



APPENDIX L

**SERVICE EQUITY
ANALYSES**



Route 33

Service Equity Analysis

PROPOSED JANUARY 2025 SERVICE CHANGE

NOVEMBER 14, 2024

TABLE OF CONTENTS

Executive Summary	1
Title VI Policies.....	3
Disparate Impact Policy.....	3
Disproportionate Burden Policy	4
Major Service Change Policy	4
Service Equity Analysis Methodology	5
Step 1. Verify the Change Qualifies as a Major Change.....	5
Step 2. Calculate the route for Disparate Impact	5
Data Sources	5
Step 3. Calculate the Disproportionate Burden.....	7
Survey Data	7
Step 4. Compare to Systemwide Data	9
Alternatives	10
Figure 1. Establishing Major Service Change	5
Figure 2. Route 33 Survey Ethnicity Data	6
Figure 3. Ethnicity or Racial Identification of the Population.....	6
Figure 4. Residential Household Income Level	8
Figure 5. Household Income Level in Walking Shed	8
Figure 6. Regional Population Data	9
Figure 7. Calculating Potential Disparate Impact of Route 33 Change Using Population Data.....	9
Figure 8. Calculating Effects of Route 33 Change Using Population Data.....	9

Executive Summary

In compliance with Title VI of the Civil Rights Act of 1964, the Federal Transit Administration (FTA) requires all transit agencies receiving federal funding to monitor the performance of their systems, ensuring services are made available and distributed equitably. Each transit agency must develop a Title VI Program to document its policies and procedures for meeting FTA requirements. The Stanislaus Regional Transit Authority (StanRTA) Title VI Program (last updated in August 2022) stipulates that any major service change must, “evaluate significant system-wide service changes and proposed improvements at the planning and programming stages to determine whether those changes have a discriminatory impact”¹ on minority (race, ethnicity, or national origin) and low-income populations.

StanRTA proposes the elimination of Route 80, the Stockton Commuter, which currently provides limited service linking the Modesto Transit Center to the Manteca and Stockton Transit Centers in San Joaquin County. Route 80 operates three round trips daily, Monday – Friday. This route was launched as part of the Modesto Area Express (MAX) service operated by the City of Modesto in July 2020, amidst the COVID-19 pandemic shutdown. The service responded to public requests for transit connections with Sacramento and, to a lesser extent, Stockton.

In California and throughout much of the United States, public transit bus service is provided within defined regions. City, county, or metropolitan areas define these regions. Connecting transit riders between those regions can be challenging and often results in connectivity gaps. Closing this gap was the goal of Route 80. As the San Joaquin Regional Transit District (SJRTD) provides service between the Stockton Transit Center and Sacramento, MAX coordinated trips so riders can easily transfer onto an SJRTD route for the final leg to Sacramento. When StanRTA was formed in 2021, all transit services, including Route 33, were transferred from MAX and the City of Modesto, becoming part of the S brand.

The cancellation is proposed for December 27, 2024, due to the route’s underperformance over its three-plus years of operation. The route is considered underperforming based on its relatively low ridership and failure to meet productivity thresholds experienced on the other two commuter routes. Those routes connect commuters to the Altamont Corridor Express (ACE) and Bay Area Rapid Transit (BART) rail trains.

The revenue hours freed by Route 80’s elimination can be redirected to offset the impact of expanding Route 33, a priority service change awaiting implementation since 2023. Expansion of Route 33 is also proposed as part of the January 2025 Service Change. The timing of this change is due in part to MJC’s decision to halt its Pirate Express shuttle service. The Pirate Express shuttled students between the two Modesto campuses for many years. Students and families reached out. The Route 33 expansion adds 1.85 miles onto the route, reaching from Carpenter Road and Coldwell

¹ FTA Circular 4702.1B

Avenue to Tully Road at Modesto Junior College (MJC) East Campus. This addition to the route restores a vital connection across Highway 99 midway between Vintage Faire Mall and the Modesto Transit Center.

StanRTA initiated a pilot service called “Route 34,” in October 2024 to evaluate the extension’s need. The pilot route offered two new bus stops, one at the MJC West Campus and the other at the MJC East Campus. The pilot results were remarkable. With limited advertising and promotion, Route 34 generated 1,435 trips in its first month of operation.

These major service changes require a Title VI Service Equity Analysis as part of the evaluative process. The service change recommendation and equity analyses will be considered at the December 5, 2024, meeting of the StanRTA Board of Directors.

This Title VI analysis will perform the following functions:

- Describe the proposed January 2025 service changes
- Determine whether the changes constitute a “major service change” or not
- Evaluate how the changes may impact low-income and minority populations
- Identify strategies to avoid, minimize, or mitigate any disproportionate burdens, disparate impacts, or any potentially negative outcomes

Title VI Policies

Title VI of the Civil Rights Act of 1964 prohibits discrimination on the basis of race, color, or national origin in programs receiving federal financial assistance. Title VI states, “No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.”

In 1994, President Clinton issued Executive Order 12898, which states that each federal agency “shall make achieving environmental justice part of its mission by identifying and addressing disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations.” Through this Executive Order, Title VI was identified as one of several Federal laws that should be applied “to prevent minority communities and low-income communities from being subject to disproportionately high and adverse environmental effects.”

In October 2012, the FTA released Circular 4702.1B (Circular), which provides guidelines for compliance with Title VI. Under the Circular, transit operators are required to study proposed fare changes and “major service changes” before the changes are adopted to ensure that such changes do not have a discriminatory effect based on race, color, national origin, or low-income status of the affected populations. As a first step, public transit providers must adopt their own “Major Service Change,” “Disparate Impact,” and “Disproportionate Burden.” StanRTA’s Board of Directors most recently adopted these policies in June 2024. The three policies, referred to cumulatively as “Title VI Policies,” are described below.

Disparate Impact Policy

This policy establishes a threshold for determining when adverse effects of proposed service or fare changes are borne disproportionately by minority populations. The threshold is the difference between the burdens borne by, or benefits experienced by, minority populations compared to non-minority populations. When the threshold is exceeded, a fare or major service change (except promotional/temporary changes) either negatively impacts minority populations more or benefits them less than non-minority populations.

Policy. StanRTA establishes that a fare change, major service change, or other policy has a disparate impact if minority populations will experience fifteen percent (15%) more of the cumulative burden or experience fifteen percent (15%) less of the cumulative benefit, relative to nonminority populations, unless (a) there is a substantial legitimate justification for the change, and (b) no other alternatives exist that would serve the same legitimate objectives but with less disproportionate effects on the basis of race, color or national origin.

StanRTA defines a minority as one who self-identifies as American Indian/Alaska Native, Asian, Black or African American, Hispanic or Latino, and/or Native Hawaiian/Pacific Islander. For this evaluation, non-minority persons were defined as those who self-identify as non-Hispanic or Latino white. All other

persons, including those identifying as two or more races and/or ethnicities, were defined as minority persons.

Data sources. StanRTA uses passenger survey data by route or census data for block groups within walking distance of the affected stops/routes for service change analysis. For fare analysis, StanRTA uses data from the annual passenger survey.

Disproportionate Burden Policy

The Disproportionate Burden Policy establishes a threshold for determining whether proposed fare or major service changes have a disproportionately adverse effect on low-income populations relative to non-low-income populations. The threshold is the difference between the burdens borne by, and benefits experienced by low-income populations compared to non-low-income populations. Exceeding the threshold means either that a fare or service change negatively impacts low-income populations more than non-low-income populations or that the change benefits non-low-income populations more than low-income populations. If the threshold is exceeded, StanRTA must avoid, minimize, or mitigate impacts where practicable. The existing disparate impact policy is as follows:

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Definition of low-income. Low-income individuals are defined as those making up to 200% of the federal poverty level.

Major Service Change Policy

A proposed change in transit service will be considered a “major service change” (MSC) if it meets one of the following criteria:

- **Changes to revenue hours:** Any aggregate change of twenty percent (20%) or more of the number of transit revenue hours of a route for the day of the week for which the change is proposed. “Transit revenue hours” refers to the amount of time that a bus is available to carry passengers.
- **Changes to revenue miles:** Any changes in the routing of a bus route that alters twenty-five percent (25%) or more of the route’s path (deadhead path not included).
- **A new transit line is established.** Applies to fixed-route and commuter services.
- **New fixed guideway.** Six months before the opening of any new fixed guideway project (e.g. Bus Rapid Transit line), regardless of whether the amount of service being changed meets the requirements in the subsections.

Service Equity Analysis Methodology

Step 1. Verify the Change Qualifies as a Major Change

StanRTA policy requires that all major service changes be evaluated for any potential disproportionate burden or disparate impact. The impacts of proposed changes must be calculated to determine whether the change is “major.” Of the four means identified on the prior page, two measures apply to the proposed change for Route 33. These measures are changes to the revenue hours and revenue miles. The analysis of Route 33 is shown in Figure 1 below:

Figure 1. Establishing Major Service Change

	FY 2024 (Scheduled)	Proposed Level of Service	Percent Change	StanRTA Threshold	Qualify as an MSC?
Revenue Hours	1,638	0.0	100%	20%	Yes
Revenue Miles	53,131.68	0.0	100%	25%	Yes

Step 2. Calculate the route for Disparate Impact

This analysis evaluates whether minority communities are adversely impacted or experience less benefit than non-minority communities due to the proposed elimination of the route. This analysis looks at both the composition of Route 33’s ridership and the community that lives in the route’s service area. This analysis measures the distribution of the adverse effects and benefits of the proposed changes.

Commuter routes like the 80 differ from regular fixed-route service in that the commuter route’s purpose is to primarily connect outlying areas with a central city. Commuter service is typically provided during peak periods with stops or destinations at major employment or transportation hubs like bus or rail stations and ferry terminals. Characterized by a motorcoach (aka over-the-road bus), limited stops in the central city, and at least five miles of closed-door service.²

Fixed routes traverse predetermined routes with frequently scheduled service and many bus stops, typically transporting riders drawn from within a one-quarter to one-half mile walking shed of the route. Commuter routes do not typically begin, end, or even have stops, in locations where their riders reside. It is therefore important to understand both the ethnicity of the rider and the environment Route 33 operates in to establish whether a disparate impact will be felt among riders.

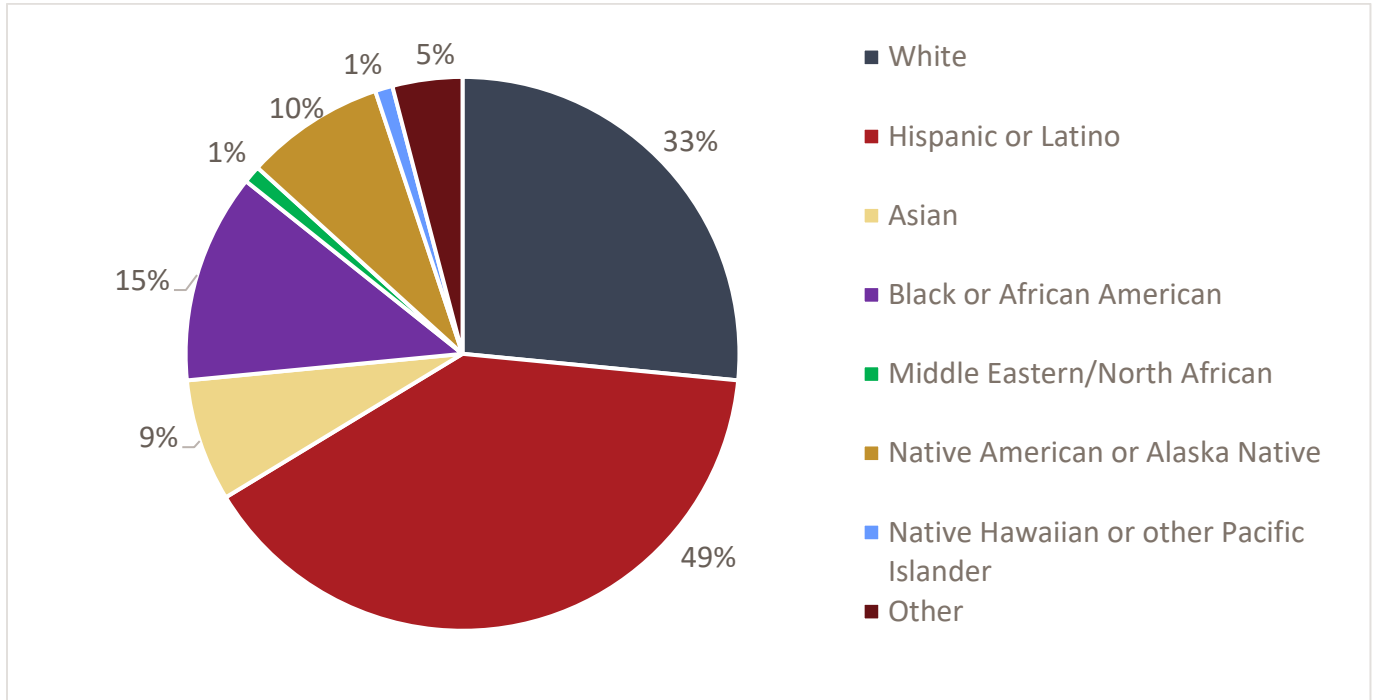
Data Sources

Data The week of October 7-11, 2024, StanRTA staff conducted an onboard survey on Route 33 to

² National Transit Database Glossary: <https://www.transit.dot.gov/ntd/national-transit-database-ntd-glossary>

gather data on riders. Although the sample size is small, the 80 respondents represent most riders using Route 33. Key data collected in the survey includes the proportion of riders that are non-white. Respondents were allowed to identify more than one race resulting in greater than a 100% total. The data is presented in Figure 2.

Figure 2. Route 33 Survey Ethnicity Data



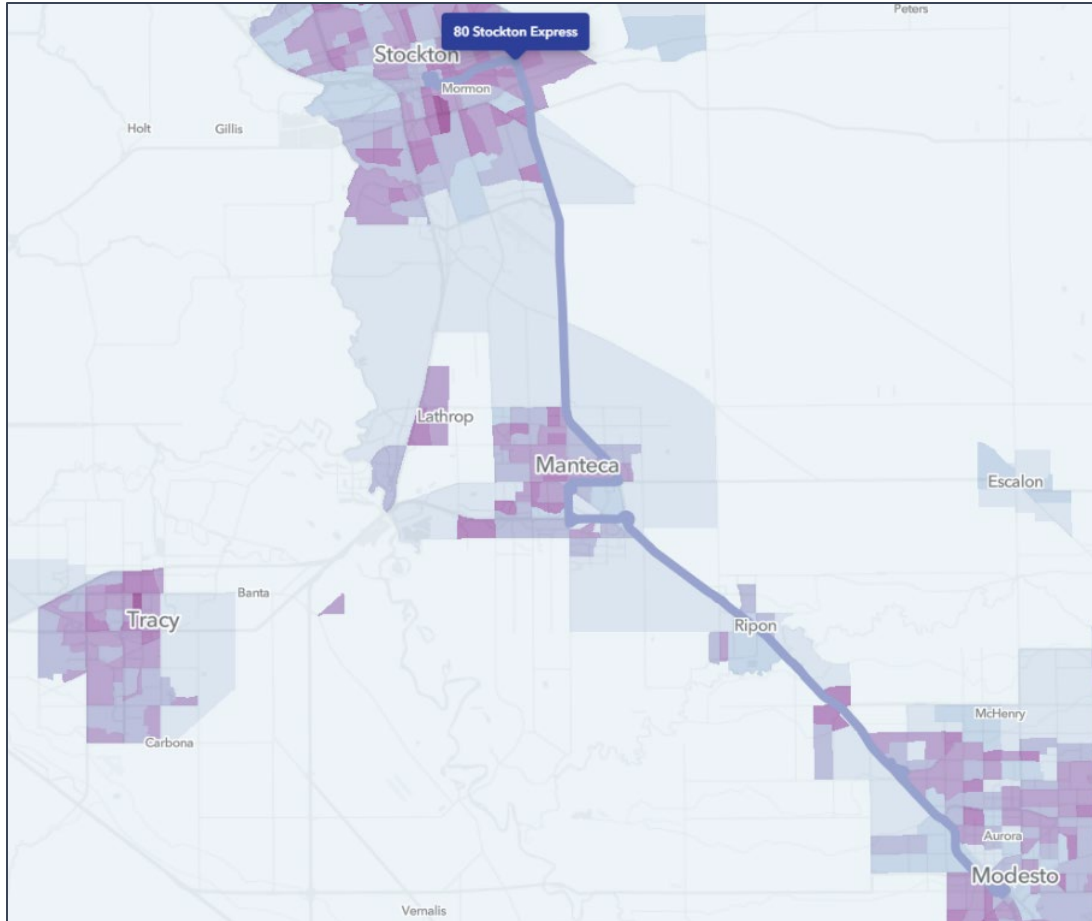
The chart shows that 32.5% or 26 riders identify as white, while the other 54 respondents (67.5%) identify as non-white or minority. The largest responding group identified as Hispanic or Latino (49%).

An alternative assessment is to analyze the population residing within the quarter mile walking corridor of the route. A GIS map of the route depicted in Figure 3 is overlaid with census tract data from the American Communities Survey (ACS.³), providing another insight into the ridership is obtained. The darker the census block, the greater the density of non-white residents.

The census data reveals that of the 2,200 people living in the walking shed surrounding Route 33's four bus stops, 73% of the people are non-white or Hispanic/Latino. This is a higher level of reporting compared to actual bus ridership.

Figure 3. Ethnicity or Racial Identification of the Population

³ American Community Survey 5 Year: 2012-2018. The ACS is an annual survey demographics program conducted by the United States Census Bureau in off-census years.



Step 3. Calculate the Disproportionate Burden

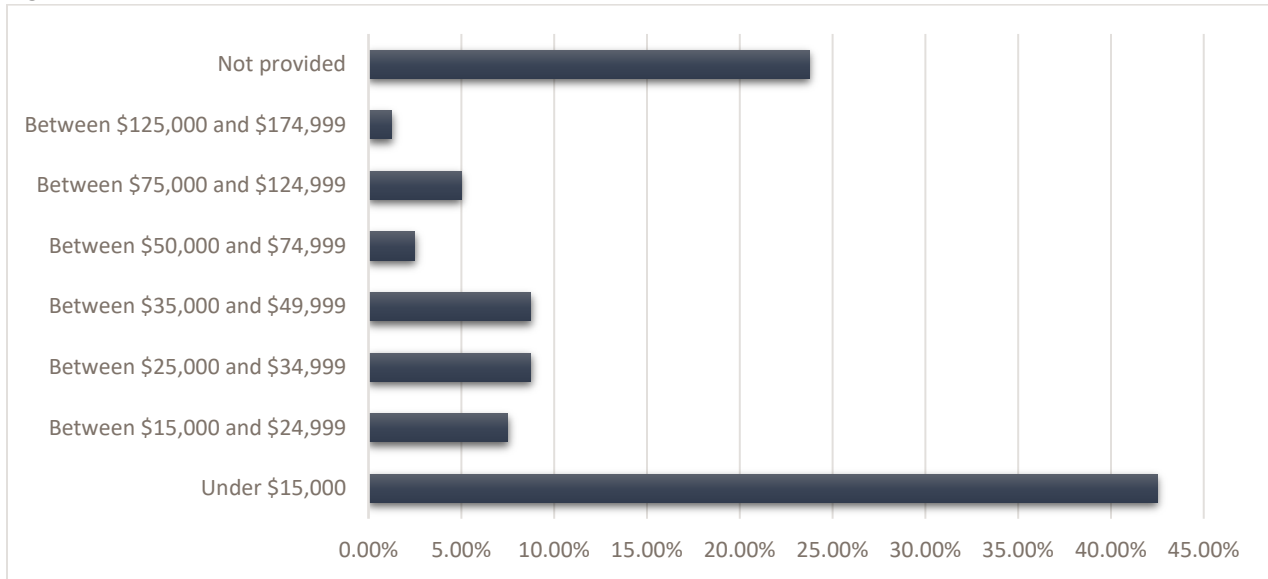
This analysis evaluates whether low-income communities are adversely impacted or experience less benefit than better off communities due to the proposed elimination of the route. This analysis looks at both the composition of Route 33’s ridership and the community that lives in the route’s service area. This analysis follows the same process as the Disparate Impact analysis.

Survey Data

Sixty-one of 80 surveyed riders responded to the question, “What is your approximate household income?” asked during the week of October 7-11, 2024, when StanRTA staff conducted an onboard survey on Route 33 riders. The survey group represents all unique riders traveling on Route 33 that week. Their responses are shown in Figure 5. Fifty percent of riders reported an income below \$25,000 and 67.5% reported an income below \$50,000.

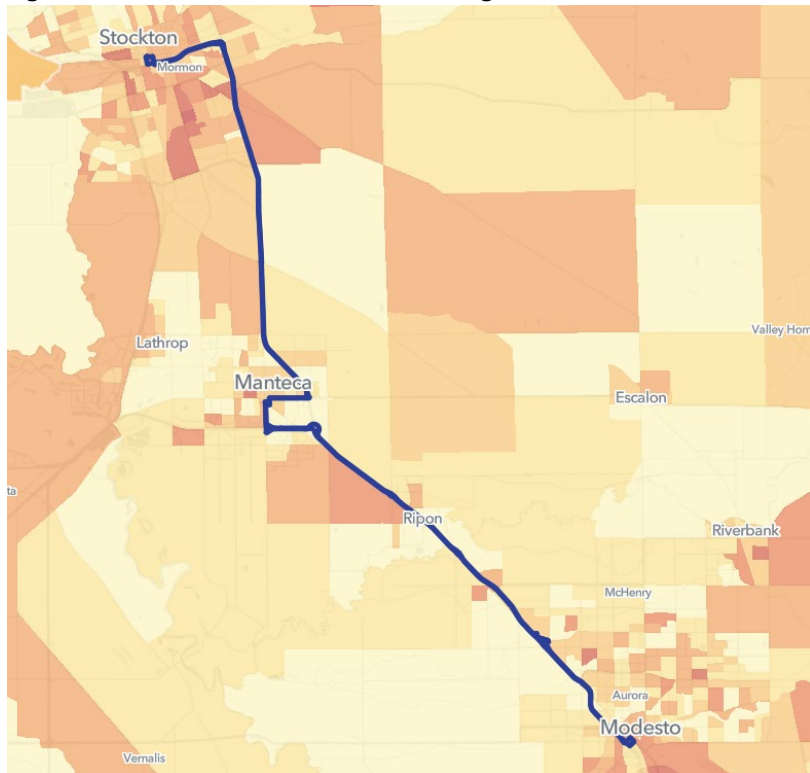
In 2024, the federal poverty level is \$15,060 for a single-person household. 200% of the federal poverty level is \$30,120. For a family of four, 200% of the federal poverty level is \$62,400. StanRTA, like many transit agencies in California, uses the 200% federal poverty level as the standard measure for poverty.

Figure 4. Residential Household Income Level



An alternative assessment is to analyze the population residing within the quarter-mile walking corridor of the route. ACS data from 2022 identifies that 34% of the 2,200 residents within the quarter-mile walking shed of the bus route are below the federal poverty level and 58% are within 200% of the poverty threshold.

Figure 5. Household Income Level in Walking Shed



Step 4. Compare to Systemwide Data

The data collected on Route 33 is now compared with systemwide data. The system data consists of the population living within ¼ mile of all the bus routes operated by StanRTA in Stanislaus County.

Figure 6. Regional Population Data

Total Population ⁴	Minority Population	Percent Minority	Low-Income Population	Percent Low Income
295,200	197,784	67%	112,176	38%

The systemwide data sets the threshold for establishing whether there is a Disparate Impact and Disproportionate Burden for those impacted by Route 33’s discontinuation. The analysis of the demographic data follows in Figure 8. The table identifies the population living in the Route 33 corridor and the number that are non-white then calculates the percent of those residents that are minority. This number is compared to the percentage of minority residents in the total service area, 67%. Route 33 has 6% more minority residents than would be found systemwide.

But does this difference amount to a Disparate Impact? StanRTA establishes that a Disparate Impact exists if the burden or benefit of a service change exceeds the system thresholds by more than 15%. In this instance, the difference is only 6% and no Disparate Impact is found.

Figure 7. Calculating Potential Disparate Impact of Route 33 Change Using Population Data

Route 33 Area Population	Minority Population	Percent Minority	Minority Threshold	System v. Route Percentage	Disparate Impact Allowance	Finding?
2,200	1,606	73%	67%	+6%	15%	No

However, in the analysis of Disproportionate Burden, a 20% difference is found between the low-income population in the Route 33 service area and the fixed route system. This exceeds the 15% Disproportionate Burden policy. Thus, there is a finding that low-income individuals living in the Route 33 walking shed, and thus potential bus riders, are disproportionately burdened by the elimination of the route.

Figure 8. Calculating Effects of Route 33 Change Using Population Data

Route 33 Area Population	Low Income Population	Percent Low Income	Low Income Threshold	System v. Route Percentage	Disproportionate Burden Allowance	Finding?
2,200	1,606	58%	38%	+20%	15%	Yes

⁴ American Community Survey, 2022

Alternatives

Making a finding of Disproportionate Burden does not nullify the transit agency's service change plans. The finding does require the agency to examine mitigation options and alternatives that will eliminate or at least partially offset the burdens placed on the route's constituency.

StanRTA has identified several potential transit alternatives for Route 33 riders who will lose their means of transportation. These options are as follows:

- **Amtrak.** StanRTA's Route 25 serves the Modesto Amtrak station with a half-hour frequency on weekdays. Passengers can take Amtrak between Modesto and Stockton and use Route 25 to connect to destinations within StanRTA's service area.
- **Route 70 – ACE Commuter.** StanRTA's ACE Commuter travels six times a day between the Modesto Transit Center and the ACE rail station in Lathrop, CA. StanRTA is exploring options to add a stop at the Manteca Transit Center as part of this route. Riders can either connect from StanRTA's service at Manteca or to the San Joaquin RTD's service at the Lathrop ACE station.
- **eTrans, Escalon Transit.** This regional service connects to Vintage Faire Mall from the City of Escalon. While service is limited, it does provide connectivity between San Joaquin and Stanislaus County.
- **Almond Blossom, Ripon Transit.** Similarly, Ripon Transit's bus connects to Vintage Faire Mall.

StanRTA is continuing to work with transit partners in San Joaquin County to develop these options. As new information is available updates will be provided to current riders on Route 33 in the form of handouts, transit alerts on the Ride the S app, and the StanRTA website (www.StanRTA.org.)

Appendix A

Route 33 Survey Results

Attached for review are the full results of the Route 33 survey conducted October 7- 11, 2024.



Route 70 Service Equity Analysis

PROPOSED JANUARY 2025 SERVICE CHANGE

NOVEMBER 14, 2024

TABLE OF CONTENTS

Executive Summary	1
Title VI Policies.....	3
Disparate Impact Policy.....	3
Disproportionate Burden Policy	4
Major Service Change Policy	4
Service Equity Analysis Methodology	5
Step 1. Verify the Change Qualifies as a Major Change.....	5
Step 2. Calculate the route for Disparate Impact	5
Data Sources	5
Step 3. Calculate the Disproportionate Burden.....	7
Survey Data	7
Step 4. Compare to Systemwide Data	9
Alternatives	12
Figure 1. Establishing Major Service Change	5
Figure 2. Route 80 Survey Ethnicity Data	6
Figure 3. Ethnicity or Racial Identification of the Population	6
Figure 4. Residential Household Income Level	8
Figure 5. Household Income Level in Walking Shed	8
Figure 6. Regional Population Data	9
Figure 7. Calculating Potential Disparate Impact of Route 80 Change Using Population Data.....	9
Figure 8. Calculating Effects of Route 80 Change Using Population Data.....	9

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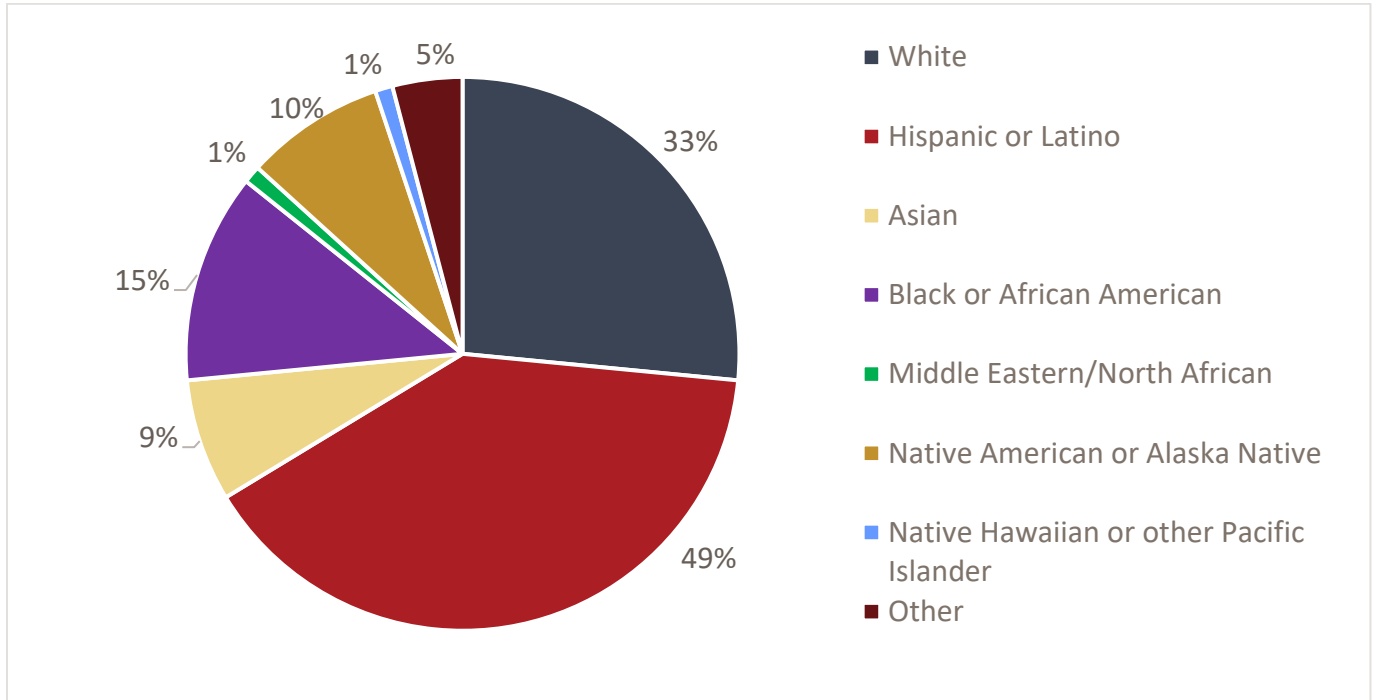
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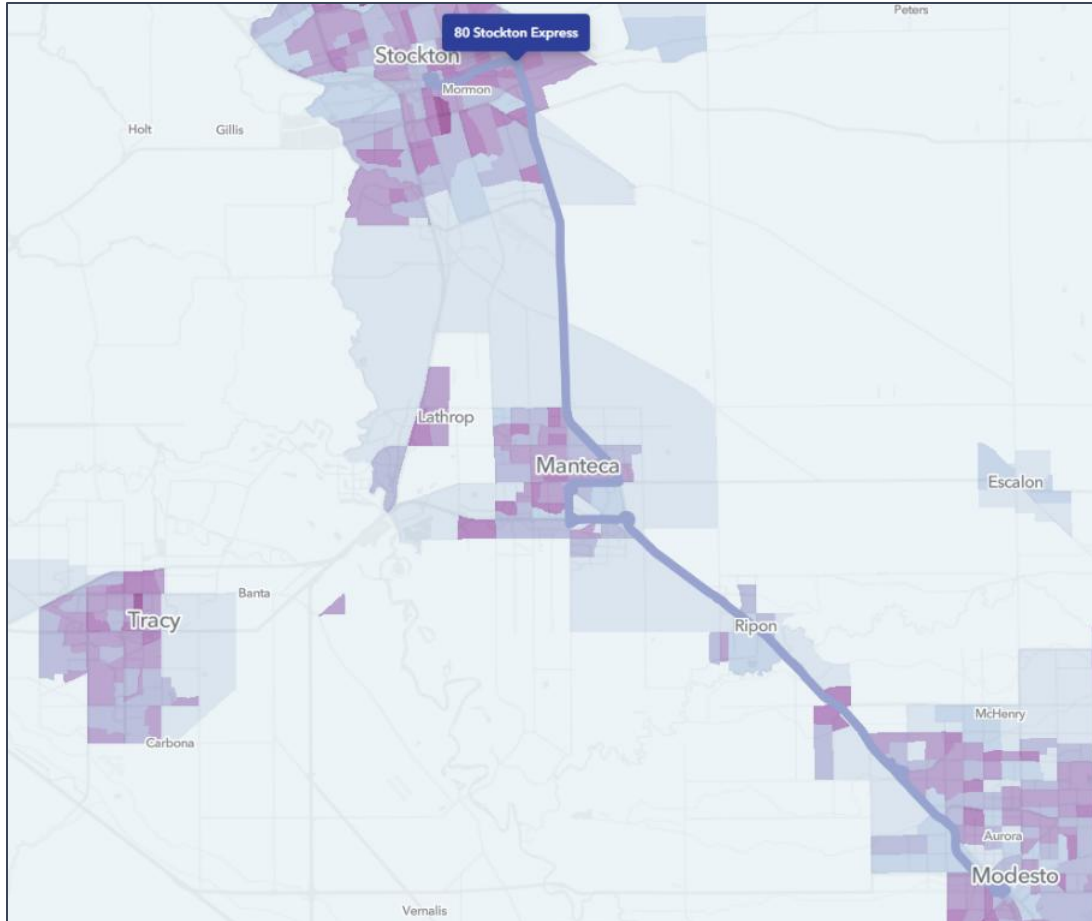
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Figure 3. Ethnicity or Racial Identification of the Population

³ American Community Survey 5 Year: 2012-2018. The ACS is an annual survey demographics program conducted by the United States Census Bureau in off-census years.



Step 3. Calculate the Disproportionate Burden

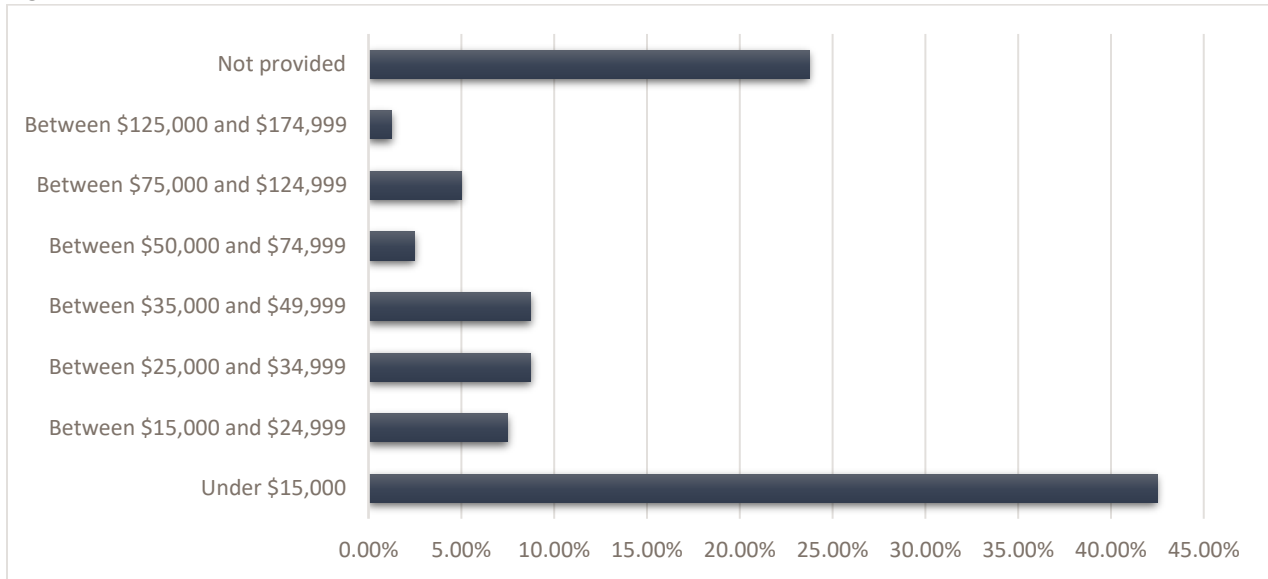
This analysis evaluates whether low-income communities are adversely impacted or experience less benefit than better off communities due to the proposed elimination of the route. This analysis looks at both the composition of Route 80’s ridership and the community that lives in the route’s service area. This analysis follows the same process as the Disparate Impact analysis.

Survey Data

Sixty-one of 80 surveyed riders responded to the question, “What is your approximate household income?” asked during the week of October 7-11, 2024, when StanRTA staff conducted an onboard survey on Route 80 riders. The survey group represents all unique riders traveling on Route 80 that week. Their responses are shown in Figure 5. Fifty percent of riders reported an income below \$25,000 and 67.5% reported an income below \$50,000.

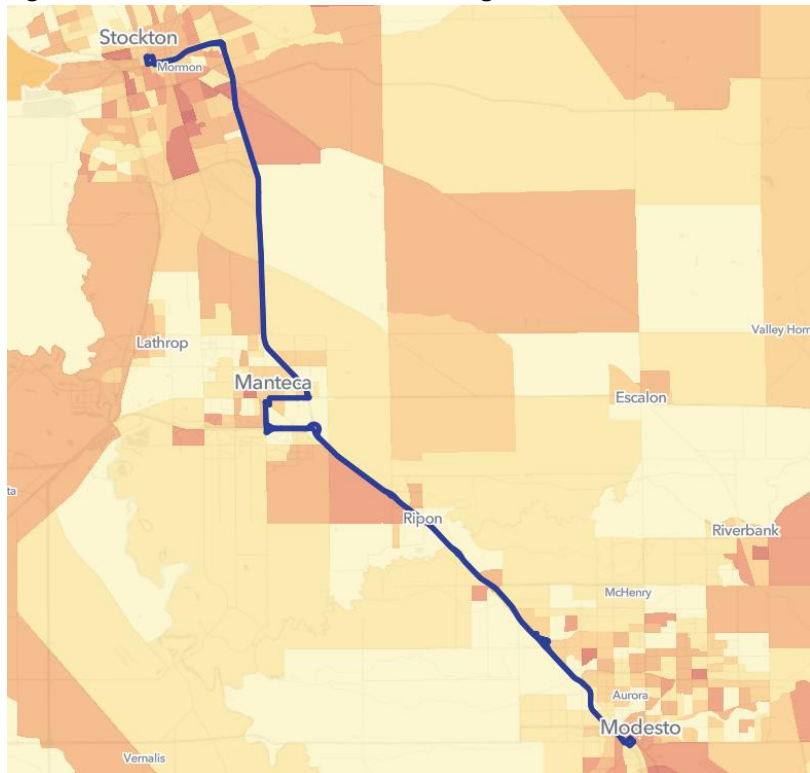
In 2024, the federal poverty level is \$15,060 for a single-person household. 200% of the federal poverty level is \$30,120. For a family of four, 200% of the federal poverty level is \$62,400. StanRTA, like many transit agencies in California, uses the 200% federal poverty level as the standard measure for poverty.

Figure 4. Residential Household Income Level



An alternative assessment is to analyze the population residing within the quarter-mile walking corridor of the route. ACS data from 2022 identifies that 34% of the 2,200 residents within the quarter-mile walking shed of the bus route are below the federal poverty level and 58% are within 200% of the poverty threshold.

Figure 5. Household Income Level in Walking Shed



Step 4. Compare to Systemwide Data

The data collected on Route 80 is now compared with systemwide data. The system data consists of the population living within ¼ mile of all the bus routes operated by StanRTA in Stanislaus County.

Figure 6. Regional Population Data

Total Population ⁴	Minority Population	Percent Minority	Low-Income Population	Percent Low Income
295,200	197,784	67%	112,176	38%

The systemwide data sets the threshold for establishing whether there is a Disparate Impact and Disproportionate Burden for those impacted by Route 80’s discontinuation. The analysis of the demographic data follows in Figure 8. The table identifies the population living in the Route 80 corridor and the number that are non-white then calculates the percent of those residents that are minority. This number is compared to the percentage of minority residents in the total service area, 67%. Route 80 has 6% more minority residents than would be found systemwide.

But does this difference amount to a Disparate Impact? StanRTA establishes that a Disparate Impact exists if the burden or benefit of a service change exceeds the system thresholds by more than 15%. In this instance, the difference is only 6% and no Disparate Impact is found.

Figure 7. Calculating Potential Disparate Impact of Route 80 Change Using Population Data

Route 80 Area Population	Minority Population	Percent Minority	Minority Threshold	System v. Route Percentage	Disparate Impact Allowance	Finding?
2,200	1,606	73%	67%	+6%	15%	No

However, in the analysis of Disproportionate Burden, a 20% difference is found between the low-income population in the Route 80 service area and the fixed route system. This exceeds the 15% Disproportionate Burden policy. Thus, there is a finding that low-income individuals living in the Route 80 walking shed, and thus potential bus riders, are disproportionately burdened by the elimination of the route.

Figure 8. Calculating Effects of Route 80 Change Using Population Data

Route 80 Area Population	Low Income Population	Percent Low Income	Low Income Threshold	System v. Route Percentage	Disproportionate Burden Allowance	Finding?
2,200	1,606	58%	38%	+20%	15%	Yes

⁴ American Community Survey, 2022

Alternatives

Making a finding of Disproportionate Burden does not nullify the transit agency's service change plans. The finding does require the agency to examine mitigation options and alternatives that will eliminate or at least partially offset the burdens placed on the route's constituency.

StanRTA has identified several potential transit alternatives for Route 80 riders who will lose their means of transportation. These options are as follows:

- **Amtrak.** StanRTA's Route 25 serves the Modesto Amtrak station with a half-hour frequency on weekdays. Passengers can take Amtrak between Modesto and Stockton and use Route 25 to connect to destinations within StanRTA's service area.
- **Route 70 – ACE Commuter.** StanRTA's ACE Commuter travels six times a day between the Modesto Transit Center and the ACE rail station in Lathrop, CA. StanRTA is exploring options to add a stop at the Manteca Transit Center as part of this route. Riders can either connect from StanRTA's service at Manteca or to the San Joaquin RTD's service at the Lathrop ACE station.
- **eTrans, Escalon Transit.** This regional service connects to Vintage Faire Mall from the City of Escalon. While service is limited, it does provide connectivity between San Joaquin and Stanislaus County.
- **Almond Blossom, Ripon Transit.** Similarly, Ripon Transit's bus connects to Vintage Faire Mall.

StanRTA is continuing to work with transit partners in San Joaquin County to develop these options. As new information is available updates will be provided to current riders on Route 80 in the form of handouts, transit alerts on the Ride the S app, and the StanRTA website (www.StanRTA.org.)

Appendix A

Route 80 Survey Results

Attached for review are the full results of the Route 80 survey conducted October 7- 11, 2024.