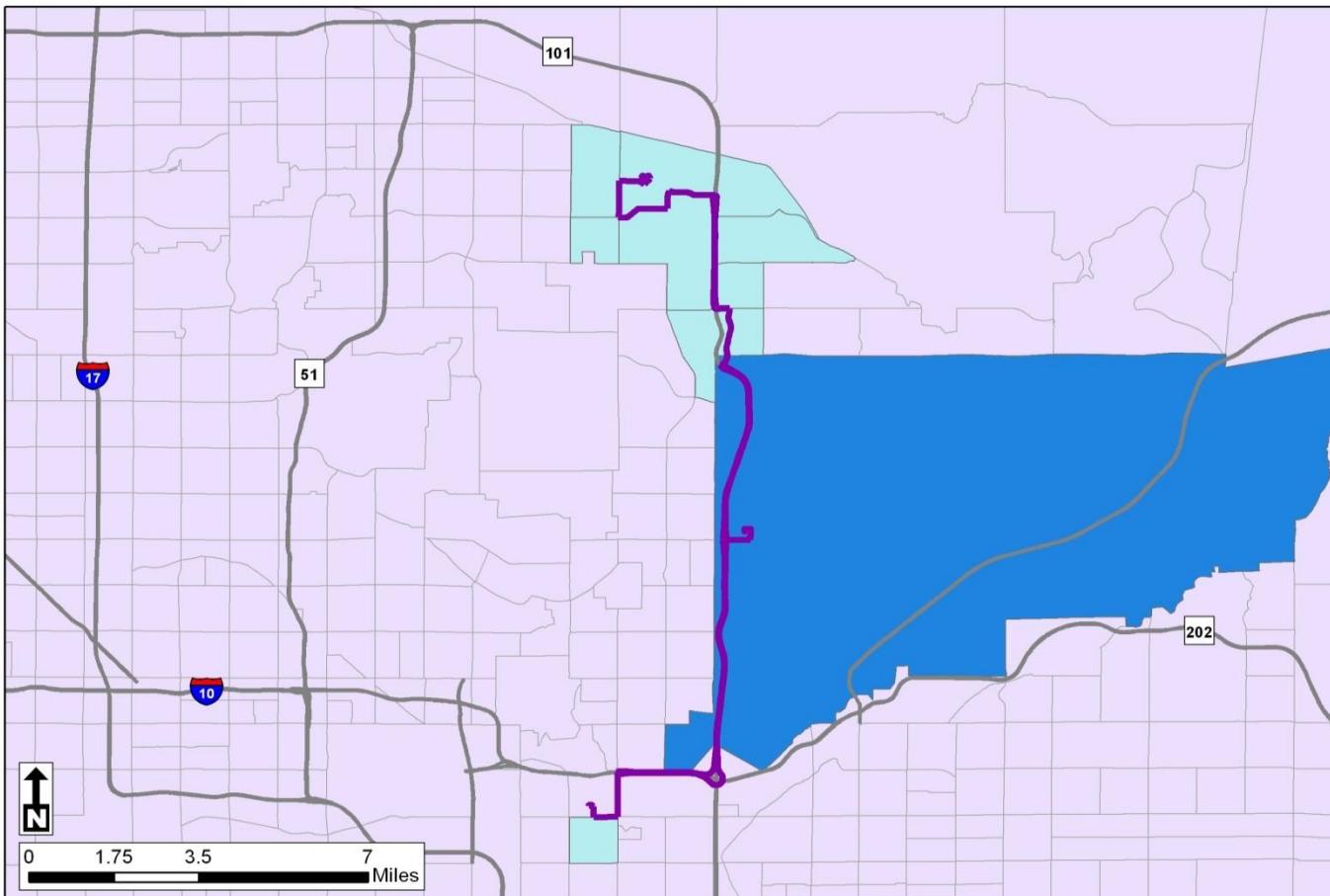
- < 45.5%
- 45.6 - 50.0%

- 50.1 - 60.0%
- 60.1 - 70.0%
- > 70.1%

The service area minority population percentage is 45.6%. This map displays those units that are above this threshold.

Data Sources: US Census Bureau, USDOT, Valley Metro

Route 511 - Proposed Service Modification & Low-Income Percentage



Legend

Route 511

Highways

Low-Income Population Percentage

< 15.7%

15.8 - 20.0%

20.1 - 25.0%

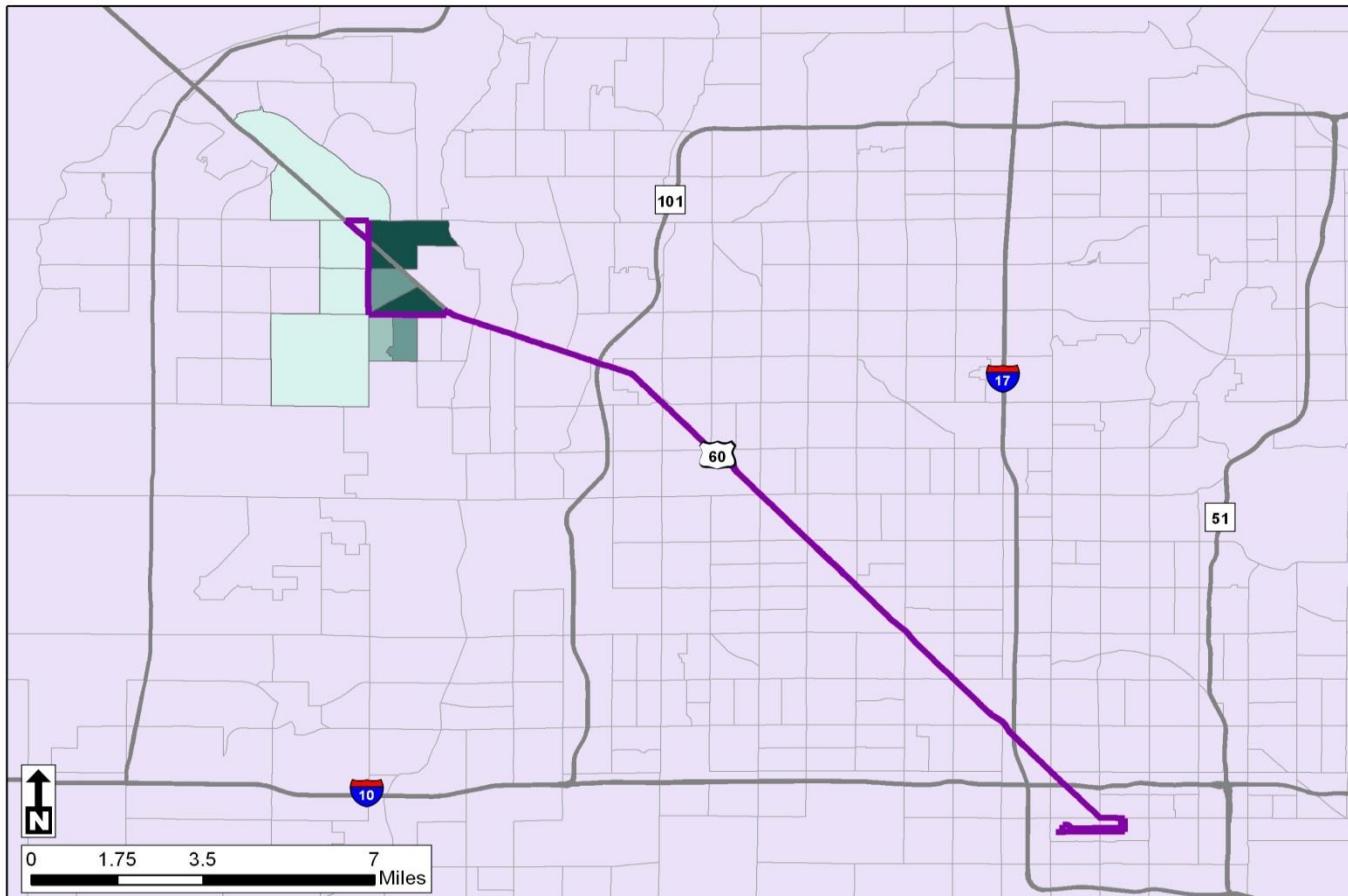
25.1 - 30.0%

> 30.1%

The service area low-income population percentage is 15.8%. This map displays those units that are above this threshold.

Data Sources: US Census Bureau, USDOT, Valley Metro

Route 571 - Proposed Service Modification & Minority Percentage



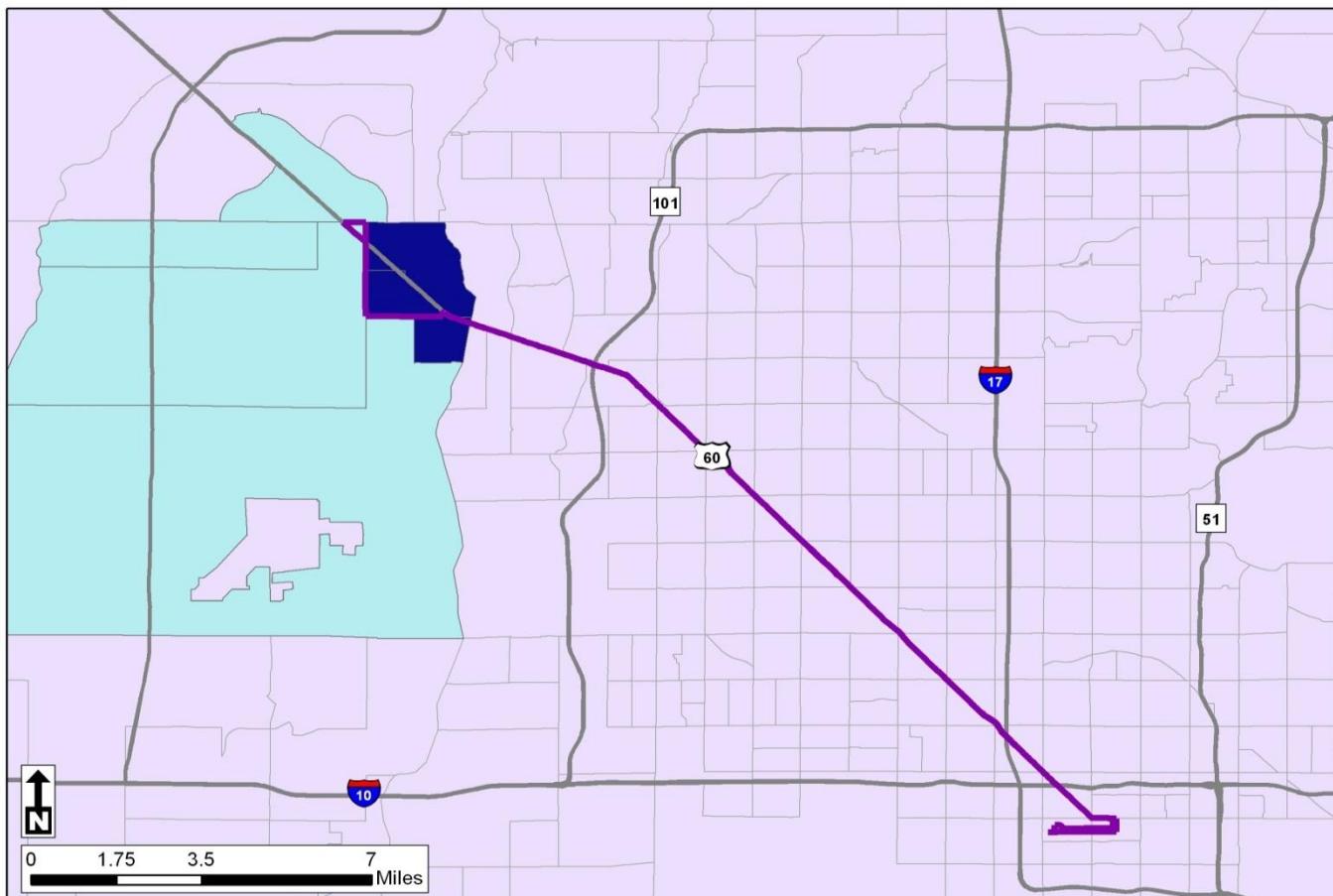
Legend

Route 571	Minority Population Percentage
Highways	
	< 45.5%
	45.6 - 50.0%
	50.1 - 60.0%
	60.1 - 70.0%
	> 70.1%

The service area minority population percentage is 45.6%. This map displays those units that are above this threshold.

Data Sources: US Census Bureau, USDOT, Valley Metro

Route 571 - Proposed Service Modification & Low-Income Percentage



Legend

Route 571	Low-Income Population Percentage	20.1 - 25.0%
Highways	< 15.7%	Dark Blue: > 25.1%
	15.8 - 20.0%	Medium Blue: 20.1 - 25.0%
		Cyan: 15.8 - 20.0%

The service area low-income population percentage is 15.8%. This map displays those units that are above this threshold.

Data Sources: US Census Bureau, USDOT, Valley Metro

VALLEY METRO
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