

Attachment B

Title VI Service Equity Analysis

City of Phoenix July 2025 Service Change



City of Phoenix Public Transit Department



INTRODUCTION

Title VI of the Civil Rights Acts 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 process will be used 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.

The Phoenix Public Transit Department (PTD) manages modification to the region's transit network through service changes. Bus service changes are coordinated regionally and occur in April and October each year. Service modifications that are considered major service changes require service equity analysis to be conducted and considered by the Phoenix City Council before approval.

SERVICE EQUITY ANALYSIS POLICIES

This section describes Phoenix's Title VI Service Equity analysis policy, definition, and data analysis procedures. The City of Phoenix Public Transit Title VI Program is posted at <https://www.phoenix.gov/publictransit/title-vi-notice>

Major Service Change

The Major Service Change and Service Equity Policy developed jointly by both the City of Phoenix and Valley Metro defines a major service change as follows:

- Adding or eliminating an entire route
- Expanding or reducing existing revenue miles on a route by more than 25% on Weekday, Saturday, or Sunday
- Expanding or reducing number of route directional miles more than 25%
- A change resulting in a 25% or greater variance from the existing route alignment¹²

¹ A change of 25 percent in weekly route revenue miles and/or route directional miles is the 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 percent or more is determined. Valley Metro has adopted the same thresholds.

² A change of 25 percent in Express/RAPID service route revenue miles and/or route directional miles does not apply to the portion of the routes that are on the freeway/highway because there are no stops or service. Only the portion of the routes that occurs on surface streets applies to the 25 percent threshold for a major service change.



All service change proposals that are determined to be a major service change will undergo Service Equity Analysis.

Adverse Effect

An adverse effect is defined as a reduction or addition in service that includes but is not limited to: changes in span of service, changes to frequency of service; the addition of new routes; the elimination of routes or route segments; or the modification of routes or route segments.

Disparate Impact

When the difference in adverse impacts between minority ridership³ and/or population⁴ and non-minority ridership and/or population on the affected service is equal to or greater than **five percent** compared to the transit system's minority and non-minority ridership⁵ and/or population, there would be a disparate impact.

Disproportionate Burden

When the difference in adverse impacts between low-income ridership³ and/or population⁴ and non-low-income ridership and/or population on an affected service is equal to or greater than **five percent** compared to the transit system's low-income and non-low-income ridership⁵ and/or population, there would be a disproportionate burden impact.

Should Valley Metro or the City of Phoenix find any disparate impact or disproportionate burden during the service equity analysis, steps will be taken to avoid, minimize, or mitigate the impacts.

Equity Analysis Data Sources

The following table identifies the data source for the service equity analysis depending on the type of service change being proposed.

³ The determination of the transit system and an affected route's minority and/or low-income ridership will be derived from the most recently completed, statistically valid regional on-board origin/destination survey.

⁴ The determination of the potential ridership for service expansion or the addition of a new service will be derived from the most recent American Community Survey data for the census tract or census block group surrounding the expanded route or new route.

⁵ The transit system's ridership is separated into Local Bus Service (local fixed bus routes, key local service, light rail, streetcar and circulator bus service) and Express/RAPID Service (commuter bus service). The affected service would be compared to the overall transit system's ridership by Local Bus Service or Express/RAPID Bus Service.



Category	Action	Sub Action	Evaluation Method
Service Level ⁶ Change	Reduction	Not Applicable	O/D ⁷ Data
	Expansion	Not Applicable	
Route Length	Reduction	Not Applicable	O/D Data
	Expansion	Not Applicable	Census Data
Route Alignment Change	Reduction	Not Applicable	O/D Data
	Expansion	Not Applicable	O/D Data and Census Data
	Modification	Eliminated Segment(s)	O/D Data and Census Data
		Segment(s) to New Areas	Census Data
	Elimination	Not Applicable	O/D Data
New Route	New Route	Not Applicable	Census Data
Fare Media Access	Modifications	Not Applicable	O/D Data Census Data

Transit System Minority/ Low-Income Population Benchmarks

Service Equity Analysis Service Area - 2022 ACS Data

Service Type	Minority	Low-Income (150%)
Local Bus	53%	22%
Circulator	58%	26%
Express/RAPID Bus	49%	20%

Service Equity Analysis - 2023 O/D Data

Service Type	Minority	Low-Income
Local Bus	65%	51%
Circulator	72%	63%
Express/RAPID Bus	38%	19%

⁶ Service Level- Refers to the span of service, days of operations, trips and headways (service frequencies) for a transit route or the regional transit system.

⁷ Origin/Destination Survey Data



Description of Proposed July 2025 Changes

The Public Transit Department (PTD) is proposing to modify the local bus service on Central Avenue in connection with the upcoming five-mile South Central Light Rail extension on Central Avenue from downtown Phoenix to Baseline Road. The proposed service change on Central Avenue would combine Route 0 and Route 0A back into a single bus route. In addition, service frequency on the combined route would be modified in anticipation of riders shifting transit modes to use Light Rail for travel from South Phoenix.

Current Route Description

Route 0 (Central Ave): Route 0 operates on Central Avenue between Sunnyslope Transit Center (to the north) and downtown Phoenix at Van Buren Street (to the south).

Route 0A (South Central Shuttle): Route 0A operates on Central Avenue between Van Buren Street (to the north) and Dobbins Road (to the south).

Proposed Service Changes

Route 0 (Central Ave): Combine route with Route 0A and modify the weekday route frequency from every 20 minutes to every 30 minutes. The combined route eliminates duplicative service with the introduction of light rail service to South Phoenix.

Route 0A (South Central Shuttle): Combine route with Route 0 and modify the weekday route frequency from every 15 minutes to every 30 minutes. The combined route eliminates duplicative service with the introduction of light rail service to South Phoenix.

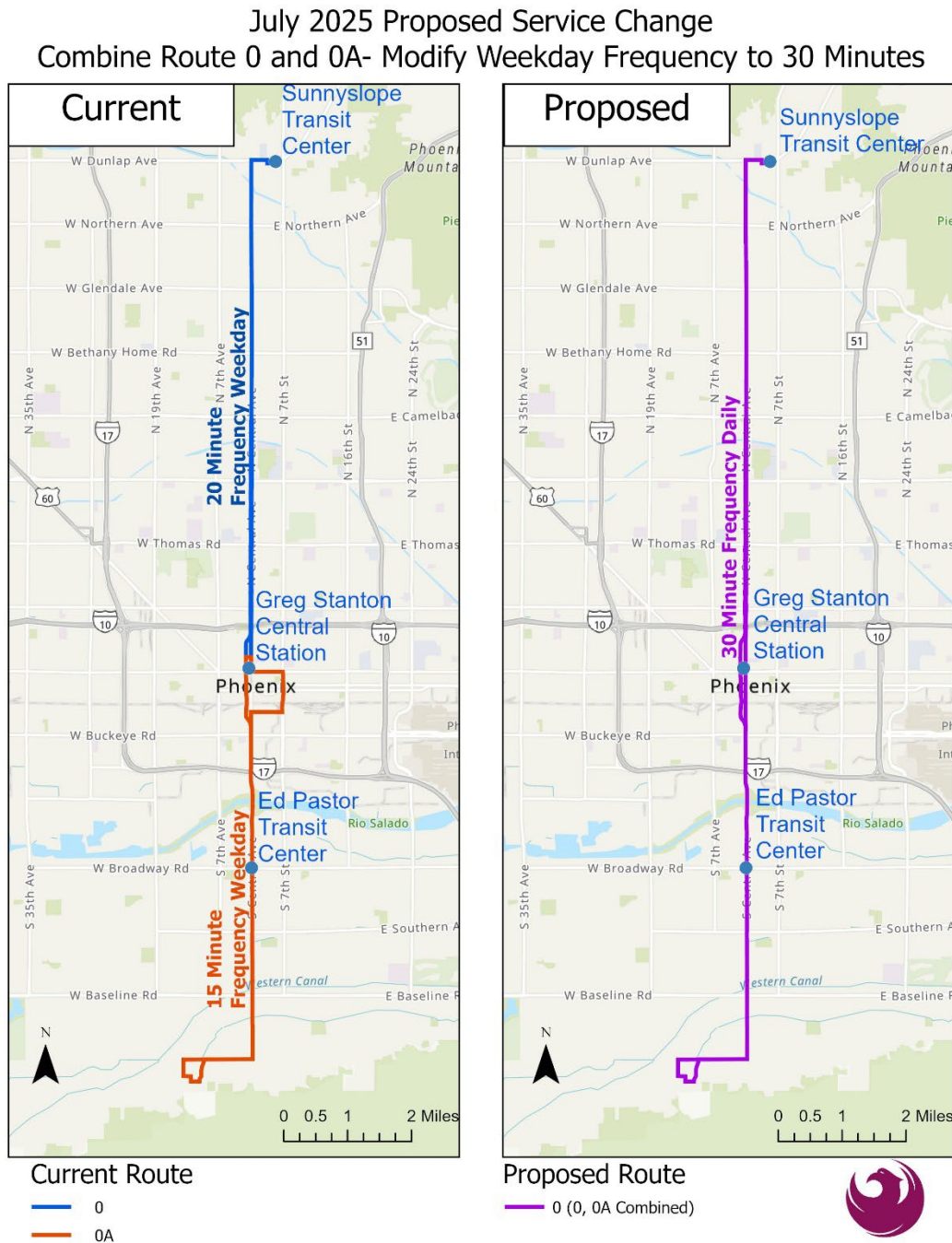
Prior to October 2020, the local bus service on Central Avenue was served by a single Route 0 that operated between Sunnyslope Transit Center and Dobbins Road seven days a week.

In October 2020, the local bus service on Central Avenue was split into two routes in coordination with light rail construction activities on Central Avenue. The Route 0 segment north of Van Buren Street continued to operate as Route 0 and maintained its pre-light rail construction frequency of every 20 minutes. The Route 0 segment south of Van Buren Street was split into a new Route 0A that was scheduled to run every 15 minutes on weekdays between Van Buren Street and Baseline Road. The Route 0A segment south of Baseline Road is scheduled to run every 30 minutes.

The proposed change would once again merge the two routes back together with the completion of the South-Central Light Rail extension project. PTD anticipates that demand for Route 0 service would be reduced on Central Avenue as transit riders in



South Phoenix choose to ride light rail on Central Avenue once the rail line extension is operational. While Route 0's proposed frequency adjustment north of Van Buren from every 20 minutes to every 30 minutes is unrelated to the South-Central Light Rail project, recent passenger load analysis indicates that a frequency reduction would not cause crowding issues on Route 0.





Public Outreach

The Public Transit Department will use the locally adopted public outreach process to solicit public feedback on proposed service changes.

The public input process would take place from March 3 to April 4, during which time Phoenix and Valley Metro staff will seek public input on the proposed service changes by conducting in-person and virtual outreach activities, utilize posters and A-Frame signs placed at key areas along each route to notify the public of the proposed changes, and direct passengers to visit Valley Metro's website to submit comments. The proposed changes are also to be advertised via social media, interactive webinars, and a public hearing.

SERVICE EQUITY ANALYSIS OF JULY 2025 PROPOSED SERVICE CHANGES

The first step of the Title VI assessment is to measure and document the magnitude of service change being proposed to determine if a project qualifies as a "major service change".

Table 1: Magnitude of Impact- Revenue Miles Change

Routes	Current Revenue Miles			Proposed Revenue Miles			% Difference		
	Weekday	Saturday	Sunday	Weekday	Saturday	Sunday	Weekday	Saturday	Sunday
Route 0	946	627	627	1,273	1,207	1,207	35%	93%	93%
Route 0A	991	609	609	-	-	-	-100%	-100%	-100%
Route 0/0A Corridor	1,937	1,235	1,235	1,273	1,207	1,207	-34%	-2%	-2%

Table 2: Magnitude of Impact- Directional Miles Change

Routes	Current Directional Miles	Proposed Directional Miles	% Difference
0	16.8	32.7	94.6%
0A	16	-	-100%
0/0A Corridor	33	33	-2%

Table 3: Magnitude of Impact- Major Change Indicators by Individual Projects



	Add or Eliminate Route	Expanding or reducing existing route by more than 25% of Weekday route revenue miles	Expanding or reducing existing route by more than 25% of Saturday routes revenue miles	Expanding or reducing existing route by more than 25% of Sunday route revenue miles	Expanding or reducing number of route directional miles more than 25%	A change resulting in a 25% or greater variance from the existing route alignment	Continue to Assess Mitigation
0	No	Yes	Yes	Yes	Yes	Yes	Yes
0A	Yes	Yes	Yes	Yes	Yes	Yes	Yes
0/0A Corridor	No	Yes	No	No	No	No	Yes

Magnitude of Service Change Assessment Findings

Routes 0 and 0A merger with frequency reduction represent a Major Service Change as the revenue miles will change by over 25%. The proposed project will proceed to step 2 to be assessed for possible disparate impact to minority population and/or bestowing disproportionate burden on low-income populations.

Step 2- Disparate Impact and Disproportionate Burden Determination

The second step of the service equity assessment will evaluate each major service change to determine if it would have a disparate impact on minority populations and/or cause disproportionate burden on low-income populations. Should Valley Metro or the City of Phoenix find any disparate impact or disproportionate burden is found during the service equity analysis, steps will be taken to avoid, minimize, or mitigate the impacts.

Table 4: Route Service Area Title VI Populations by Census Block Group*

Route	Percent Minority Population	Percent Low Income Population
All Local	52.8%	22.0%
Route 0	45.0%	23.2%
Route 0A	75.2%	35.2%
* Population within 3/4 mile buffer of route.		
	Above system average by five percent	

Table 5. Route Rider Population from 2023 Valley Metro Origin and Destination Survey

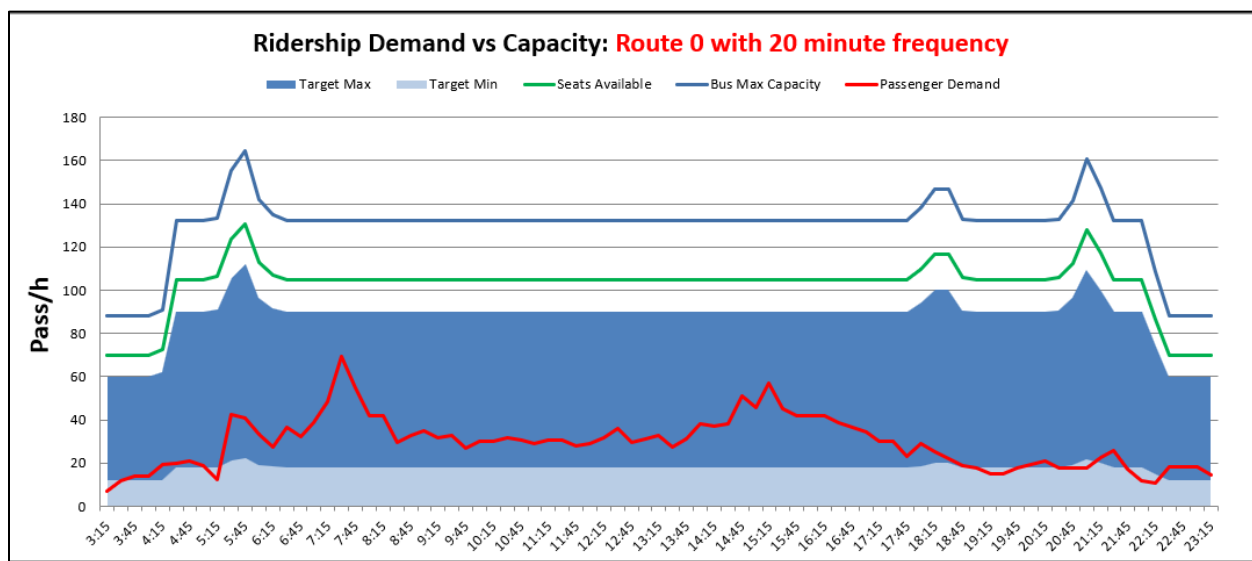


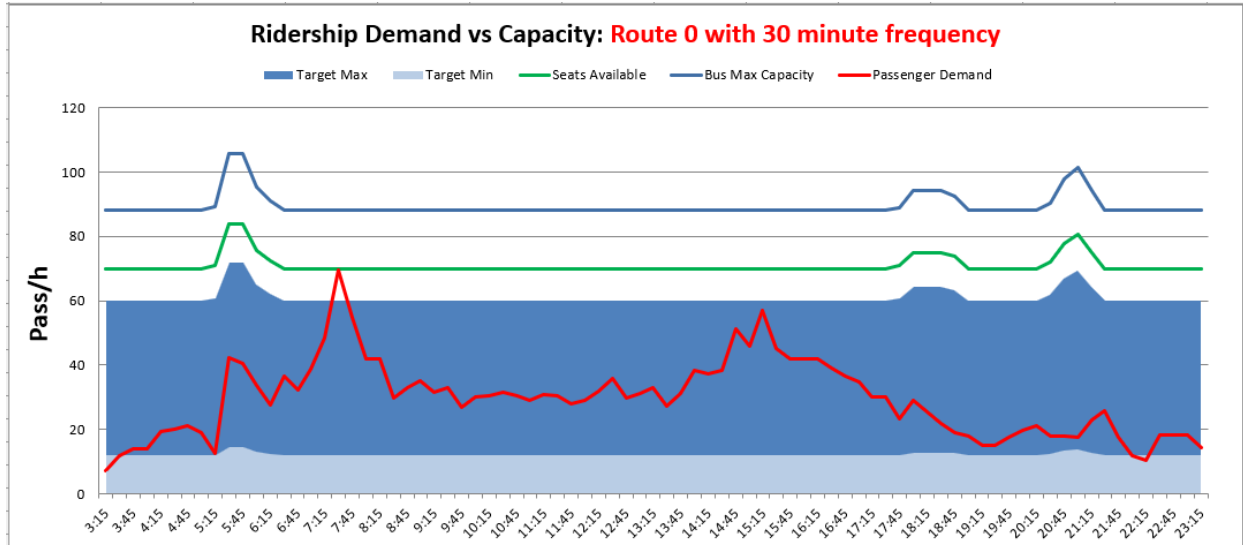
Route	Percent Minority Population	Percent Low Income Population
All Local	64.7%	50.9%
Route 0	74.1%	74.2%
Route 0A	73.2%	62.9%
* 2023 Valley Metro Origin and Destination Study		
Above system average by five percent		

Step 2- Disparate Impacts and Disproportionate Burden findings and mitigation strategy

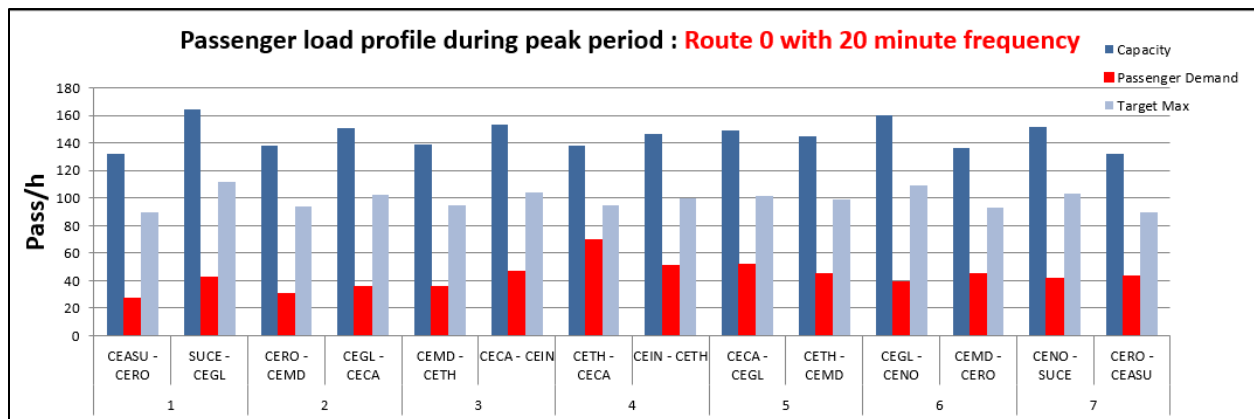
Route 0 findings: According to the most recent origin/destination survey, current Route 0 passengers are 74% minority, which is more than five percent above the regional average of 65% for local routes. The proposed service change on Route 0 qualifies as having a disparate impact on minority populations. Route 0 passengers are 74% low income, which is more than five percent above the regional average of 51%. The proposed service change on Route 0 qualifies as causing a disproportional burden on low-income populations.

Route 0 Mitigation: Current passenger loads on Route 0 indicate there are adequate seating capacity at 20-minute weekday frequency. Transit service volume and capacity chart on Route 0 based on Fall 2024 passenger data calculated at the 90th percentile indicates expected passenger loads are typically well below bus capacity. When lowering route seat capacity by reducing service to every 30 minutes on weekdays, assuming the same passenger demand, there would still be more than enough transit capacity to handle expected passenger loads.





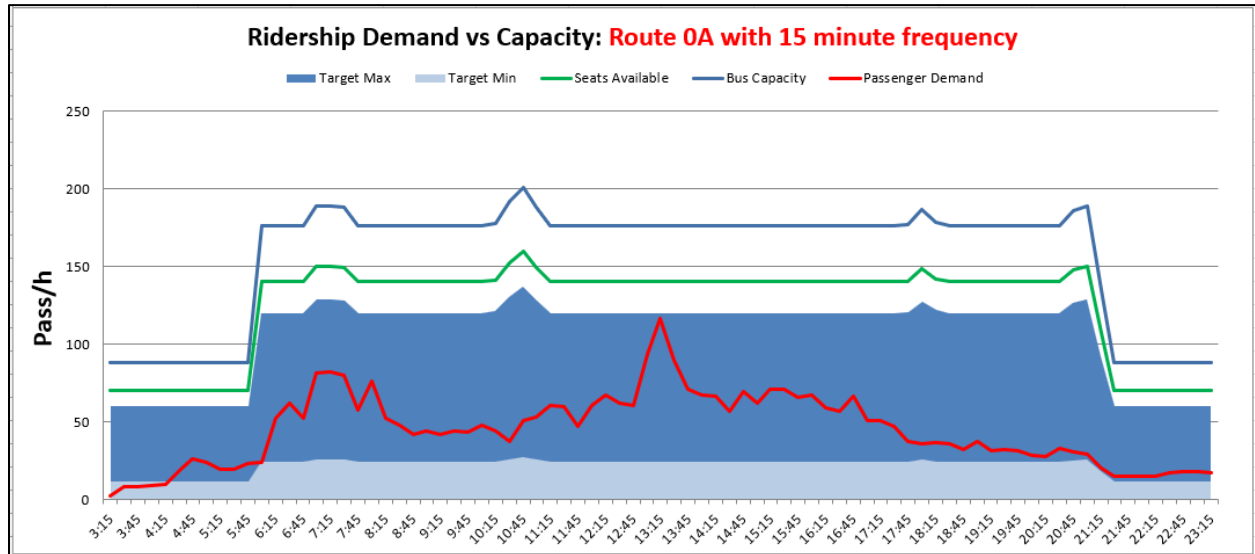
When examining the location where Route 0 currently is seeing higher transit demand, it is highest at route segment between Thomas Road and Camelback Road, which is influenced by the presence of Central High School located between Indian School Road and Camelback Road. This section of the route is also serviced by Valley Metro's Light Rail B Line. Valley Metro B line is expected to be improved to operate every 12 minutes from the existing 15-minute frequency on weekdays. With the expected improvement on the nearby light rail line, transit passenger crowding on Central Avenue should be mitigated.



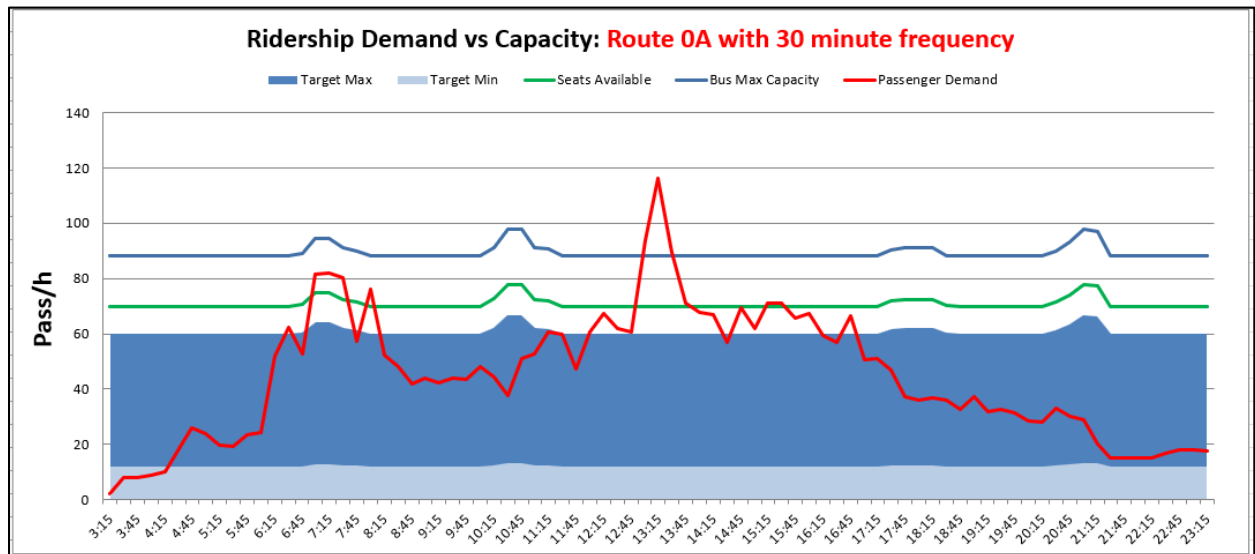
Route 0A findings: According to the most recent origin/destination survey, current Route 0A passengers are 73% minority, which is more than five percent above the regional average of 65% for local routes. The proposed service change on Route 0A qualifies as having a disparate impact on minority populations. Route 0A passengers are 62% low income, which is more than five percent above the regional average of 51%. The proposed service change on Route 0A qualifies as causing a disproportional burden on low-income populations.



Route 0A Mitigation: Current passenger loads on Route 0A indicate there are adequate seating capacity at 15-minute weekday frequency. Transit service volume and capacity chart on Route 0A based on Fall 2024 passenger data calculated at the 90th percentile indicates expected passenger loads are typically well below bus capacity.



Without accounting for the expected implementation of Valley Metro's South Central Rail extension, when just lowering route seat capacity by reducing service to every 30 minutes on weekdays, assuming the same passenger demand, there will be crowding issues around 6:00 a.m. where standing load is expected. Around 1:00 p.m., Route 0A is expected to be overcapacity where passengers will need to wait for the next bus.



Phoenix public transit is expecting much of the transit passenger demand on Central Avenue south of Van Buren Street to shift over to Valley Metro's B Line when South



Central Rail extension is complete. On top of the 30-minute frequency of the combined Route 0 on Central Avenue on weekdays, Valley Metro B line will operate every 12 minutes on weekdays connecting South Central communities to the rest of the regional transit network. With the expected new light rail service on Central Avenue, transit passenger crowding on Central Avenue south of Van Buren Street should be mitigated.

Valley Metro Two-line System Map





Demographic Maps

Map 1: July 2025 Service Change and Title VI Populations Route 0 and 0A

