APPENDIX A – 3

2023 TIP Investment Analysis

2023 TIP Investment Analysis

A FOCUS ON LOW-INCOME POPULATIONS, PEOPLE OF COLOR, SENIORS, AND PERSONS WITH DISABILITIES

INTRODUCTION

The 2023 TIP Investment Analysis is an assessment of TIP investments through an equity lens, specifically focused on the Bay Area's disadvantaged populations. The purpose of the analysis is to understand if low-income populations, people of color, seniors, and persons with disabilities are sharing equitably in the region's near-term transportation investments. Although investment information is current as of development of the 2023 TIP, travel data and modal usage is pre-COVID-19. Any long-term impacts to travel patterns due to COVID-19 will be reflected in the analysis of future TIPs.

2023 TIP

The Bay Area's 2023 TIP covers the four-year period of FY 2022-23 through FY 2025-26 and includes over 300 transportation projects with $11.0 billion in committed funding during the four-year period.

Projects in the TIP

The TIP includes all transportation projects that are federally funded, require a federal action, or are considered regionally significant for air quality conformity purposes. The majority of projects in the TIP are federally funded, although some local or state-funded projects are also included, particularly those that are large in scale or impact travel patterns over a relatively large geographic area, such as a new carpool lane on a state highway. In reviewing TIP investments as a whole, it is important to keep in mind that most transportation projects are local, in both scale and funding, and these projects are typically not reflected in the TIP. These projects include pavement preservation, transit operations and maintenance, planning efforts, bicycle/pedestrian improvements, and minor intersection improvements.

All projects included in the TIP must be consistent with the region's long-range plan, *Plan Bay Area 2050* (the Plan). As such, the TIP represents a four-year snapshot that is a small part of the 30-year Plan period.

In addition to the total investments captured in the TIP versus the Plan, there is an important difference between these two documents that complicates any side-by-side comparison. While the Plan includes the universe of revenues reasonably expected to be available (federal, state, local, and private funds) to implement planned transportation projects, program, and strategies, the TIP is much more focused on projects with federal funding or that affect air quality conformity. This means that the TIP is more heavily weighted toward large capital projects, such as transit and highway expansions, that are more likely to require federal funds or action. The vast majority of funds that go to operate, maintain, and manage the region's existing transportation system, a top priority of the long-range plan, are not typically captured in a TIP as they tend to be locally funded. See Figure 1, on the following page, for an illustration of this distinction.
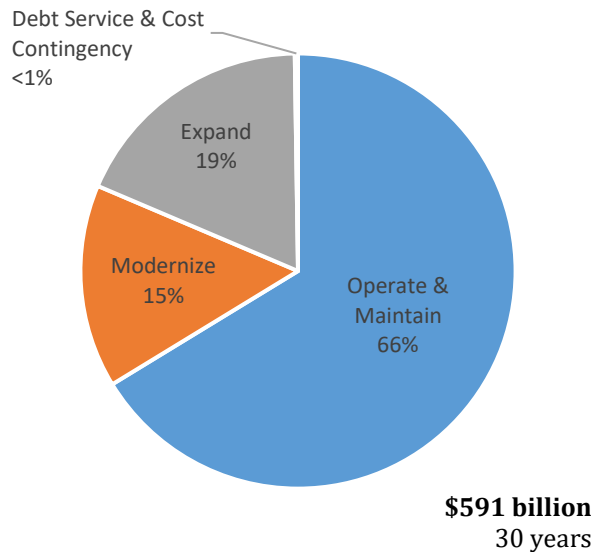
Note: The percentages shown on the tables and charts throughout this document may not sum to 100% due to rounding.

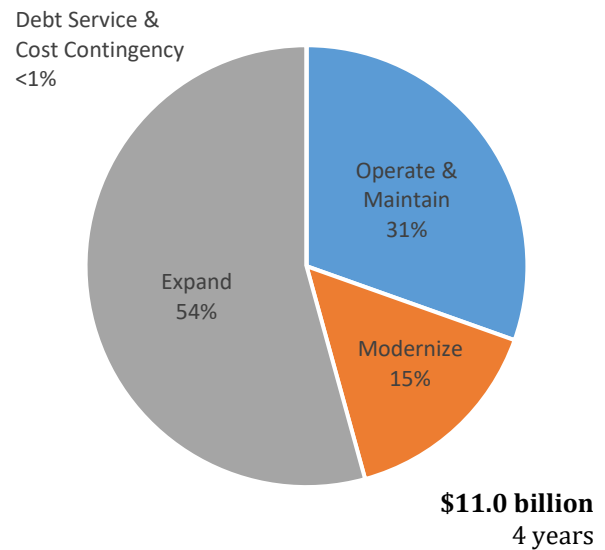**Figure 1. TIP and Plan Investments by Mode/Type**

Plan Bay Area 2050 Transportation Investments
Expenditures by Investment Strategy

Debt Service & Cost
Contingency
<1%

Expand
19%

Modernize
15%

Operate &
Maintain
66%

$591 billion
30 years

2023 TIP Investments
Expenditures by Investment Strategy

Debt Service &
Cost Contingency
<1%

Operate &
Maintain
31%

Expand
54%

Modernize
15%

$11.0 billion
4 years

The narrower focus of the TIP also means only a fraction of total regional transportation expenditures are captured in any given year. On average, one year of investments in the 2023 TIP accounts for less than a quarter of annual expenditures in the regional long-range plan.

Another feature of the TIP that distinguishes it from the regional long-range plan is that it tends to be a more dynamic document – meaning that it is revised frequently to reflect funding and project changes, and on-going funding efforts. For context, the 2021 TIP was amended or modified more than 20 times in the 16 months following its federal approval.

Equity and Environmental Justice Considerations

As the federally designated Metropolitan Planning Organization (MPO) for the Bay Area, MTC is required to ensure that the region's transportation planning processes comply with applicable equity and environmental justice requirements. The legal, regulatory, and policy framework for addressing those issues is described in Appendix A and includes:

- ❖ **Title VI of the Civil Rights Act**: states that no person shall be subject to discrimination based on his or her race, color or national origin under any federally funded program.

- ❖ **Federal Guidance on Environmental Justice**: requirement that federal programs and funds do not result in disproportionately high and adverse impacts on people of color and low-income populations.

- ❖ **MTC's Environmental Justice Principles**: adopted principles that affirm MTC's ongoing commitments to:

- ◆ Create an open and transparent public participation process that empowers disadvantaged communities to participate in decision making that affects them, and

- ◆ Collect accurate and current data essential to defining and understanding the presence and extent of inequities, if any, in transportation funding based on race and income.

MTC satisfies its requirements for equity and environmental justice primarily through the *Plan Bay Area 2050* Equity Analysis, MTC's Public Participation Plan, and MTC's broader Title VI program. To further build upon MTC's commitment to address equity concerns, the TIP Investment Analysis provides the public with an additional opportunity to assess the region's near-term transportation investments funded within the TIP.

BAY AREA COMMUNITY CONTEXT

Demographic Profile

An important first step of the investment analysis is to understand the demographic context and travel patterns for the Bay Area.

Race and Ethnicity

The Bay Area is one of the most diverse regions in the country, with 62% of the population identifying as people of color. Within the region, more than a quarter of the population identifies as Asian (28%), followed closely by Hispanic or Latino (24%), and then Black or African American (6%). Other racial minorities, including those identifying as two or more races, account for the remaining 5% of the population.

TABLE 1. Population Distribution by Race/Ethnicity

	Population (in millions)	Percentage of Population
People of Color	**4.8**	**62%**
Asian	2.1	28%
Hispanic or Latino	1.8	24%
Black or African American	0.5	6%
Other People of Color	0.4	5%
White Population	**3.0**	**38%**
Total	**7.7**	**100%**

Notes: Tabulation prepared by MTC based on data from 2019 One-Year American Community Survey.

Income

Although the Bay Area's economy has shown strong growth over the past few decades, regional levels of poverty persist. Approximately 8% of the population lives below the federal poverty level ($25,750 a year for a family of four in 2019). Another 9% of the region's households are technically above the federal poverty line but still qualify as low-income for the purposes of this analysis, defined as households with incomes that fall below $50,000 (approximately 200% of the federal poverty line for a family of four). For reference, the 2019 household median income ranged from approximately $87,000 in Solano County to more than $138,000 in San Mateo County.

TABLE 2. Population Distribution by Household Income

	Population (in millions)	Percentage of Population
Low-Income	**1.3**	**17%**
<$25,000	0.6	8%
$25,000 - $49,999	0.7	9%
Not Low-Income	**6.4**	**83%**
$50,000 - $99,999	1.6	21%
$100,000 - $149,999	1.4	18%
$150,000+	3.4	44%
Total	**7.7**	**100%**

Notes: Tabulation prepared by MTC based on data from 2019 One-Year American Community Survey Public Use Microdata Samples. Income is calculated in 2019-denominated dollars. Note that the universe is persons in households and excludes persons living in group quarters.

Seniors and Persons with Disabilities

Nearly 16% of the Bay Area's population is aged 65 or older. Persons reporting disabilities across six categories defined by the Census Bureau total more than 9% of the region's population.

TABLE 3. Seniors and Persons with Disabilities

	Population (in millions)	Percentage of Population
Seniors	1.2	16%
Persons with Disabilities	0.7	9%

Notes: Tabulation prepared by MTC based on data from 2019 One-Year American Community Survey. Note that the universe is civilian noninstitutionalized population counted in disability.

Travel Patterns

Commute trips by Bay Area residents are overwhelmingly made by motor vehicle (74%) followed by transit (13%), telecommute (6%), non-motorized trips (5%), and other modes (1%). Travel pattern data is pre-COVID-19. Any long-term impacts to travel patterns due to COVID-19 will be reflected in future TIP analyses, once updated data becomes available.

TABLE 4. Share of Commute Trips by Mode by Population

	Low-Income	People of Color	Seniors	Total Population
Roadway (Motorized)	67%	76%	71%	74%
Roadway (Non-motorized)	10%	4%	4%	5%
Transit	14%	14%	10%	13%
Telecommute	8%	5%	14%	6%
Other	2%	1%	1%	1%
Total	**100%**	**100%**	**100%**	**100%**

Notes: Tabulation prepared by MTC based on data from 2019 One-Year American Community Survey Public Use Microdata Samples. Income is calculated in 2019-denominated dollars. Note that the universe is persons in households and excludes persons living in group quarters.

The share of all trips (including both commute and non-commute trips) made by target population groups is provided in Table 5 below. While there are differences in the travel patterns of low-income populations, people of color, and senior populations, the vast majority of all trips are categorized as roadway trips, which includes highway and roadway travel as well as trips made by walking or biking.

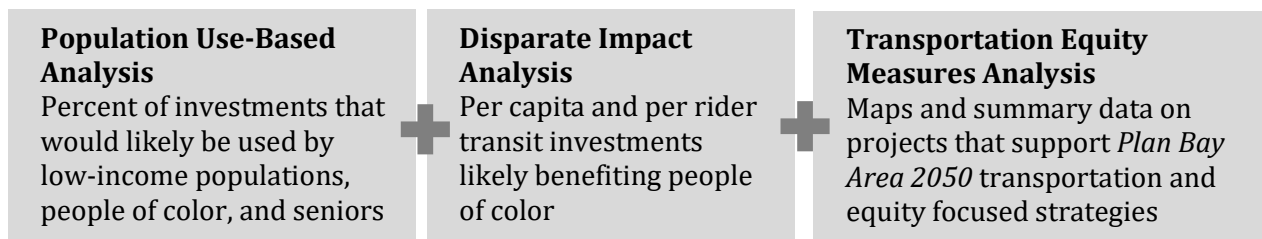**TABLE 5. Share of Commute and Non-Commute Trips by Mode by Population**

	Low-Income	People of Color	Seniors	Total Population
Roadway	94%	95%	96%	95%
Transit	6%	5%	4%	5%
Total	**100%**	**100%**	**100%**	**100%**

Notes: Tabulation based on 2018/19 Bay Area Travel Survey. Tabulation does not include share of trips made by persons with disabilities due to sample size limitations.

METHODOLOGY

The 2023 TIP investment analysis is built on three components that work together to inform how low-income communities, people of color, seniors, and persons with disabilities may be affected by the investments in the 2023 TIP.

Population Use-Based Analysis Percent of investments that would likely be used by low-income populations, people of color, and seniors	**Disparate Impact Analysis** Per capita and per rider transit investments likely benefiting people of color	**Transportation Equity Measures Analysis** Maps and summary data on projects that support *Plan Bay Area 2050* transportation and equity focused strategies

The methodologies used in each analysis are described in more detail below. Appendix B includes definitions and data sources used in this analysis.

Population Use-Based Analysis

This portion of the analysis compares the estimated percent of investments included in the TIP that benefit low-income populations, people of color, and seniors, to the percent of these populations' relative usage of the transportation system, for both roadways and transit. The analysis measures transit and motor vehicle trips using the 2018/19 Bay Area Travel Survey (BATS).

1. For this analysis, investments in the TIP are separated into two modes: transit and local streets and roads/highway (referred to as "roadway"). For simplicity, pedestrian and bicycle projects are assigned to local streets and roads and not evaluated as a separate mode of travel or investment type.

   For reference, Appendix C includes maps for each county with projects shown with their roadway or transit categorization.

2. To analyze what share of each mode (transit and roadway) low-income populations, people of color, and seniors utilize, the following definitions are used to identify disadvantaged populations:

   - *Low-Income Households:* Low-income households were defined as households earning $50,000 or less. This is roughly equivalent to 200% of the federal poverty level for a family of four.
   - *Households of Color:* For this analysis, households of color were defined using U.S. Census Bureau definitions. People of color, as defined for this analysis, are people identifying as Hispanic, Black or African American, Asian, and other or two or more races.
   - *Seniors:* Seniors are defined as persons aged 65 and over.

3. The assignment of investments by usage is then performed by multiplying the percent of use of the mode by the investment in that particular mode. This analysis is conducted at the county level for highways and roadways and at the transit-operator level for transit.

   For the multimodal, aggregate analysis, trip data from the BATS is used. As an illustrative example, low-income populations make 19% of Alameda County roadway trips. For a $50 million state highway project in that county, 19% or $9.5 million, would be assigned as a financial benefit to low-income populations and the remaining 81%, or $40.5 million, to the remaining population. A similar approach is followed for transit investments by operator. A similar analysis is conducted using roadway vehicle miles traveled (VMT) and transit origin-destination distance.

   For the in-depth analysis, transit usage data is derived from the most recent transit survey data available for each operator through MTC's ongoing Transit Passenger Demographic Survey. For in-depth roadway usage, VMT data is used from the BATS.

4. The investments by mode (from county or transit operator data) are summed for low-income, people of color, and senior populations based on each group's usage share of each mode. The percent of usage of the system by the target and other populations is then compared to the percent of investment for trips supporting that population.

Disparate Impact Analysis

This portion of the analysis compares 2023 TIP investments per capita for people of color to per capita investments identified for white populations, to investigate whether disadvantaged persons in the region are receiving an equitable share of the benefits from TIP investments. Due to the similarities in the analysis required by the Federal Transit Administration (FTA) for the long-range transportation plan, this portion of the analysis is also referred to as the Title VI analysis. The disparate impact analysis is not a required component of the TIP, and is provided for informational purposes only.

This portion of the analysis focuses on federal- and state-funded projects only. Some of the State and Federal fund sources included are FTA 5307, FTA 5309, FTA 5311, FTA 5337 funds, STP/CMAQ, Proposition 1B, and Senate Bill 1 (SB 1) funds. In addition, people of color (Asian, Black or African American, Hispanic or Latino and other minorities) are evaluated collectively in comparison to the investments per capita for white populations.

The disparate impact analysis incorporates the quantitative results produced by the population/use-based analysis for state and federally funded projects. Investments are first expressed in terms of investments per capita for both transit riders of color and white transit riders (or total population) in the region as follows:

People of color benefit per capita = $\dfrac{\text{Total transit investments allocated to transit riders of color}}{\text{Total regional ridership by people of color (or population)}}$

White population benefit per capita = Total transit investments allocated to white transit riders
Total regional white transit ridership (or population)

Next, the people of color and white per-capita benefit results are compared, expressing the people of color benefit per capita as a percentage of the white benefit per capita:

Result (%) = People of color benefit per capita
White benefit per capita

Although FTA does not provide specific guidance or standard benchmarks for MPOs to use in the metropolitan planning process to determine whether any given result for a long-range plan represents a disparate impact, a general practice is to use the percentage result to determine whether any differences between benefits for people of color or white populations may be considered statistically significant. If a disparate impact in the long-range plan is found to be statistically significant, consideration must then be given to "whether there is a substantial legitimate justification for the policy that resulted in the disparate impacts, and if there are alternatives that could be employed that would have a less discriminatory impact."[1] As stated earlier, the disparate impact analysis is not a federal requirement for the TIP, and is included in the 2023 TIP Investment Analysis for informational purposes.

Transportation Equity Measures Analysis
The third component of the analysis highlights projects and investments that support transportation and equity-related regional strategies from *Plan Bay Area 2050*:
- Maintain and Optimize the Existing System
- Create Healthy and Safe Streets
- Build a Next-Generation Transit Network
- Reduce Climate Emissions

The number and investment level of applicable project types supporting each of these regional strategies are summarized at the regional and county level. Additionally, projects with physical locations are also mapped over the region's Equity Priority Communities (EPCs). As transit asset projects tend to be systemwide, rather than tied to a static location, they are not included in the analysis maps. This exclusion also applies to transit maintenance and/or fueling facility projects, which have specific locations but benefit the operator(s) network at large. Transit projects associated with new or expanded service in specific locations, such as a new light rail line, are represented in the next-generation transit network maps.

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[1] FTA Circular 4702.1B, page VI-2.

Maintain and Optimize the Existing System
Projects that maintain and optimize the existing system were identified through three performance measures:
- Pavement/Bridge Condition: projects that preserve or rehabilitate existing bridges or roadways.
- Congestion/Reliability: transit and roadway projects identified by the project sponsors as having a primary purpose of addressing congestion or system reliability, or projects anticipated as having a significant impact on congestion reduction or improved system reliability.
- Transit State of Good Repair: projects that rehabilitate or replace existing transit assets.

This equity measure excludes projects that expand system capacity, as these projects do not contribute towards the regional strategy to maintain and optimize the existing system. Transit expansion projects are included under the next-generation transit network equity measure.

Create Healthy and Safe Streets
Projects that are expected to create healthy and safe streets include:
- Safety: projects identified by the project sponsors as having a primary purpose of addressing safety, or as anticipated to have a significant impact on reducing fatalities and serious injuries for all users.
- Active Transportation: projects identified by project sponsors as being focused primarily on bicycle or pedestrians (greater than 50% of the project's investment supports bicyclists and/or pedestrians), and the total investments included in the TIP that support bicycle or pedestrian mode regardless of the project's primary purpose.

Build a Next-Generation Transit Network
Projects that advance the goal of building a next-generation transit network include:
- Transit Service/Capacity: Transit projects with the primary purpose, as identified by the project sponsor, of expanding transit capacity.

Reduce Climate Emissions
Projects expected to reduce climate emissions include:
- Climate & Air Quality: Projects funded with federal Congestion Mitigation and Air Quality Improvement Program (CMAQ), state California Air Resources Board (CARB), regional Transportation for Clean Air (TFCA) grants, or in MTC's Climate Initiatives Program.

Limitations

As a regional analysis, the methods used in the TIP investment analysis have several limitations. The most significant limitation is that the analysis does not directly assess the resulting benefit and burden of specific projects or programs, such as travel time savings or improved accessibility to jobs or other destinations. Other limitations are:

- ***TIP is a snapshot in time***: It is also important to re-emphasize that the TIP does not reflect the full picture of transportation investments in the Bay Area over the long-term. As discussed in the introduction, the TIP only includes four years of near-term fund programming, compared to the 30 years forecast in *Plan Bay Area 2050*. Also, funding shown in the TIP is included in the year that project phases begin or are obligated and does not reflect the actual flow of funding and expenditures within these phases. While rehabilitation programs will typically have their funding spread across many years, large capital projects tend to have their funding lumped into a single year in the TIP, even if the funds will actually be expended over a number of years, some of which may be outside the 4-year period of the TIP.

- ***Notes on assumptions***: In addition, the analysis assumes that mode choice and system usage remain constant over time. System expansion, such as a new transit line or highway, and changing conditions, such as improvements to reliability and travel costs, tend to influence travel behavior over time. Notably, the substantial travel behavior impacts related to the COVID-19 pandemic are also not included in this analysis due to data availability limitations. This analysis assumes that the usage derived in the recent travel survey and transit passenger surveys remains static over time. Any long-term impacts to travel patterns due to COVID-19 will be reflected in future TIP analyses once updated data becomes available.

  The classification of investments into either roadway or transit investments also presents some limitations. For example, classifying a pavement rehabilitation project as strictly roadway does not account for the benefit to the region's transit vehicles that share the street with private automobiles.

- ***Mapping limitations***: Mapping projects provides a visual representation of the location of projects in relation to EPCs. However, project mapping also presents certain limitations. First, not all significant regional investments are mappable. For example, a substantial share of total funding in the TIP is dedicated to transit operators for ongoing maintenance and rehabilitation of their entire system, which cannot be represented as a simple point or line on a map in relation to a specific community. Second, displaying investments on a map does not translate into a direct benefit or burden for the surrounding communities. Given these limitations, the mapping analysis provides a qualitative, rather than quantitative, assessment of the spatial distribution of mappable projects included in the TIP.

- ***Funding and project types***: Given the document's federal focus, the investments reflected in the TIP represent less than a quarter of all transportation investments in the Bay Area at any given time. As a result, the investment analysis does not

capture the equity implications of many locally funded projects. Local projects tend to be smaller, in both geography and scope, but collectively, these projects are expected to have a significant impact on travel behaviors and experiences throughout the region.

- ***Demographic data***: While the latest available datasets were used in the investment analysis, some sources have been updated more recently than others. Demographic data are from the 2019 One-Year American Community Survey and Public Use Microdata Samples. Travel pattern data sources used in the analysis include the Bay Area Travel Survey (2018/19), the MTC Passenger Demographic Survey (2014-19), and BART Customer Satisfaction Survey (2018). Again, all the data used in the analysis is pre-COVID. Any long-term impacts to the region's demographics will be reflected in future TIP analyses, once updated data becomes available.

The 2023 TIP Investment Analysis includes an analysis of investments benefiting seniors. Unfortunately, a similar analysis for persons with disabilities is not included due to sample size limitations of the BATS, and data unavailability from the transit passenger demographic survey. However, a qualitative discussion of regional transportation investments that benefit seniors and persons with disabilities is included in the following section.

ANALYSIS RESULTS & DISCUSSION

Population Use-Based Results

The population use-based analysis is divided into three focus areas: income, race/ethnicity, and seniors. Additional information is also provided at the end of this section on regional efforts and initiatives to support and better understand the transportation needs of residents with transportation related disabilities.

Investments by Income

Bay Area residents living in low-income households, earning less than $50,000 per year, account for about a fifth of all trips (19%) in the region.

In the 2023 TIP, 20%, or more than $2.2 billion, is directed to projects supporting trips made by residents from low-income households. The share of these investments supporting low-income trips exceeds the share of trips made by persons from low-income households by approximately 1%. See Table 6 and Figures 2 and 3 for additional detail.

TABLE 6. 2023 TIP Investments and Trips by Income

	TIP Investments (in billions)	Percent of Investment	Percent of Trips
Low-Income	**$2.2**	**20%**	**19%**
<$25,000	$0.9	8%	6%
$25,000 - $49,999	$1.4	12%	12%
Not Low-Income	**$8.7**	**80%**	**81%**
$50,000 - $74,999	$1.0	9%	10%
$75,000 - $99,999	$1.0	10%	12%
$100,000 - $149,999	$2.1	19%	20%
$150,000+	$4.6	42%	39%
Total	**$11.0**	**100%**	**100%**

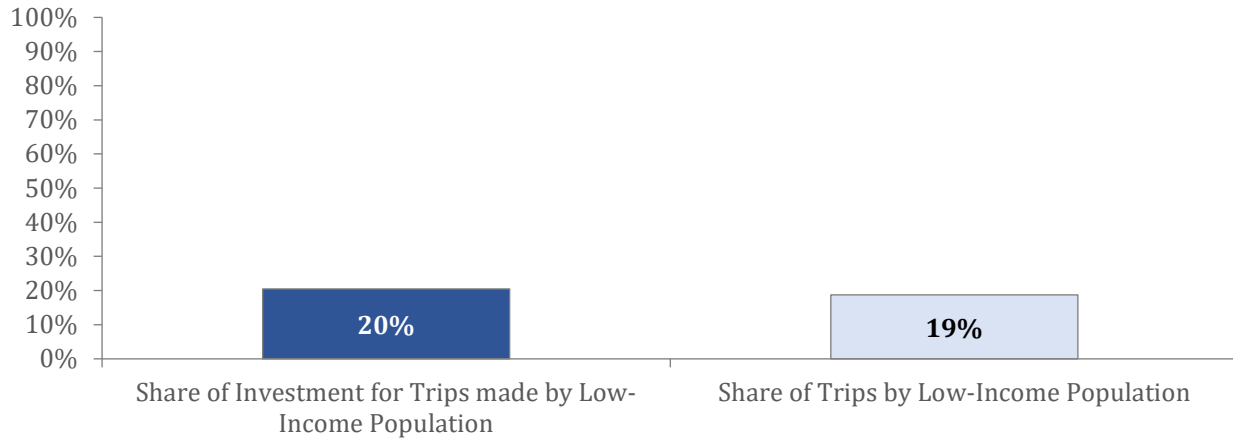*Sources: 2018/19 Bay Area Travel Survey, 2023 TIP*

FIGURE 2. 2023 TIP Investments and Trips by Income Category
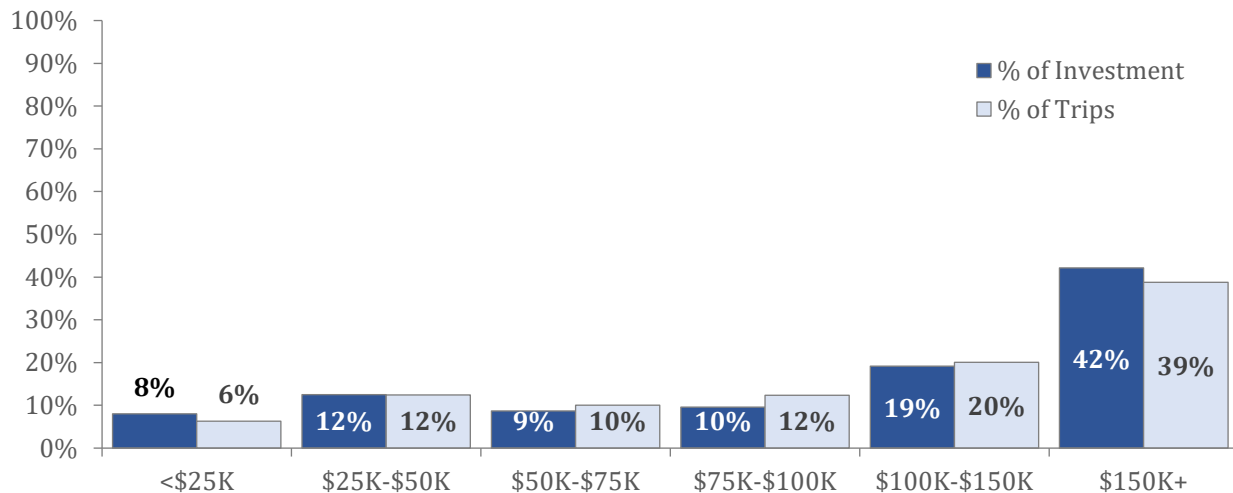
Sources: 2018/19 Bay Area Travel Survey, 2023 TIP

FIGURE 3. 2023 TIP Investments and Low-Income Trips

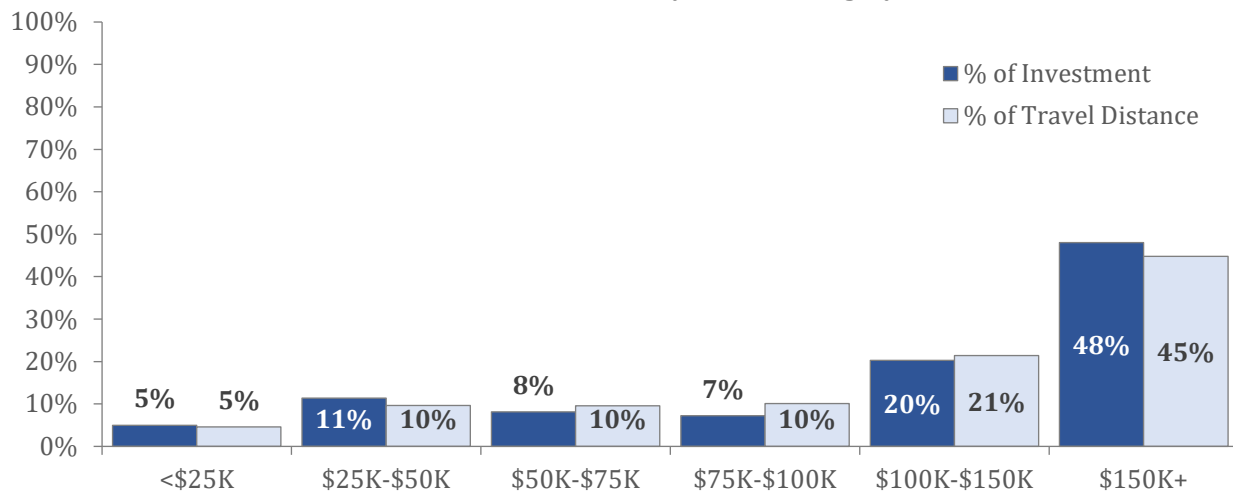

Sources: 2018/19 Bay Area Travel Survey, 2023 TIP

Similarly, the share of investments in projects that support travel made by low-income populations (16%) slightly exceeds their usage share of the transportation system in terms of share of the total distance traveled (14%)—vehicle miles traveled (VMT) for auto trips and origin-destination distance for transit trips. See Table 7 and Figure 4.

TABLE 7. 2023 TIP Investments and Travel Distance by Income

	TIP Investments (in billions)	Percent of Investment	Percent of Total Travel Distance
Low-Income	**$1.8**	**16%**	**14%**
<$25,000	$0.5	5%	5%
$25,000 - $49,999	$1.2	11%	10%
Not Low-Income	**$9.2**	**84%**	**86%**
$50,000 - $74,999	$0.9	8%	10%
$75,000 - $99,999	$0.8	7%	10%
$100,000 - $149,999	$2.2	20%	21%
$150,000+	$5.3	48%	45%
Total	**$11.0**	**100%**	**100%**

Sources: 2018/19 Bay Area Travel Survey, 2023 TIP

FIGURE 4. 2023 TIP Investments and Travel Distance by Income Category

Sources: 2018/19 Bay Area Travel Survey, 2023 TIP

The analysis indicates that the share of investments in local road, state highway and toll bridge systems that benefit drivers living in low-income households (13%) is slightly lower than the share of total VMT by drivers living in low-income households (14%). See Table 8 and Figure 5.

**TABLE 8. 2023 TIP Roadway Investments and Travel Distance by Income**
Includes Local Streets and Roads, State Highway, Public Lands/Trails, Port/Freight Rail and Toll Bridge

	TIP Roadway Investments (in billions)	Percent of Investment	Percent of Total Travel Distance
Low-Income	**$0.6**	**13%**	**14%**
<$25,000	$0.2	4%	4%
$25,000 - $49,999	$0.4	9%	9%
Not Low-Income	**$3.9**	**87%**	**86%**
$50,000 - $74,999	$0.4	9%	10%
$75,000 - $99,999	$0.5	10%	11%
$100,000 - $149,999	$1.0	22%	22%
$150,000+	$2.0	45%	44%
Total	**$4.5**	**100%**	**100%**

Sources: 2018/19 Bay Area Travel Survey, 2023 TIP

FIGURE 5. 2023 TIP Roadway Investments and Travel Distance by Income
Includes Local Streets and Roads, State Highway, Public Lands/Trails, Port/Freight Rail and Toll Bridge
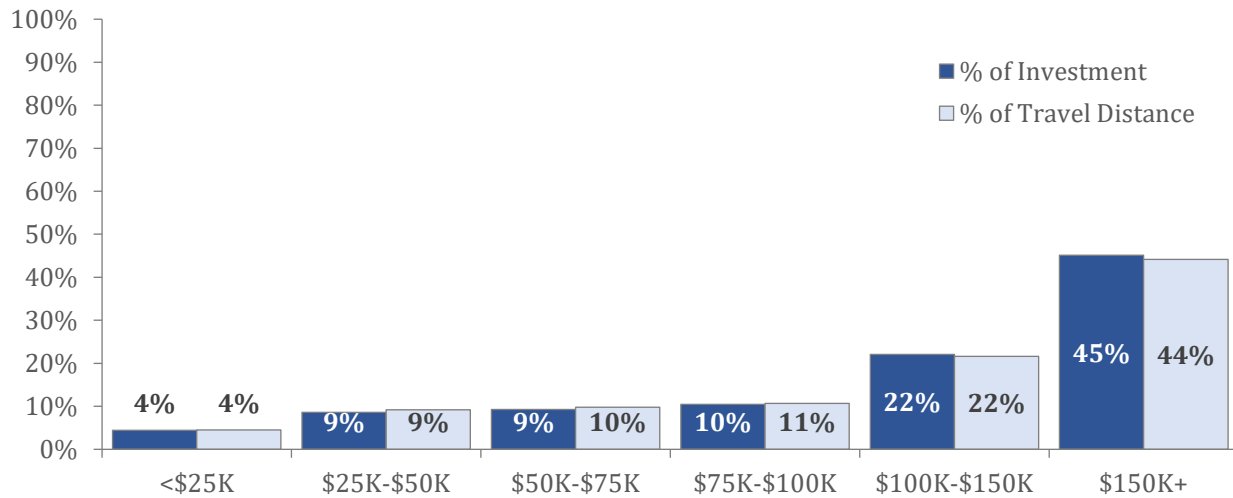
Sources: 2018/19 Bay Area Travel Survey, 2023 TIP

The share of transit investments in the 2023 TIP for passengers living in low-income households (31%) falls short of the share of transit trips by passengers living in low-income households (44%).

**TABLE 9. 2023 TIP Transit Investments and Transit Trips by Income**

	TIP Transit Investments (in billions)	Percent of Investment	Percent of Passenger Transit Trips
Low-Income	**$2.0**	**31%**	**44%**
Not Low-Income	**$4.4**	**69%**	**56%**
Total	**$6.5**	**100%**	**100%**

Sources: 2014-19 MTC Transit Passenger Demographic Survey, 2018 BART Customer Satisfaction Survey, 2023 TIP

FIGURE 6. 2021 TIP Transit Investments and Passenger Trips by Income
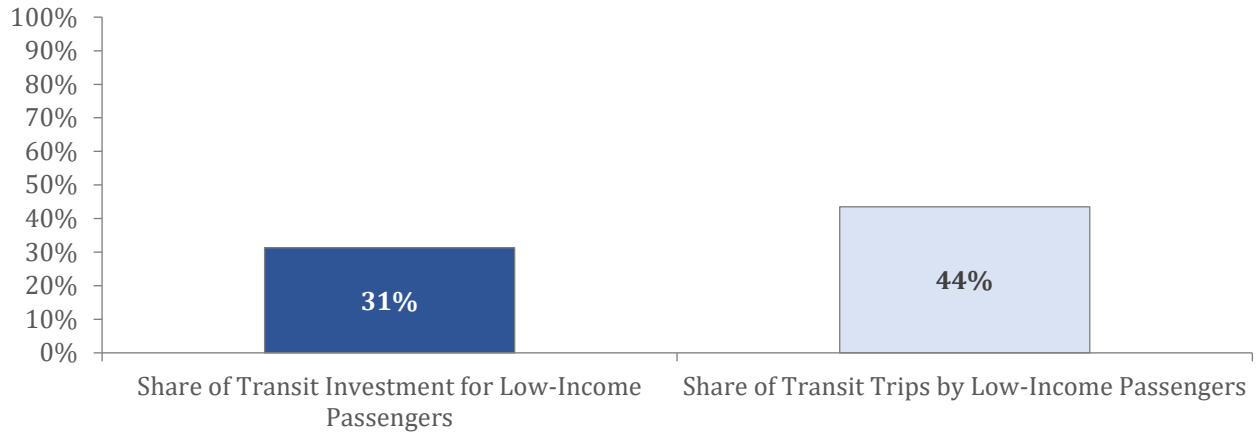
Sources: *2014-19 MTC Transit Passenger Demographic Survey, 2018 BART Customer Satisfaction Survey, 2023 TIP*

Investments by Race/Ethnicity

Households of color make up 62% of the region's population and account for 62% of all trips.

The share of transportation investments in the Bay Area that support trips by people of color (64%) is greater than the share of trips taken by these populations (62%).

TABLE 10. 2023 TIP Investments and Trips by Race/Ethnicity

	TIP Investments by Trips (in billions)	Percent of Investment	Percent of Trips
People of Color	**$7.0**	**64%**	**62%**
White Population	**$4.0**	**36%**	**38%**
Total	**$11.0**	**100%**	**100%**

Sources: *2018/19 Bay Area Travel Survey, 2023 TIP*

FIGURE 7. 2023 TIP Investments and Trips by Race/Ethnicity
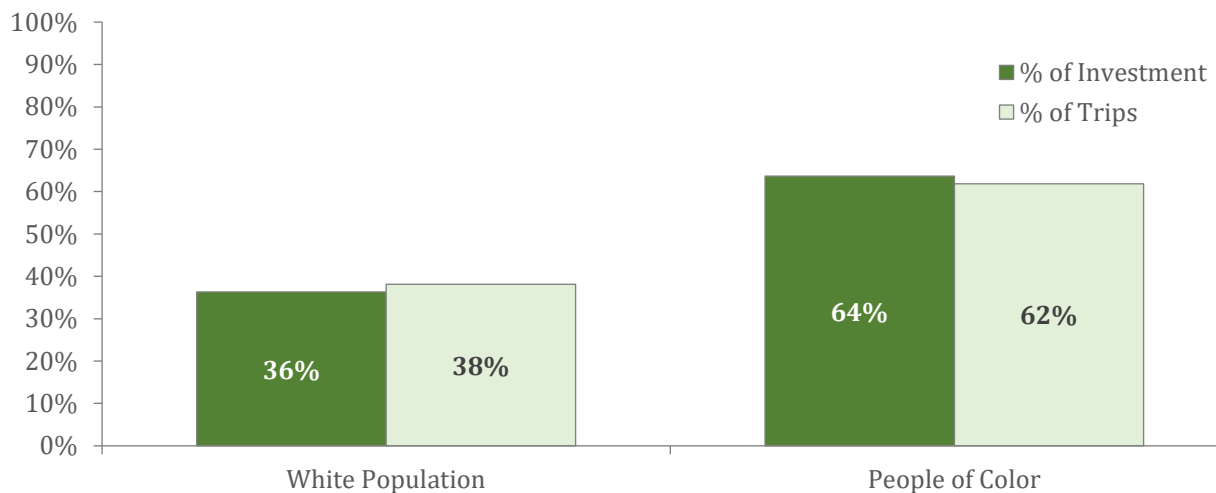
Sources: *2018/19 Bay Area Travel Survey, 2023 TIP*

Households of color account for nearly two-thirds (62%) of all travel distance, as measured by VMT of roadway trips and origin destination distance for transit trips.
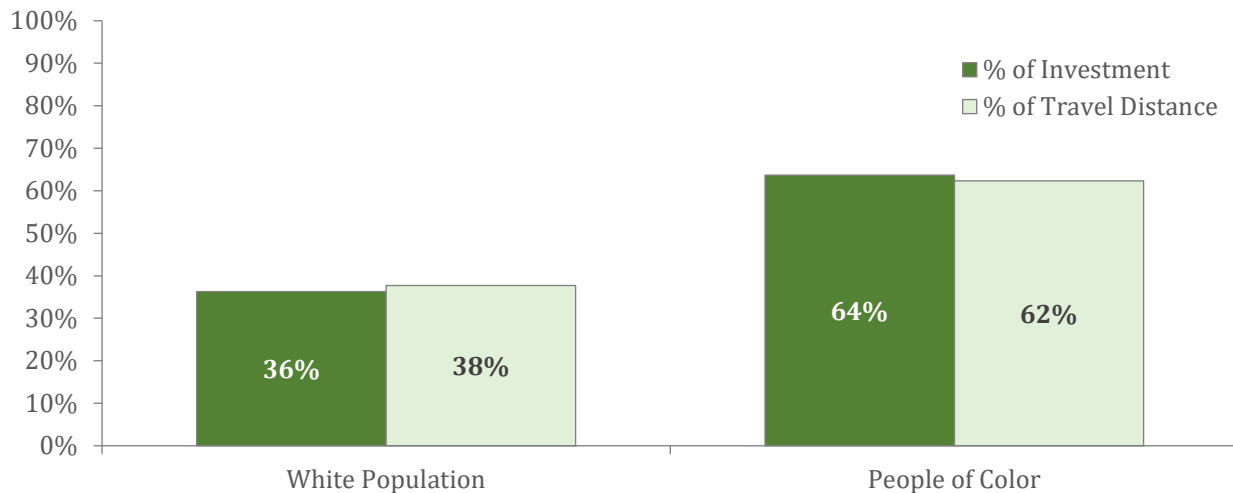
The share of investments supporting travel by people of color by distance (64%) is slightly more than the share of travel distance traversed by people of color (62%).

TABLE 11. 2023 TIP Investments and Travel Distance by Race/Ethnicity

	TIP Investments by Travel Distance (in billions)	Percent of Investment	Percent of Travel Distance
People of Color	**$7.0**	**64%**	**62%**
White Population	**$4.0**	**36%**	**38%**
Total	**$11.0**	**100%**	**100%**

Sources: 2018/19 Bay Area Travel Survey, 2023 TIP

FIGURE 8. 2023 TIP Investments and Travel Distance by Race/Ethnicity

Sources: 2018/19 Bay Area Travel Survey, 2023 TIP

People of color account for nearly two-thirds (62%) of all roadway travel distance, as measured by VMT. The share of investments supporting roadway travel by people of color by distance (64%) is slightly higher than the overall share of VMT traveled by people of color (62%).

TABLE 12. 2023 TIP Roadway Investments and Travel Distance (VMT) by Race/Ethnicity
Includes Local Streets and Roads, State Highway, Public Lands/Trails, Port/Freight Rail and Toll Bridge

	TIP Investments by Travel Distance (in billions)	Percent of Investment	Percent of Travel Distance
People of Color	**$2.8**	**62%**	**62%**
White Population	**$1.7**	**38%**	**38%**
Total	**$4.5**	**100%**	**100%**

Sources: 2018/19 Bay Area Travel Survey, 2023 TIP

FIGURE 9. 2023 TIP <u>Roadway</u> Investments and Travel Distance (VMT) by Race/Ethnicity
Includes Local Streets and Roads, State Highway, Public Lands/Trails, Port/Freight Rail and Toll Bridge
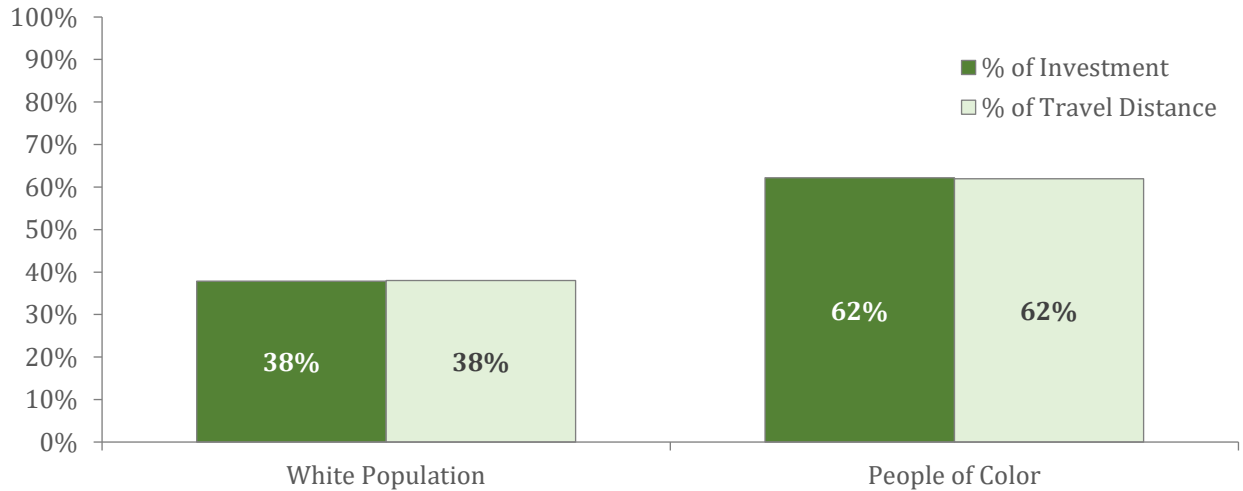
*Sources: 2018/19 Bay Area Travel Survey, 2023 TIP*

Nearly two-thirds (63%) of transit trips in the Bay Area are taken by residents identifying as people of color. The share of investments in the 2023 TIP that support these transit trips (65%) is slightly higher than the share of transit trips made by people of color (63%).

TABLE 13. 2023 TIP <u>Transit</u> Investments and Transit Trips by Race/Ethnicity

	TIP Investments by Transit Trips (in billions)	Percent of Investment	Percent of Travel Distance
People of Color	$4.2	65%	63%
White Population	$2.3	35%	37%
Total	$6.5	100%	100%

Sources: 2014-19 MTC Transit Passenger Demographic Survey, 2018 BART Customer Satisfaction Survey, 2023 TIP

FIGURE 10. 2023 TIP <u>Transit</u> Investments and Transit Trips by Race/Ethnicity
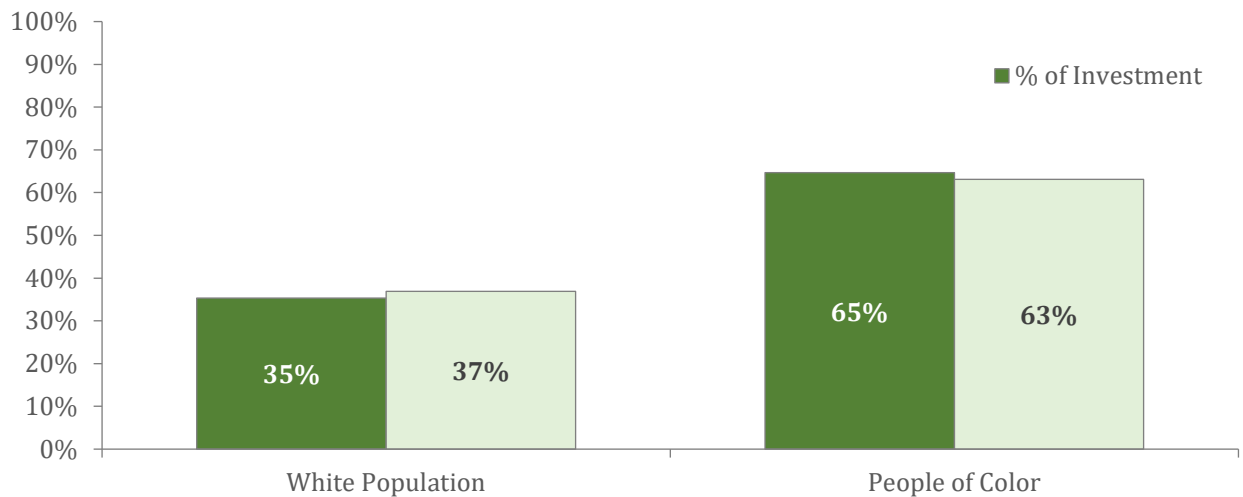
Sources: 2014-19 MTC Transit Passenger Demographic Survey, 2018 BART Customer Satisfaction Survey, 2023 TIP

Investments by Seniors

Seniors, defined for this analysis as persons over the age of 65, account for 16% of the region's population. The share of transportation investments that support trips taken by seniors (16%) is slightly less than, but roughly equivalent to, their share of trips (18%).

TABLE 14. 2023 TIP Investments and Trips by Seniors

	TIP Investments by Trips (in billions)	Percent of Investment	Percent of Trips
Senior	$1.8	16%	18%
Non-Senior	$9.2	84%	82%
Total	$11.0	100%	100%

Sources: 2018/19 Bay Area Travel Survey, 2023 TIP

FIGURE 11. 2023 TIP Investments and Trips by Seniors
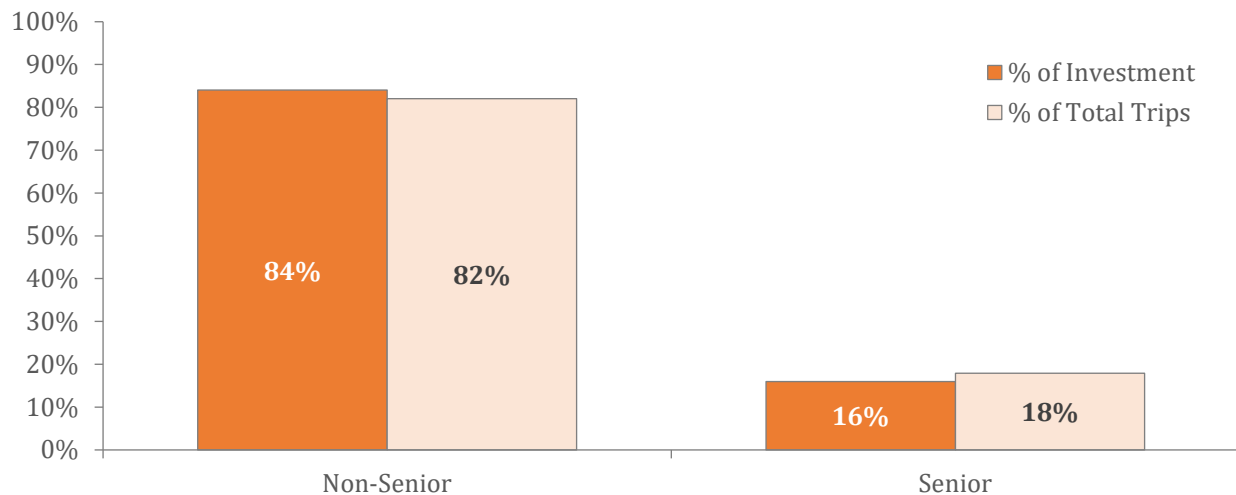
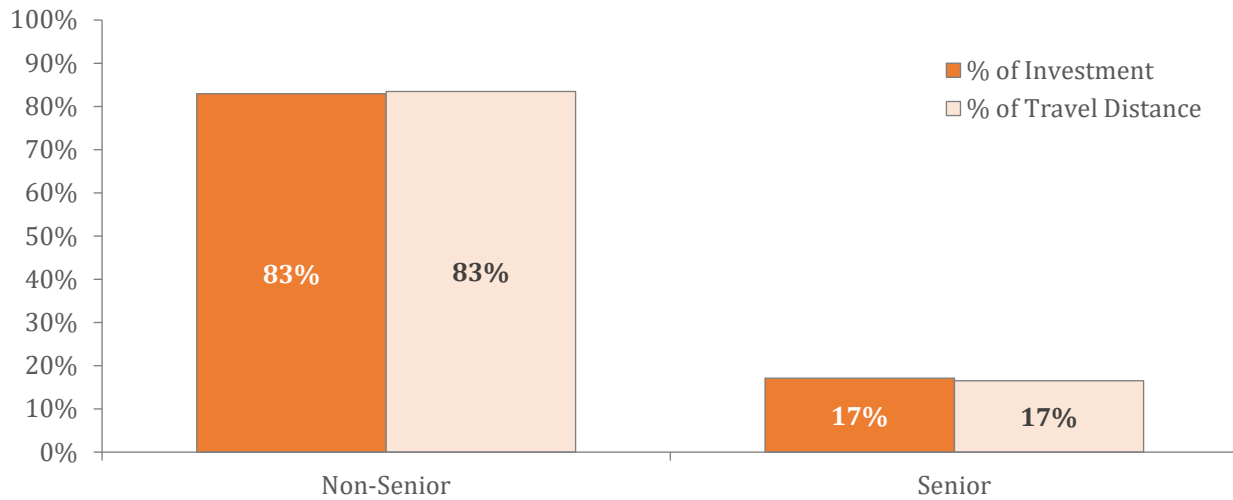*Sources: 2018/19 Bay Area Travel Survey, 2023 TIP*

Seniors also account for 17% of all travel distance, as measured by VMT of roadway trips and origin/destination distance for transit trips. This is roughly equivalent to their share of the investments (17%) supporting distance travelled by senior populations.

TABLE 15. 2023 TIP Investments and Travel Distance by Seniors

	TIP Investments by Travel Distance (in billions)	Percent of Investment	Percent of Travel Distance
Senior	$1.9	17%	17%
Non-Senior	$9.1	83%	83%
Total	$11.0	100%	100%

Sources: 2018/19 Bay Area Travel Survey, 2023 TIP

FIGURE 12. 2023 TIP Investments and Travel Distance by Seniors

Sources: 2018/19 Bay Area Travel Survey, 2023 TIP

For roadway travel, seniors account for 16% of all VMT and benefit from an equivalent share of investments (16%).

TABLE 16. 2023 TIP <u>Roadway</u> Investments and Travel Distance (VMT) by Seniors
Includes Local Streets and Roads, State Highway, Public Lands/Trails, Port/Freight Rail and Toll Bridge

	TIP Investments by Travel Distance (in billions)	Percent of Investment	Percent of Travel Distance
Senior	$0.7	16%	16%
Non-Senior	$3.8	84%	84%
Total	$4.5	100%	100%

Sources: 2018/19 Bay Area Travel Survey, 2023 TIP

FIGURE 13. 2023 TIP <u>Roadway</u> Investments and Travel Distance (VMT) by Seniors
Includes Local Streets and Roads, State Highway, Public Lands/Trails, Port/Freight Rail and Toll Bridge
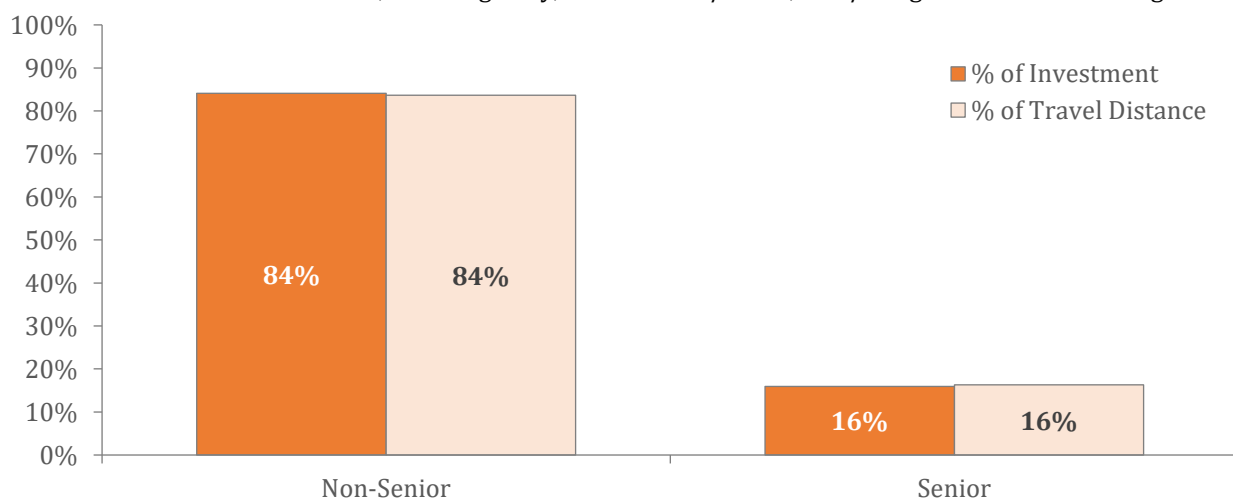
Sources: 2018/19 Bay Area Travel Survey, 2023 TIP

Given the limitations of the data available, a detailed look at investments by transit trip length by passenger age is not included in the population use-based analysis.

Supplemental Information - *Persons with Transportation-Related Disabilities*

Limitations in the data available make it difficult to quantify transportation system usage of persons with disabilities to the degree necessary for the population use-based analysis. However, transportation investments benefiting these populations are being made throughout the region. Below is an overview of regional investments and planning initiatives that support transportation by persons with disabilities. A list of transit projects compliant with the Americans with Disabilities Act (ADA) is included Appendix A-52.
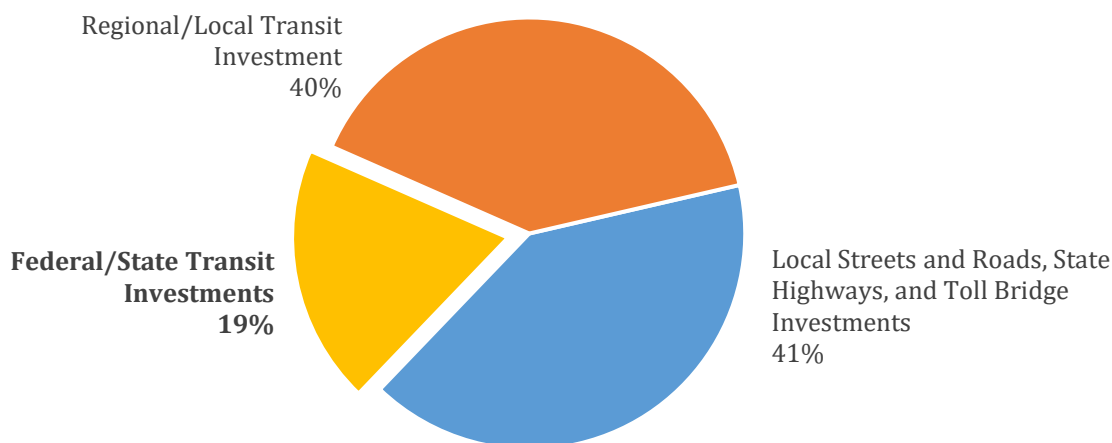
- Community Based-Transportation Planning (CBTP) – Provides planning funds for developing transportation project recommendations the region's Equity Priority Communities (EPCs). Persons with disabilities are one of eight factors that are used to determine EPC designations. Between 2004 and 2021, forty-eight CBTPs were completed in partnership with these communities, with roughly five CBTPs currently in production. The current $1,465,000 funding cycle for CBTPs is set to last from Fiscal Year 2017/2018 through Fiscal Year 2021/2022; another $3,000,000 in funding for this work will be released as part of the third One Bay Area Grant (OBAG) program in Fiscal Year 2022/2023.

- Lifeline Transportation Program – Provides funds to address mobility needs of low-income residents, including seniors and individuals with disabilities. Funding is used to support projects from CBTPs and other improvements to publicly available transportation projects. Historically, the program has served as a centralized means to fund low-income initiatives. Currently, the program is being redesigned to expand project type eligibility, decentralize MTC's approach to funding projects serving Equity Priority Communities, and to advance high priority project implementation through technical assistance. Historically, $20 million has been provided annually, with the exception of the most recent cycle, which was $7 million. $26 million is proposed for CBTPs and Lifeline for 4-years through the One Bay Area Grant Cycle 3 and Regional Early Action Planning (REAP) 2.0.

- FTA Section 5310 Enhanced Mobility of Seniors & Individuals with Disabilities – Provides capital and operating grants to private nonprofit and public agencies to improve mobility for seniors and individuals with disabilities by removing barriers to and expanding services. In the last round of funding (2019), $12.1 million in awards were made in the region's large urbanized areas. The region's small urbanized areas received $2.0 million in awards.

- Transit Capital Priorities – Provides an ADA set aside of 10% of the FTA Section 5307 urbanized area apportionment. Operators may use this funding to defray the operating costs of their paratransit systems. Annually, this amounts to approximately $20 million.

- State Transit Assistance – With the adoption of MTC Resolution No. 4321 in February 2018, 70% of all STA Population-Based funds now flow to each County Transportation Agency through the STA County Block Grant and 30% is directed to the Regional Program managed by MTC. Paratransit operations are an eligible use of the County Block Grant program.

- MTC's Coordinated Public Transit—Human Services Transportation Plan – Identifies the transportation needs of older adults, low-income populations and people with disabilities, and identifies funding priorities and coordination strategies for meeting these needs. The Coordinated Plan is intended to meet the federal planning requirements as well as to provide MTC and its regional partners with a "blueprint" for implementing a range of strategies to advance local efforts to improve transportation for transportation disadvantaged populations. MTC staff works with stakeholders throughout the region to gather input on transportation gaps, as well as solutions that are then eligible for federal funding through the Section 5310 program. The Coordinated Plan was last updated in 2018. The next Coordinated Plan will be adopted in 2023.

Disparate Impact Analysis

The second component of the investment analysis includes a closer look at federal and state investments in public transportation. The federal and state funding sources for transit account for only a small portion (19%) of funding in the 2023 TIP, as illustrated below in Figure 14.

FIGURE 14. 2023 TIP Transit Investments from Federal/State Sources as a Share of All Investments

Regional/Local Transit Investment 40%

Federal/State Transit Investments 19%

Local Streets and Roads, State Highways, and Toll Bridge Investments 41%

Source: 2023 TIP

Although 40% of the TIP is made up of regional or local investments in public transit, it is important to note that a substantial share of total funding dedicated to transit operators for ongoing operations and maintenance is not included in the TIP. This funding comes from state, regional and local sources and may not be captured in the TIP as these projects and programs do not typically require a federal action.

The disparate impact analysis indicates that the share of federal and state transit investments distributed to transit service supporting people of color is greater than the respective shares of regional transit ridership and regional population.

TABLE 17. 2023 TIP Federal/State Transit Investments by Race/Ethnicity

	Federal/State Transit Investments (in millions)	Percent of Total Federal/State Transit Funding	Percent of Regional Ridership	Percent of Total Regional Population
People of Color	$1,367	65%	63%	62%
White Population	$751	35%	37%	38%
Total	$2,119	100%	100%	100%

Sources: 2014-19 MTC Transit Passenger Demographic Survey, 2018 BART Customer Satisfaction Survey, 2023 TIP

Investments distributed on a per-capita basis indicate that people of color in the region are receiving $286 in benefits per person, more than the $254 in benefits per person for white populations (or 113% of the benefits received by white residents).

TABLE 18. 2023 TIP Federal/State Transit Investments, Disparate Impact Analysis by Population

	Federal/State Transit Investments (in millions)	Regional Population (2019)	Per-Capita Benefit	Per Capita Benefit for People of Color as a Percentage of White per Capita Benefit
People of Color	$1,367	4,778,954	$286	113%
White Population	$751	2,960,424	$254	N/A
Total	$2,119	7,739,378	$1,631	N/A

Sources: 2014-19 MTC Transit Passenger Demographic Survey, 2018 BART Customer Satisfaction Survey, 2023 TIP

Investments distributed on a per transit rider basis indicate that people of color in the region receive $1,294 in benefits per rider, more than the $1,218 in benefits per transit rider for white populations (or 106% of the benefits received by white residents).

TABLE 19. 2023 TIP Federal/State Transit Investments, Disparate Impact Analysis by Boardings

	Federal/State Transit Investments (in millions)	Average Daily Transit Ridership (2014-19)	Per-Rider Benefit	Per Capita Benefit for People of Color as a Percentage of White per Capita Benefit
People of Color	$1,367	1,056,083	$1,294	106%
White Population	$751	617,342	$1,218	N/A
Total	$2,119	1,673,425	$6,103	N/A

Sources: 2014-19 MTC Transit Passenger Demographic Survey, 2018 BART Customer Satisfaction Survey, 2023 TIP

Transportation Equity Measures

Maintain and Optimize the Existing System
Projects that support the regional strategy to maintain and optimize the existing system include projects which improve pavement and bridge conditions, maintain transit state of good repair, reduce congestion, and increase system reliability. This equity measure excludes projects with the primary purpose of expanding capacity.

- **Pavement and Bridge Rehabilitation:** In the 2023 TIP, more than $1.8 billion is invested in 10 projects to rehabilitate and preserve existing roads and bridges (Table 20). The bulk of this investment is dedicated to two consolidated regional listings:
    - ❖ $873 million for various State Highway Operation and Protection Program (SHOPP) roadway preservation projects
    - ❖ $511 million for various SHOPP bridge rehabilitation and reconstruction projects

TABLE 20. 2023 TIP Pavement & Bridge Rehabilitation

County	Projects	Investment (in millions)
Alameda	1	$1
Contra Costa	1	$2
Marin	1	$51
Napa	0	$0
San Francisco	0	$0
San Mateo	1	<$1
Santa Clara	0	$0
Solano	1	$3
Sonoma	0	$0
Regional	5	$1,757
Total	**10**	**$1,815**

- **Transit Asset Management:** The 2023 TIP includes 42 projects, totaling over $770 million, which maintain transit assets in a state of good repair (Table 21). Significant projects in this category include:

- ❖ $219 million for BART's Railcar Procurement Program
- ❖ $119 million for SamTrans' Bus Replacement
- ❖ $65 million for BART's Rail, Way, and Structures Program
- ❖ $55 million for VTA's Standard and Small Bus Replacement

TABLE 21. 2023 TIP Transit Asset Management

Operator	Projects	Investment (in millions)	Operator	Projects	Investment (in millions)
AC Transit	1	$13	SamTrans	2	$122
ACE/SJRC	0	$0	Santa Rosa CityBus	0	$0
BART	6	$363	SFMTA	5	$23
Caltrain	3	$34	SMART	0	$0
CCCTA	0	$0	Soltrans	1	$7
ECCTA	1	$3	Sonoma County	1	<$1
Fairfield	0	$0	Union City	0	$0
GGBHTD	1	$7	Vacaville	0	$0
LAVTA	0	$0	VTA	7	$123
MCTD	7	$11	WCCTA	0	$0
N/A	0	$0	WETA	3	$31
Napa Vine	1	$11	Regional	2	$24
Petaluma	0	$0	All Others	1	$3
Table continued			**Total**	**42**	**$774**

- **Congestion Reduction/System Reliability Improvements:** Over $1.1 billion in the 2023 TIP is devoted to 44 projects that reduce congestion and improve system reliability (Table 22). Major investments within this category include:
    - ❖ $284 million for various SHOPP Mobility Program projects
    - ❖ $232 million for ACTC's 7th Street Grade Separation East
    - ❖ $80 million for various SHOPP emergency response projects
    - ❖ $79 million for VTA's US 101/State Route 25 Interchange (Phase 1)

TABLE 22. 2023 TIP Congestion Reduction/System Reliability Improvements

County	Projects	Investment (in millions)
Alameda	9	$371
Contra Costa	5	$61
Marin	0	$0
Napa	2	$12
San Francisco	2	$25
San Mateo	4	$14
Santa Clara	7	$193
Solano	2	<$1
Sonoma	2	$5
Regional	11	$429
Total	**44**	**$1,109**

Create Healthy and Safe Streets

Projects with the primary purpose of improving transit or roadway safety, as well as projects anticipated to result in significant reductions in serious injuries and/or fatalities on the transportation system, are expected to support the region strategy to create healthy and safe streets. In addition, projects that support active transportation through bicycle and/or pedestrian elements also advance this strategy.

- **Roadway Safety Improvements:** The 2023 TIP includes over $1.1 million in funding for 97 roadway safety projects (Table 23). It is important to note that many other

projects in the 2023 TIP are anticipated to have a moderate or slight positive impact on transportation safety. However, this analysis focused on projects that are identified by project sponsors as having the primary purpose of improving roadway safety, or are otherwise anticipated to significantly reduce fatalities and serious injuries due to traffic collisions.

Major roadway safety investments in the 2023 TIP include:
- ❖ $270 million for ACTC's 7th Street Grade Separation East
- ❖ $163 million for various SHOPP Collision Reduction projects
- ❖ $64 million for ACTC's Oakland/Alameda Access Project
- ❖ $33 million for Caltrans' Highway Safety Improvement Program

TABLE 23. 2023 TIP Roadway Safety Improvements

County	Projects	Investment (in millions)
Alameda	29	$591
Contra Costa	10	$48
Marin	4	$17
Napa	3	$9
San Francisco	4	$32
San Mateo	13	$44
Santa Clara	20	$101
Solano	6	$45
Sonoma	5	$26
Regional	3	$207
Total	**97**	**$1,121**

The majority of roadway safety investments in the 2023 TIP are anticipated to significantly reduce bicyclist and pedestrian fatalities and serious injuries specifically, including over $770 million towards 58 projects across all nine Bay Area counties (Table 24). In addition to projects previously mentioned, other large bicycle/ pedestrian safety projects include:
- ❖ $49 million for ACTC's I-880/ Whipple Road and Industrial Parkway Interchange Improvements
- ❖ $34 million for SMART Rail and Pathway (Phase 2)

TABLE 24. 2023 TIP Bicyclist/ Pedestrian Safety Improvements

County	Projects	Investment (in millions)
Alameda	25	$532
Contra Costa	2	$16
Marin	1	<$1
Napa	2	$8
San Francisco	4	$32
San Mateo	5	$31
Santa Clara	12	$59
Solano	1	$11
Sonoma	3	$8
Regional	3	$79
Total	**58**	**$774**

Safety of the transportation system includes more than just the reduction of collisions. Projects unrelated to reducing collisions can also have significant impacts on safety to the traveling public, including seismic retrofits, security improvements, and resiliency projects. The 2023 TIP also includes a significant investment in the Golden Gate Bridge Suicide Deterrent Safety System, intended to impede the ability of individuals to jump off the bridge. This project was not included in the Health and Safe Streets equity measure for this analysis, but does serve an important safety purpose.

- **Bicycle and Pedestrian Investments:** Approximately $470 million is dedicated to active transportation projects in the 2023 TIP, comprised of 94 projects primarily focused on bicycle and/or pedestrian elements. Some of the larger bicycle and pedestrian projects include:
  - ❖ $31 million for Oakland's Reconnecting the Town project
  - ❖ $27 million for Alameda County Complete Streets Improvements
  - ❖ $16 million for Santa Rosa's Highway 101 Bicycle and Pedestrian Overcrossing
  - ❖ $15 million for San Jose's Willow-Keyes Complete Streets Improvements

Many projects in the TIP that are focused on other modes or purposes also include improvements that benefit bicyclists or pedestrians, such as a pavement rehabilitation project that includes adding a new bike lane. Project sponsors report the share of each project's total project cost that can be attributed to the various modes that will benefit from the project. Table 24 displays county and regional investments in bike/pedestrian projects as well as the total dollars invested on all projects that are anticipated to benefit bicyclists and pedestrians over the four-year TIP period, as reported by the project sponsors.

TABLE 25. 2023 TIP Bicyclist/ Pedestrian Safety Improvements

County	Bicycle & Pedestrian Projects	Investment (in millions)	Projects with Bike/Ped Elements	Investment (in millions)
Alameda	21	$168	37	$178
Contra Costa	10	$40	21	$45
Marin	4	$69	5	$70
Napa	3	$6	5	$8
San Francisco	5	$32	7	$35
San Mateo	13	$14	23	$34
Santa Clara	24	$88	37	$116
Solano	2	$12	11	$18
Sonoma	11	$34	14	$32
Regional	1	$5	4	$20
Total	**94**	**$467**	**164**	**$556**

Build a Next-Generation Transit Network
Projects in the 2023 TIP that contribute towards the region's next-generation transit network are identified in this analysis as transit system expansion projects.

Over $5.3 billion in 2023 TIP investments support the regional goal to build a next-generation transit network. These funds span just 16 projects, with the two large rail projects representing a majority of the investment:
- ❖ $3.9 billion for BART's Berryessa to San Jose Extension
- ❖ $745 million for TBJPA's Transbay Terminal and Caltrain Downtown Extension Phase 2

TABLE 26. 2023 TIP Transit System Expansion

Operator	Projects	Investment (in millions)	Operator	Projects	Investment (in millions)
AC Transit	0	$0	SamTrans	0	$0
ACE/SJRC	0	$0	Santa Rosa CityBus	0	$0
BART	4	$4,172	SFMTA	3	$39
Caltrain	2	$42	SMART	1	$34
CCCTA	0	$0	Soltrans	0	$0
ECCTA	0	$0	Sonoma County	0	$0
Fairfield	0	$0	Union City	0	$0
GGBHTD	1	$1	Vacaville	0	$0
LAVTA	0	$0	VTA	1	$248
MCTD	0	$0	WCCTA	0	$0
N/A	0	$0	WETA	1	$14
Napa Vine	0	$0	Regional	1	$745
Petaluma	0	$0	All Others	2	$15
Table continued			**Total**	**16**	**$5,312**

Reduce Climate Emissions

Projects expected to reduce climate emissions include those funded with federal Congestion Mitigation and Air Quality Improvement Program (CMAQ), California Air Resources Board (CARB), regional Transportation for Clean Air (TFCA), or MTC's One Bay Area Grant (OBAG) Climate Initiatives Program funds are expected to improve air quality and reduce greenhouse gas emissions through promoting cleaner technologies, alternative modes of transportation, or compact development. Many other projects in the 2023 TIP may also support emissions reductions, but this analysis focused on projects funded with air quality and climate specific fund sources.

Over $100 million in air quality and climate specific funding is included in the 2023 TIP, contributing to 47 projects (Table 25). The largest listings in this category are regional projects and programs led by MTC, including:
- ❖ $15 million for the Clipper 2.0 Fare Payment System
- ❖ $12 million for Bay Bridge Forward Preliminary Engineering
- ❖ $10 million for the Bay Area Commuter Benefits Program

TABLE 25. 2023 TIP Climate & Air Quality Investments

County	Projects	Investment (in millions)
Alameda	10	$31
Contra Costa	7	$17
Marin	1	$1
Napa	0	$0
San Francisco	1	<$1
San Mateo	7	$5
Santa Clara	10	$16
Solano	4	$6
Sonoma	0	$0
Regional	7	$45
Total	**47**	**$120**

2023 TIP Investment Analysis Key Findings

Equitable distribution of investments overall

The results of the population use-based analysis indicate that overall, the investments in the 2023 TIP direct an equitable proportion of investments to projects that support the transportation of residents of low-income households, people of color, and seniors.

**FIGURE 15. 2023 TIP Investments and Trips by Population**
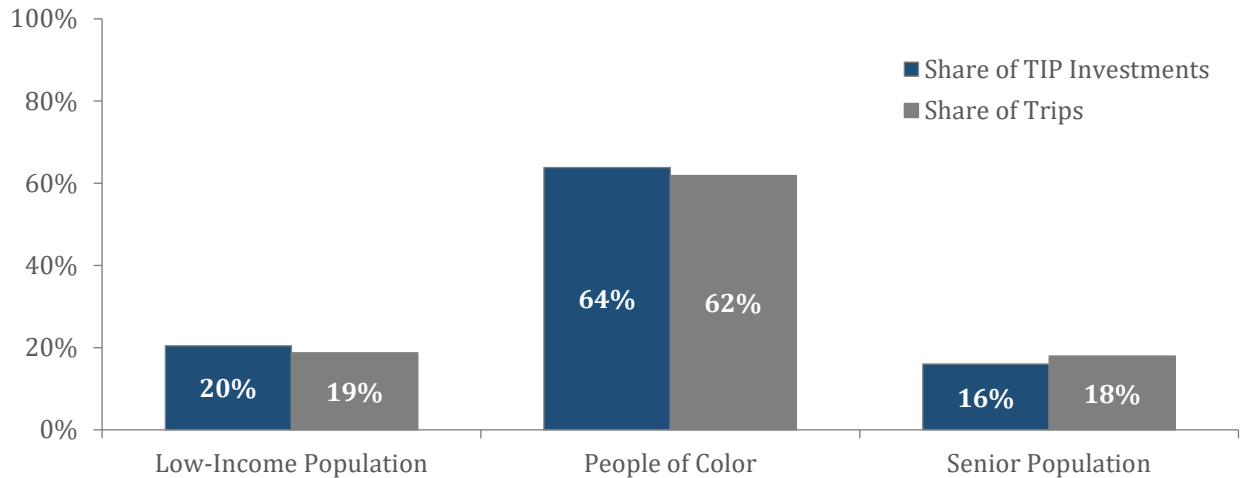
Sources: 2018/19 Bay Area Travel Survey, 2023 TIP

Comparison with Prior Analyses

While the 2023 TIP maintains an overall equitable distribution of investments largely consistent with prior analyses, the proportion of trips and corresponding investment levels differ from prior TIP periods due to updated data used in this analysis. While prior analyses relied on the 2010-12 California Household Travel Survey for overall travel behavior by demographics, the 2023 TIP analysis used more recent data from the 2018/19 Bay Area Travel Survey (BATS).

FIGURE 16. 2023 TIP Investments: Comparison with Prior TIP Periods
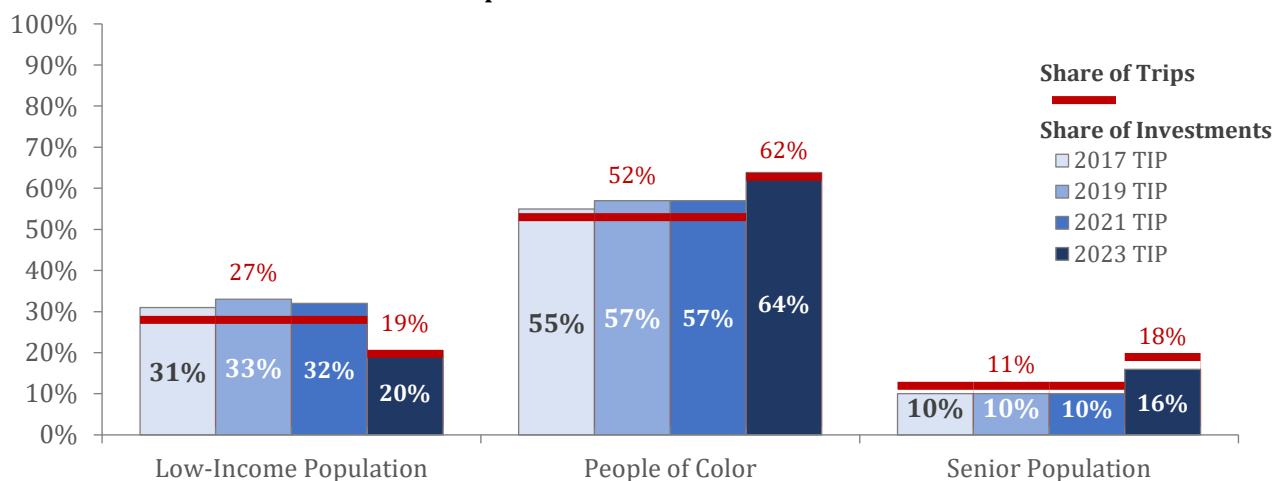
Sources: 2018/19 Bay Area Travel Survey and 2023 TIP, 2010-12 California Household Travel Survey and 2017-21 TIPs

Variable results for transit

While the 2023 TIP continues to make improvements in transit per rider and per capita disparate impact metrics, the proportion of investments supporting low-income transit riders continues to be less than the share of transit trips within the same group. It is important to re-emphasize that the TIP does not reflect the full picture of transportation investments in the Bay Area. The TIP only includes four years of near-term fund programming and tends not to include operating and maintenance funds, particularly for transit.

<u>Comparison with Prior Analyses</u>
The share of transit investments in the 2023 TIP that support trips made by passengers in low-income households (31%) continues to be less than these passengers' relative share of transit trips (44%). Although the share of low-income trips and the corresponding proportion of TIP investments have both declined in recent analyses, the proportion of TIP investments has declined more precipitously, resulting in a growing divide between TIP investment supporting low-income transit riders and the proportion of trips by these riders. Over the past two TIP periods, the majority of TIP transit investment has been directed to a single project: BART's Berryessa to San Jose Extension. The proportion of low-income BART riders is lower than the regional average for transit riders, consequently the last two analyses have shown a greater disparity between the proportion of low-income trips and associated TIP investment levels. Declines seen in both these metrics are also driven in part by the static definition of low-income riders, which captures a decreasing share of transit passengers over each subsequent TIP analysis due to steady increases in median income over the same period.

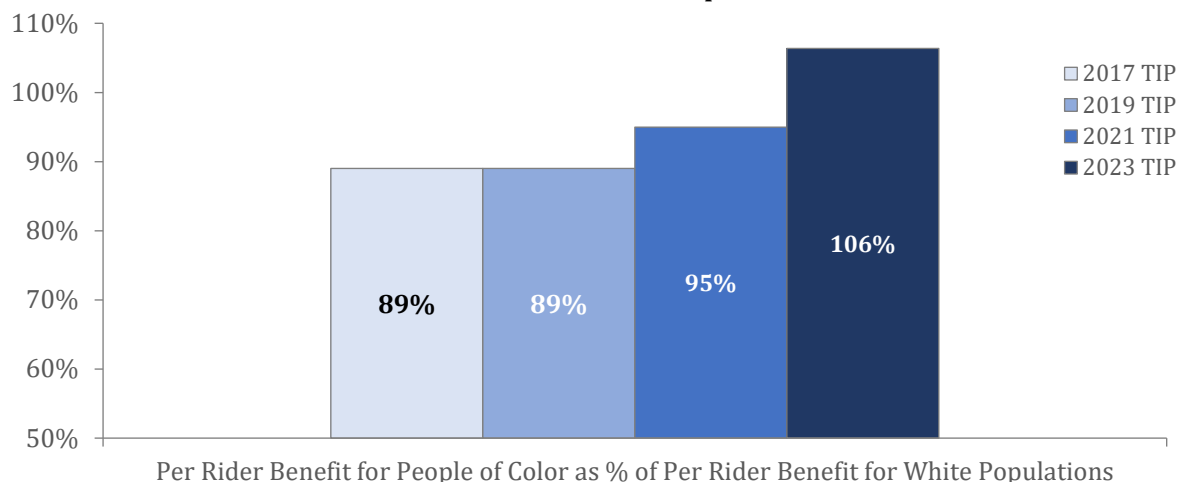**FIGURE 17. 2023 TIP Transit Investments: Comparison with Prior TIP Periods**
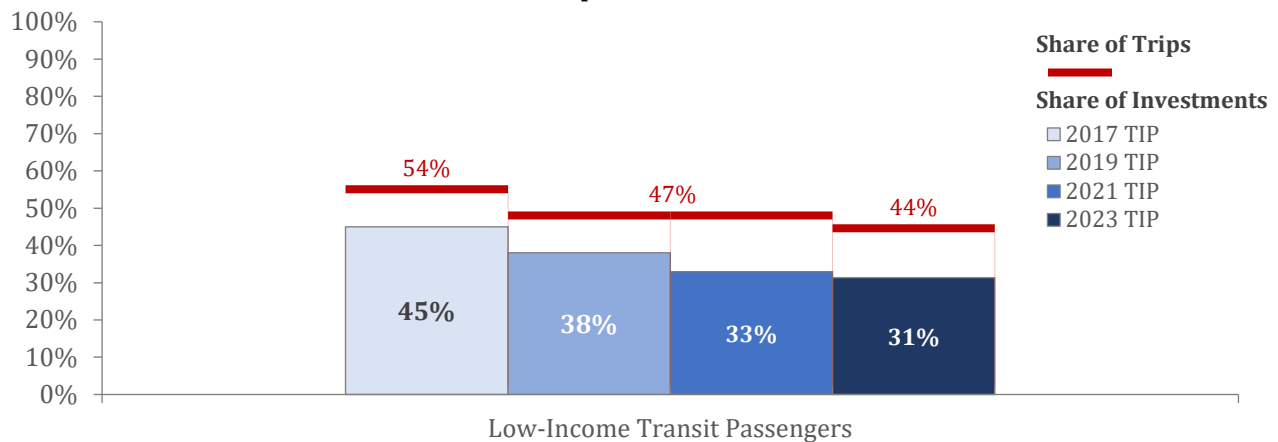
Sources: MTC Transit Passenger Demographic Survey, BART Customer Satisfaction Survey, 2017-23 TIPs

Conversely, the results of the disparate impact transit analysis have improved with the 2023 TIP, as compared to the 2021 TIP. The per transit rider investment benefit for people of color increased from 95% of transit investment benefits for white populations in the 2021 TIP to 106% benefit in the 2023 TIP.

FIGURE 18. 2023 TIP Transit Investments <u>Per Rider</u>: Comparison with Prior TIP Periods

Per Rider Benefit for People of Color as % of Per Rider Benefit for White Populations

Sources: MTC Transit Passenger Demographic Survey, BART Customer Satisfaction Survey, 2017-23 TIPs

Similarly, the per capita transit investment benefit for people of color continues to exceed the per capita for white populations (113% of the white per capita benefit in 2023 TIP).

FIGURE 19. 2023 TIP Transit Investments <u>Per Capita</u>: Comparison with Prior TIP Periods
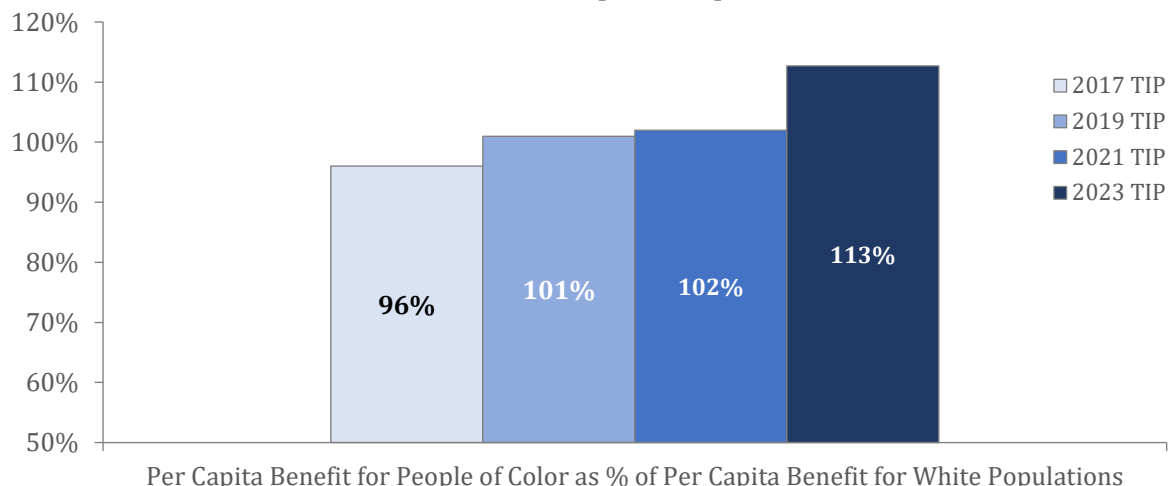
Per Capita Benefit for People of Color as % of Per Capita Benefit for White Populations

Sources: MTC Transit Passenger Demographic Survey, BART Customer Satisfaction Survey, 2017-23 TIPs

Addition of transportation equity measures provides opportunity for better understanding of potential equity impacts

For the 2023 TIP, additional information is provided on projects that support transportation and equity-related regional goals from in *Plan Bay Area 2050*: Maintain and Optimize the Existing System, Create Healthy and Safe Streets, Build a Next-Generation Transit Network, and Reduce Climate Emissions. Although the analysis does not identify direct benefits and burdens resulting from individual investments, it builds upon the population use-based and disparate impact analyses to better understand the nature of the projects included in the 2023 TIP and their anticipated effects on long-term regional goals. Data for the transportation equity measures is self-reported by project sponsors, therefore the resulting information is limited by the quality and consistency of the data provided.

Where possible, projects supporting selected *Plan Bay Area 2050* goals were also mapped to illustrate the location of 2023 investments in relation to adopted EPCs. The geographic display of projects allows for examination and identification of any apparent systematic exclusion of communities in the spatial distribution of benefits, or any apparent systematic imbalances between the distribution of projects between EPCs and the remainder of the region. Mapped projects can also be viewed on an interactive webmap available at: https://mtc.maps.arcgis.com/apps/mapviewer/index.html?webmap=1d8f3cdeb9914c8bab88266bfc534cbe.